## Technology

NOVEMBER/DECEMBER 2005 Vol 5 No 10



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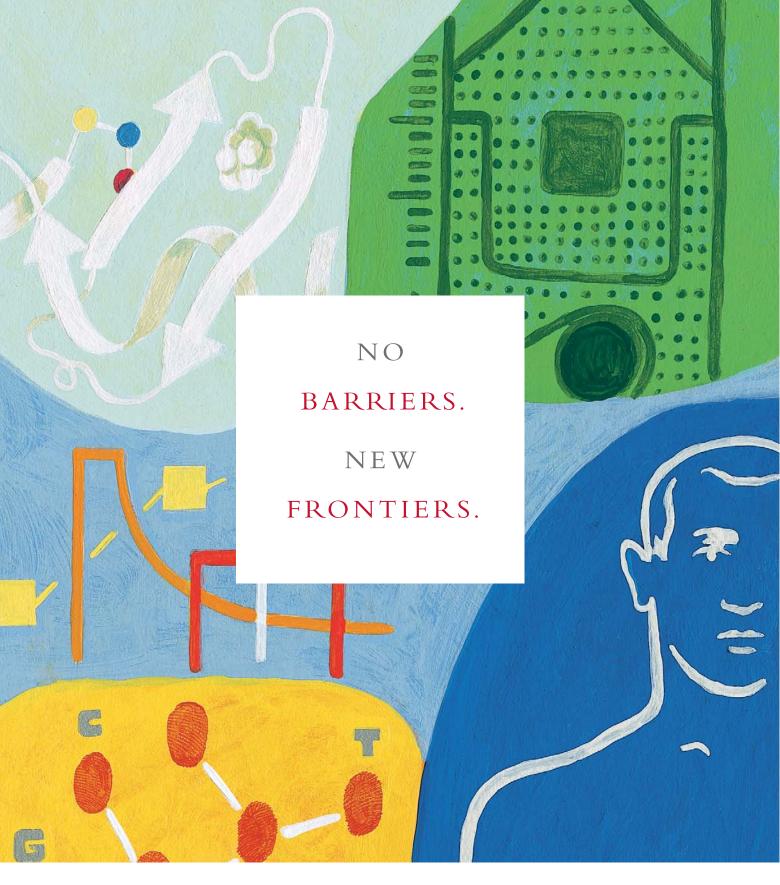
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The science & business of specialty pharma, biotechnology, and drug delivery



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#### Company Profiles

12

For each participating company, this section presents a special 2-page spread featuring core technologies, capabilities, products, and services as well as visuals and complete contact information. Featured companies include:

3M Cardinal Health Hovione Coating Place **ALZA** Innercap Aradigm **Dow Corning** Medpharm **BASE Emerson** Degussa Baxter Dowpharma Facet NOF BD**DPT Labs** Cirrus **Furand** Remmele Filtertek Glatt Pharmaceuticals Huber MedPharm InnerCap Kurve Technology CRS Remmele NuSil Shire Labs Safety Syringes **SCOLR** 

Weiler Engineering Drug Delivery Partnerships

#### Partnerships, Technologies & Pipeline Report 76

This Report, divided into four sections for Drug Delivery, Excipient, Contract Service, and Laboratory Testing & Analysis companies, provides a checklist of currently marketed technologies or services and their applications, pipeline/investigational technologies and their applications and stage of development, and partnerships. Technologies include:

0ral Gene Therapy Rectal Inhalation Mucosal Vaginal Transdermal Colon Capsules Parenteral Intranasal Liposomes **Implants Polymers** Lipids Nasal Biomaterials **Devices** Topical Proteins & Peptides 0cular Transmucosal Controlled Release Excipients



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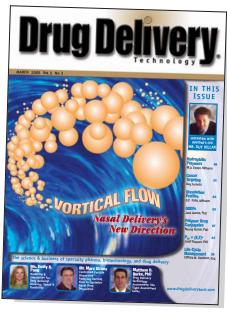
# ANUANT 2005 W. 3. 16.3 Analyzing Greenst Trends IN THIS ISSUE For the notice of your control of the control

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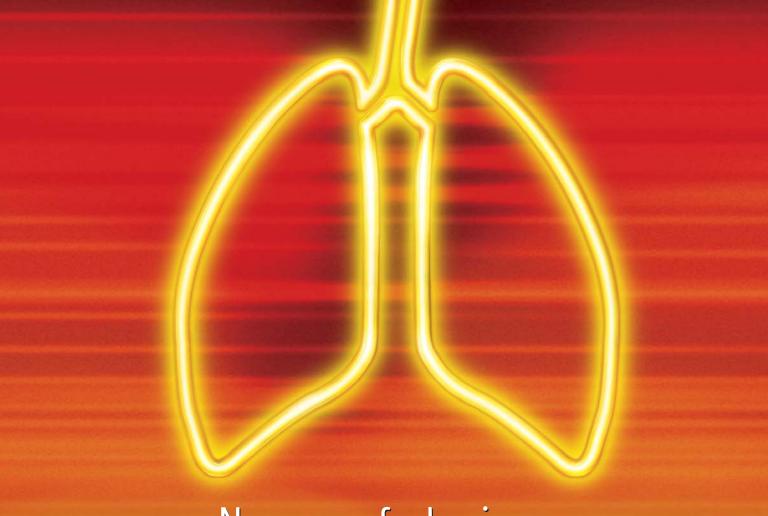
To complement the Company Profiles and Special Report, this section examines innovative and emerging technologies, services, and devices, featuring dynamic 4-color visuals and contact information.











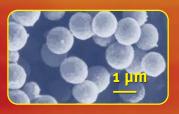
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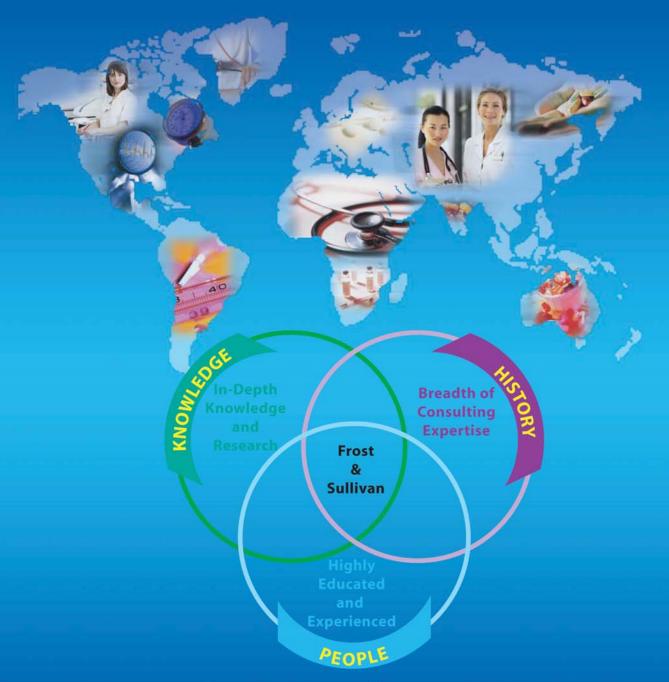


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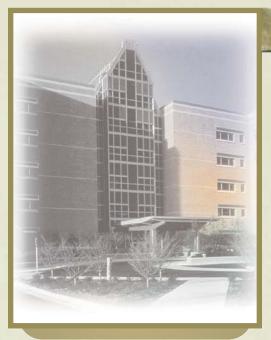
Geographical Expansion Strategies Customer Segmentation & Positioning

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#### **3M** Drug Delivery Systems

3M Drug Delivery Systems 3M Center, Bldg. 275-3E-10 St. Paul, Minnesota 55144-1000 T: (651) 733-7853 • F: (651) 737-5265

E: dkwiatkowski@mmm.com Website: www.3M.com/DDS



3M Drug Delivery Systems is a global leader providing pharmaceutical and biotechnology companies with innovative drug delivery solutions ranging from MDIs to DPIs for inhalation & conventional or novel transdermal technology. 3M provides partners flexibility in working arrangements from development through commercialization & expertise to help you get to market sooner.

We combine the agility of a leading company with the resources of a major, multinational corporation supported by 3M's annual R&D budget of more than \$1 billion.

Successfully teaming our delivery technology with molecules from many major pharmaceutical firms has helped make us a world leader in inhalation and transdermal drug delivery. 3M's proven track record includes development of the first metered-dose inhaler (MDI), development of the first CFC-Free MDI, and development of the first 7-day transdermal system. Products manufactured by 3M Drug Delivery Systems are currently sold in more than 60 countries on 6 continents.

3M in-house resources are available to support each step of the development process from early stages through post-approval. Corporate resources include technology centers and divisions producing component materials. In-house resources include pharmacokinetics, drug metabolism, clinical affairs, toxicology, analytical, regulatory affairs, quality assurance, operations, and marketed product support.

Whether accessing our systems development capabilities or using our transdermal or inhalation components for your own development program, you will benefit from our global development, regulatory, and manufacturing expertise.

New Movel Dry Powder Inhaler
From Micro Dose Technologies

Inhalation and transdermal technology from 3M

# Gives you the edge in a competitive environment







The MicroDose dry powder inhaler, CFC-free metered dose inhaler and transdermal drug delivery systems customized to your specifications

- ► A wide variety of components to meet your needs
- ► Nearly 50 years' experience in inhalation drug delivery technology and skin adhesion products
- ► Fully integrated development and manufacturing processes
- ► Global regulatory expertise
- ► Project management support available from concept through commercialization

Developing proven solutions that enable your success.

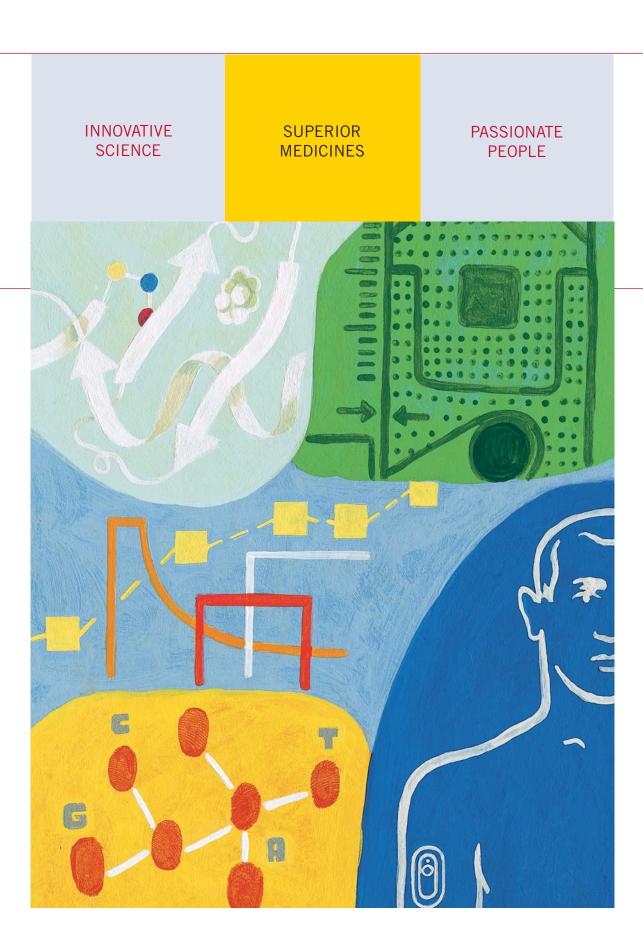
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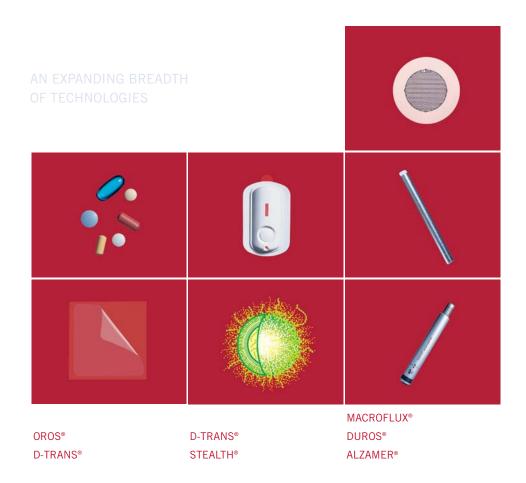
#### LEADING THE NEXT GENER



#### ATION OF DRUG DELIVERY

ALZA was founded on a vision of improving medicines to enhance patient care worldwide. Today, employees share in this vision and are exploring new ways to advance therapies. Through problem- solving strategies that address unmet patient and technology needs, ALZA is focused on drug delivery and drug targeting as a way to optimize the therapeutic utility of small molecules and biopharmaceuticals.

ALZA's commitment to develop solutions that address unmet patient needs has resulted in the industry's most extensive portfolio of drug delivery- based pharmaceuticals. Through substantial research and development, collaborative partnerships and a dedication to the highest scientific and ethical ideals, ALZA will continue to be at the forefront of novel drug delivery solutions.



FOR MORE INFORMATION about ALZA's technologies, contact Dr. Ravi Kiron, Executive Director, New Technology Assessment & Planning

Tel: (650) 564-2113 Fax: (650) 564-7118







Aradigm Corporation 3929 Point Eden Way Hayward, CA 94545

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**Aradigm** is an integrated drug delivery company dedicated to commercializing differentiated and value-added products through two advanced-stage and novel needle-free delivery systems. Leveraging expertise in innovative drug delivery systems that enable patients to conveniently, easily, and safely self-administer their therapy anytime anywhere, we

eliminate the need for needles!

Aradigm's two proprietary technology platforms, AERx® and Intraject®, are designed to efficiently deliver liquid formulations while offering significant patient benefits, including accurate and efficient delivery of the therapeutic agent via an easy-to-use and comfortable delivery system. Aradigm's partners also benefit from the features and benefits of AERx and Intraject, including value derived from patent protected, patient-preferred, and highly differentiated products.

#### **Pulmonary Delivery - AERx®**

The AERx system is composed of a single-use dosage form and a simple patient-controlled device. The system utilizes liquid drugs and proprietary technology to ensure that small aerosol particles are produced and inhaled at the correct flow rate in order to optimize delivery of drug in the specified area of the lung.

#### **Needle-Free Delivery – Intraject®**

Intraject is the only pen-sized, pre-filled, single-use, disposable needle-free delivery system in late-stage development. In three easy steps, drug can be rapidly and comfortably delivered to the subcutaneous region of the skin. Significant amounts of data demonstrate high patient preference for Intraject over the alternative needle and syringe.

Aradigm is a fully integrated drug delivery company, and our staff is experienced in a broad range of areas including:

- Drug Formulation
- Aerosol Technology
- Chemical & Mechanical Engineering
- **Project & Process Management**
- Clinical & Regulatory Strategy Implementation





The unique design of the Intraject® Needle-Free Drug Delivery System will delight patients and physicians alike. The Intraject system is prefilled and disposable, offering rapid delivery in three simple steps. It's ideal for a broad range of proteins, peptides, monoclonal antibodies, viscous liquids and small-molecule drugs. Plus, Intraject is pen-sized and is overwhelmingly preferred by patients to autoinjectors and conventional needles and syringes. All while demonstrating bioequivalence to subcutaneous injections—but without a needle. You'll be delighted with Aradigm, too. As a fully integrated drug delivery company, our highly experienced, specialized development teams will move your product into the marketplace quickly and efficiently. To learn more about the proven, proprietary Intraject system, call Aradigm today. And bring the wow factor to your brand.





## **BASF**

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#### **Company Description**

BASF helps pharmaceutical companies to be successful with:

- a broad portfolio of excipients and active ingredients;
- contract manufacturing services including pharmaceutical finishing and exclusive custom synthesis;
- the services of an experienced technical staff with industry-specific formulation expertise.

BASF offers excipients and active ingredients with proven quality and reliability, and expertise in chemistry that dates back to 1865.

#### **Products and Services**

BASF offers excipients such as Kollidon® binders and disintegrants, Ludipress® direct tableting aids, Lutrol® and Cremophor® solubilizers and emulsifiers, and Kollicoat® coatings. Actives include ibuprofen, pseudoephedrine, ephedrine, caffeine, theophylline, and retinols. BASF's Shreveport, La., pharmaceutical finishing plant is a flexible, high capacity site for the manufacture of solid and semi-solid tablets, capsules, liquids and creams.

#### What's New

*Kollicoat*\* *IR* polyvinyl alcohol-polyethylene glycol graft copolymer, which offers low viscosity, high flexibility and high solubility to help pharmaceutical companies reduce costs and coating time and improve quality.

Kollicoat IR White, a ready-to-use coating system based on Kollicoat IR.

Kollidon® VA 64 Fine copovidone, a dry binding agent that improves tablet hardness and friability.

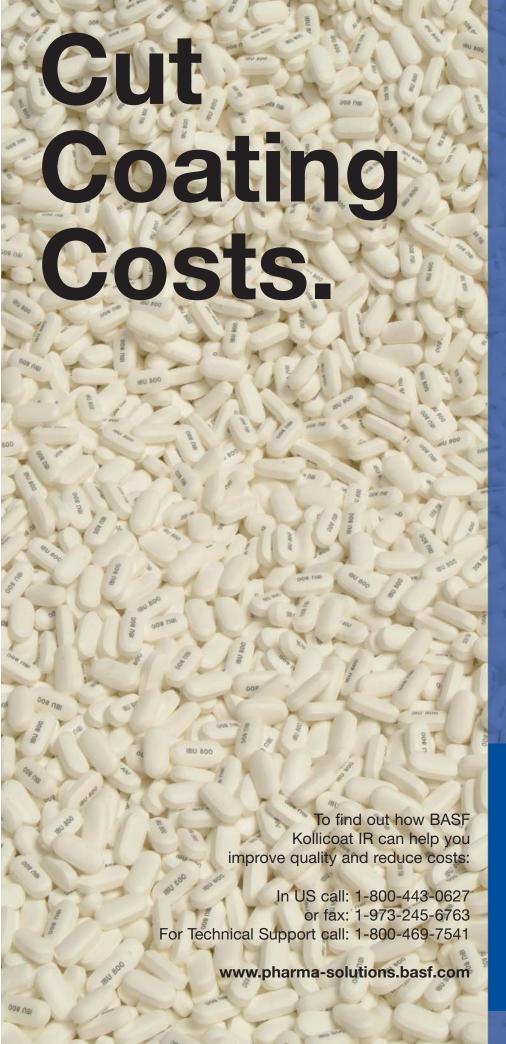
Lutrol<sup>®</sup> micro 68 and Lutrol micro 127, micronized poloxamers that provide content uniformity and compatibility for poorly soluble actives.

#### Services

BASF's Shreveport, La., pharmaceutical finishing plant is a flexible, high capacity site able to handle the manufacturing of solid and semi-solid dosage forms of tablets, capsules, liquids and creams. The site has been producing quality pharmaceuticals for nearly two decades and is among the leading U.S. manufacturers of prescription-strength ibuprofen tablets. The facility meets cGMP and is able to handle up to Schedule II compounds, from raw materials through packaging of finished product. Our capabilities include: manufacturing of solid dosage forms: aqueous and solvent granulations, compression, coating, printing, manufacturing of creams and liquids and packaging.

On the exclusive custom synthesis side, BASF is building a new, multi-product plant for pharmaceutical active ingredients – an expansion of our current production site in Minden, Germany.

BASF's Technical Service Center in Ledgewood, N.J. houses laboratory equipment used for dosage-form formulations and physical/chemical analysis. Our pharmacists and chemists provide specialized expertise to assist customers with their product and process developments. One of the main advantages of this facility is its New Jersey location – which is close to many pharmaceutical companies and their research and development laboratories.



#### Kollicoat® IR Reduces Coating Time and Improves Quality

BASF helps you reduce time and costs for the coating process – and improve quality – with Kollicoat IR polyvinyl alcohol-polyethylene glycol graft copolymer. With its low viscosity, high flexibility and rapid rate of dissolution, Kollicoat IR can be applied in spraying solutions at a high-solids content. Kollicoat IR is one example of BASF's comprehensive portfolio of coatings, which includes:

Kollicoat EMM 30 D Poly(ethylacrylate, methyl methacrylate)

Kollicoat MAE Enteric Coatings Methacrylic Acid/Ethyl Acrylate Copolymers

Kollicoat SR 30 D Polyvinyl Acetate

BASF offers a full range of binders, disintegrants, solubilizers and high quality active ingredients, plus pharmaceutical finishing and exclusive custom synthesis – all supported by an experienced and expert technical services staff that can provide solutions to your formulations challenges.

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Baxter Healthcare Corporation's BioPharma Solutions business offers

proprietary technologies and best-in-class contract

services, addressing outsourcing needs throughout development and commercialization of parenteral (injectable and pulmonary) drugs. The company has partnered with more than 150 clients, working with the top 15 bio/pharmaceutical companies.

#### **Contract Services**

Baxter is a parenteral market leader providing a range of proven contract services from process development of biopharmaceutical active ingredients to form/fill/finish of drug product into syringes, vials, and cartridges. Baxter offers the advantage of providing cytotoxic contract services from chemical synthesis (API) to scale-up for commercial production. With over 15 years of experience, we provide contract development and manufacturing services for antibodies and protein therapeutics. Our licensed facilities in Hayward and Thousand Oaks, California, have capacity for pre-clinical to commercial scale production.

Baxter's Bloomington facility has expanded capacities for syringe and vial filling/finishing; it has added new capability in cartridge filling/finishing, as well as a fully automated kitting line. Lyophilization capacity has increased along with the establishment of the Lyophilization Center of Excellence. Baxter can also provide analytical and microbiological services as well as validation and regulatory assistance.

#### **Proprietary Formulation Technologies**

NANOEDGE dispersion technology offers innovative formulations for your solubility challenges and is applicable for multiple routes of administration. It reduces the particle size of most drugs to nanometer size, which can enhance a drug's saturation solubility and dissolution rate. It

also eliminates the need for undesirable cosolvents and can offer higher drug loading and subsequent lower dose volume.

The PROMAXX microsphere technology is a unique, elegant, and cost-effective formulation platform, tailored to fit your specific requirements. It is applicable to a broad range of molecules - from small molecules and nucleic acids to peptides and proteins. PROMAXX technology can offer high-drug loading and precise particle size control and enable dosing flexibility across various administration routes, such as injectable, and pulmonary with various drug-release profiles, such as immediate and sustained release.

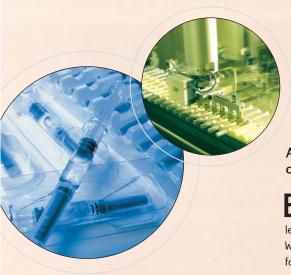
#### **Enhanced Packaging**

Baxter also offers an extensive portfolio of Ready-To-Use and Ready-To-Mix systems that can help differentiate your molecule and simplify endusers' drug preparation and administration. An established franchise into critical care clinicians globally supports end-user acceptance and market presence.

#### **Corporate Relationships Sought**

Baxter is actively pursuing and strengthening partnerships including co-development opportunities, out-licensing of internally developed products, strategic and/or full development programs.

# A shot of innovation saves you time and money



Although our name has changed, the Baxter Bloomington, IN, facility's commitment remains focused on your parenteral contract services needs.

Baxter BioPharma Solutions is the innovative parenteral contract service leader of prefilled syringes in North America. We have streamlined the process needed for validation of sWFI, bWFI, and customized prefilled diluent syringes. This innovation gives you significant savings in costs and resources to help accelerate your prefilled diluents to the marketplace.

A history of innovation

But this innovation comes as no surprise. Our history of innovation in parenteral contract services began in the mid 1990s. Since then, we have become the parenteral contract services leader for prefilled syringes with the capacity to fill vaccines, biologics, biotech, specialty diluents, and other injectables.

Today, our capabilities include syringe filling to meet your clinical and commercial needs. We fill syringes in sizes from 0.5 to 20 mL. In sizes 1 to 3 mL, our state-of-the-art equipment can fill up to 300 million BD HYPAK® syringes a year. The Bloomington, IN, facility is designed to meet regulatory requirements, including aseptic formulation in a Class 100 environment. By continuing to

improve and expand our facilities, we ensure that we will have the equipment and processes you need to get your products to the market.

#### **Built-in flexibility**

Flexibility is a key component in parenteral manufacturing, and our facilities are continually expanding to ensure we can meet your demands, including lyophilized vial and diluent syringe kitting as well as customized labeling and packaging.

Our commitment to excellence ensures we will remain the industry leader and continue to be your partner for success.

To learn more about our capabilities, call 1-800-353-0887, e-mail busdev@baxter.com, or visit www.baxterbiopharmasolutions.com

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BD Medical - Pharmaceutical Systems is the industry leader in providing quality, prefillable parenteral drug delivery systems for the pharmaceutical industry. Whether it is a prefilled syringe, nasal drug delivery system, IV infusion system, diluent syringe, dry drug reconstitution system, a safety needle, or the latest

in self-injection technology, BD delivers.

Prefills can be added at any point during a product's life cycle to make it more desirable. Whether you want to go from vials to prefilled syringes, or syringes to a nasal spray, prefills can be added as easily to products that are in development as those already on the market. Today's drug delivery systems must evolve and adapt to meet tomorrow's demands. That is the concept behind our parenteral drug delivery systems – constantly rethinking and reforming parenteral drug delivery products to keep up with the advances of modern healthcare.

We provide cost-effective alternatives to conventional drug delivery, innovative designs that meet healthcare professionals' demands, and patient-friendly products to fulfill home healthcare needs. BD is dedicated to developing drug delivery systems that set the standard. With more than 100 years of experience, BD provides the expertise and experience you need in your drug delivery partner. We customize our delivery systems to the unique requirements of each product, and provide the support and resources to help you achieve your goals.

#### **BD™ Self-Injection Solutions**

Bringing you solutions for the home care market



#### BD Liquid-Dry Pen

While most patients can use the traditional vial and syringe effectively, it can also prove to be complicated and inaccurate for those who are young, elderly and/or physically/visually impaired. Patients must gauge the dose visually and typically inject air into the vial before withdrawing the product. The BD Liquid-Dry Pen is easier, more convenient and portable than syringes and vials.

This pen allows the patient to reconstitute and inject with a single device. In only seconds the patient can have your drug reconstituted, primed, and ready for injection without the use of additional needles or complicated reconstitution devices.



Helping all people live healthy lives

- Automatic reconstitution
- Automatic priming
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For more information, please call 800.225.3310 or visit www.bdpharma.com

#### **BD Medical**

Pharmaceutical Systems 1 Becton Drive Franklin Lakes, NJ 07417 BDPS\_marketing@bd.com





Cardinal Health
14 School House Road
Somerset, New Jersey 08873
T: (732) 537-6200 • F: (732) 537-5949

E: pts@cardinal.com Website: www.cardinal.com/pts



Cardinal Health provides its pharmaceutical and biotechnology customers integrated, enabling technologies, and services that help bring quality products to market faster and deliver greater value. From laboratory to launch and beyond, Cardinal Health offers an unmatched range of world-class technologies and services to help our customers accelerate drug development, streamline the supply chain, and grow market share. Serving the pharmaceutical and biotechnology industry, Cardinal Health is a global leader in development,

drug delivery technologies, contract manufacturing, packaging, and product launch services. With several decades of experience and more than 1,500 patents and patent applications, Cardinal Health brings its customers innovative expertise throughout a drug's development, launch, and entire life cycle. Cardinal Health also offers the broadest range of dose form manufacturing options in the industry - from traditional and proprietary oral forms to sterile parenterals, inhaled forms, and topicals - in 40 facilities on 5 continents.

#### **Drug Delivery Systems**

Sometimes the right dosage form makes all the difference. A significant factor in the marketing success of a new drug is how much it improves results for patients. Even the most sophisticated new compound can benefit from a formulation that will optimize bioavailability or enhance patient compliance. Cardinal Health has a track record of improving the success of many products by developing dosage forms that offer reduced side effects or have broadened acceptance among different patient types. Zydis®, for example, makes pill-taking easier for children or older patients who may have difficulty swallowing a traditional tablet. Trust the precision, speed, and ingenuity of Cardinal Health to engineer a more efficient, patent-protected formulation or dose form for your product.

#### Streamlining the Supply Chain

In every technology that we offer, we have experience in helping our customers resolve quality, formulation, and supply issues. By integrating dose form development, manufacture, and packaging, Cardinal Health can reduce time and often total cost - to shipment. And by integrating Cardinal Health's launch acceleration services, we can help you get to pharmacy shelves quicker, with greater visibility to prescribers, pharmacists, and patients. We provide the right capacity - when and where you need it. Through our global network of facilities, Cardinal Health provides our customers the manufacturing capacity and support required to meet even the most challenging launch planning requirements. And through creative arrangements for back-up manufacturing sites and dedicated capacity, Cardinal Health provides a range of creative options.

"Bioavailability issues with one of our critical care drugs had forced a manufacturing shutdown. To recover the business, we needed to find a formulation solution fast."

# "One call to Cardinal Health put us back in business."



"Using one of Cardinal Health's proprietary technologies, we were able to quickly develop an alternative delivery form that solved the bioavailability issues and put product manufacturing back on line." can help you conquer your business challenges. You can trust the pharmaceutical outsourcing expertise of Cardinal Health for other phases of your business as well, including:

- Drug Development
- Manufacturing
- Packaging
- Professional Marketing Services

For capabilities that meet your needs, and outcomes that exceed your expectations, call on Cardinal Health.







Cirrus Pharmaceuticals, Inc.
P.O. Box 14748

Research Triangle Park, North Carolina 27709-4748
T: (919) 884-2064 • F: (919) 884-2075
E: info@cirruspharm.com
Website: www.cirruspharm.com



#### Cirrus Pharmaceuticals, Inc. is a

contract product development company assisting biotechnology and pharmaceutical companies with dosage form development projects. With partnerships that span the globe, Cirrus works with

start-up, mid-size, and multinational companies. Cirrus can assist or manage projects as needed by providing a broad array of R&D services, including physical and chemical characterization, formulation development, stability testing, container/closure selection, process development, scale-up and technical transfer to manufacturing for inhaled, oral, topical, and parenteral products. Services can include submission-ready regulatory documentation and assistance with regulatory submission questions.

Cirrus was founded and incorporated in June 1997 by Anthony Hickey and Jean-Marc Bovet. The company is headquartered in Research Triangle Park, North Carolina.

Since its creation, Cirrus has exponentially expanded its capabilities to include many aspects of drug development. The growth of the company is due largely to its focus on providing timely research and project development support to the pharmaceutical industry. One of the biggest assets of the company is the diverse professional and educational backgrounds of the staff. The experienced professionals at Cirrus work side by side with our sponsors to ensure that all their research goals are achieved. The commitment of Cirrus to exceptional service is reflected in our high rate of return business. It is the combination of scientific competency and the timely delivery of quality services that keeps our sponsors coming back time and time again.

#### Strategic Product Development



From drug characterization, to NDA submission, to market, our strategic product development teams help bio-technology and pharmaceutical companies around the world characterize, formulate, and scale-up products to meet critical business timelines. Moreover, our strategic approach helps maximize returns on investments by shortening development cycles to keep costs low.

Through close collaboration with our sponsors, our highly experienced scientists work to combine state of the art instrumentation in a cGMP regulatory compliant facility with customized development strategies for each project. So, whether your company needs inhalation, parenteral, topical, oral, specialty dosage forms or a range of sample-based services, feasibility studies, or full-scale product development, we are here to assist you. Contact us today!

#### **Cirrus Product Development Services:**

- Physical & Chemical Characterization
- Fine Particle Generation & Particle Size Analysis
- · Formulation Development
- Reformulation
- Peptide and Protein Formulation & Characterization
- Device Evaluation
- · Pharmaceutical Analysis
- · Stability Testing
- Process Development
- · Manufacturing for GLP Toxicology Studies
- Line Extension
- Product Maintenance
- · Scale-Up and Technical Transfer to Manufacturing
- Packaging Component Evaluation & Selection
- · Manufacturing Oversight and Batch Release
- Regulatory Submission







#### **Coating Place Inc.**

THE ORIGINAL WURSTER TECHNOLOGY SOURCE

The Coating Place, Inc. 200 Paoli Street Madison, WI 53593 T: (608) 854-9521 • F: (608) 845-9526

> E: info@encap.com Website: www.encap.com



**Coating Place Inc.** specializes in Wurster fluid bed microencapsulation of fine powders, granules, crystals, and beads. We provide contract formulation development, technology transfer, scale-up, and commercial manufacturing in a GMP environment with analytical support. Coating Place formulation chemists have been able

to apply this process to particles ranging from less than 50 µm

up to several centimeters in diameter. Our facility has organic solvent capabilities that allow formulations to be developed in either solvent or aqueous coating processes. Coating properties can be optimized with formulation, coat percent thickness, and other processing parameters.

Our new ion resin drug-release system allows us to create 12-hour time-release liquid suspensions that can match the profiles of sustained-release solid dosage forms. These easy-to-swallow liquids make it simple to take your medicine wherever you go.

The original management, with 34 years of Wurster coating experience, remains active in the development of formulations and new technology. Our production staff includes numerous employees with more than 20 years of coating experience. Our history and expertise in this coating technology is unmatched in the industry.

Coating Place provides Wurster coating and other manufacturing services to the following markets:

- Rx, Branded, and Generic
- OTC
- Controlled Substance (Schedule II -V)

Services offered include tablet compression, capsule filling, and pan coating for both R&D and commercial manufacturing. Coating capabilities include softgels, hard shell capsules, and tablets. Development applications include controlled oral delivery, such as enteric, delayed, or sustained release. Other coating applications include moisture or oxygen barrier and taste-masking.

Our 110,000-sq-ft FDA-registered facility is located in Verona, Wisconsin. Production suites are equipped with a range of Wurster fluid bed coating units that will accommodate batch sizes ranging from 0.010 to over 600 kg. Coating Place Inc. continues to develop, manufacture, and operate proprietary cutting-edge Wurster coating equipment for our operations. Our chemists have successfully developed a wide range of formulations and applied them to an equally wide range of core materials. Our formulations are designed for a wide variety of desired outcomes, including improved stability, shelf life, taste, or odor masking, enteric delivery, controlled release, sustained release, delayed release, and surface property modification. The possibilities are almost limitless. The innovative, creative staff of the Coating Place is prepared to take on all your particle, bead, or tablet coating needs. Every project is handled in a confidential manner and scheduled to meet your needs. Honest and confidential research and manufacturing services have made us the leader and most trusted in the industry.



# Drug Delivery Systems.

And formulation development, contract manufacturing...

For over 30 years Coating Place Inc. has brought innovative ideas to the marketplace. This time is no different....

People will tell you that it is impossible to create a 12 hour time released suspension... not any more. Introducing 12 hour time re-

Dr. Dale Wurster - Inventor

lease suspensions that actually taste good.
Our new ion resin drug delivery system allows us to create liquid suspensions with custom-release

profiles much like solid dosage forms. These good tasting liquids make medicine easier to swallow.



We have experience in

other types of formulation development as well; taste masking, enteric, and delayed or sustained release coatings. These applications are available in both aqueous or organic solvent systems.

From development through commercial manufacturing in a cGMP environment, Coating Place has you covered.

#### The Original Wurster Technology Source for more than 30 Years.

August, 1953 First Wurster coating patent by WARF January, 1970 Harlan Hall joins WARF lab

December, 1976 Harlan Hall founds CPI via WARF technology December, 1982 CPI introduces first Micro-Wurster (<20gcap.)

June, 1989, CPI adds 7 nozzle Wurster production unit

July, 1997, CPI develops first 3 nozzle Wurster with linear scalability 2002, CPI achieves 2 million pounds capacity



## 33rd Annual Meeting & Exposition of the Controlled Release Society

Controlled Release Society
3650 Annapolis Lane North, Suite 107
Minneapolis, Minnesota 55447
T: (763) 512-0909 • F: (763) 765-2329

E: director@controlledrelease.org Website: www.controlledrelease.org



#### The Controlled Release Society (CRS) is

an international organization with headquarters in the Minneapolis area, which serves 3,000 members from more than 50 countries. Two-thirds of the CRS membership represents industry, and one-third represents academia and government.

#### **Mission**

The Controlled Release Society is a multi-disciplinary society dedicated to the science and technology of controlled release and delivery and promoting education by releasing science to deliver a better future.

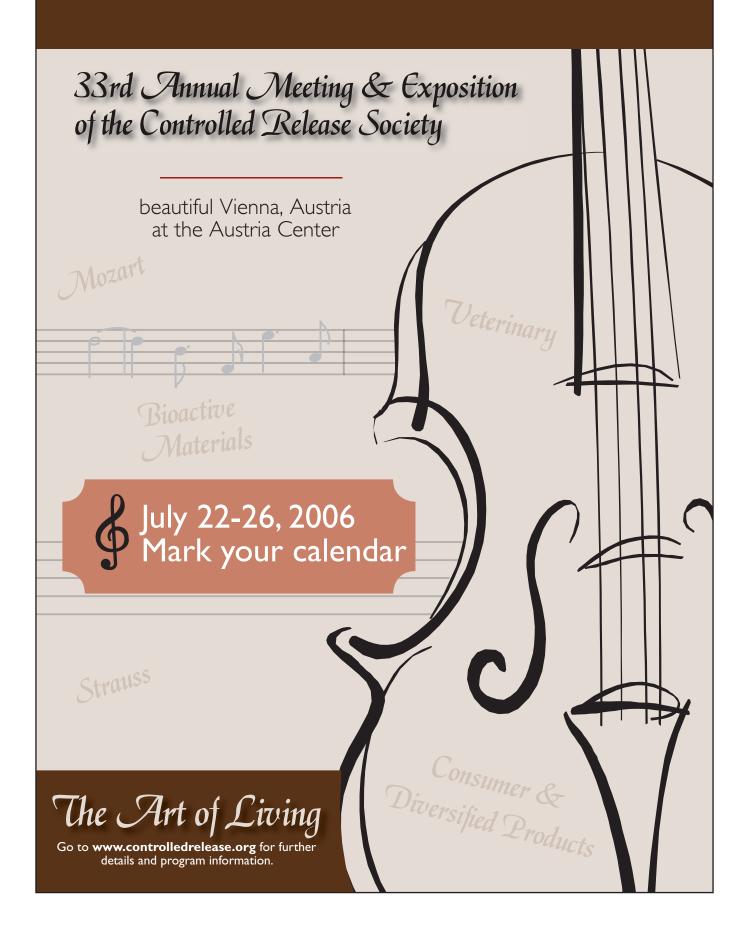
#### **Background**

Efforts to use materials to regulate the spatial and temporal release of substances for agricultural, veterinary, cosmetic, medicinal, and household applications are probably as old as mankind. The modern era of controlled release can be traced to the development of the first commercially successful oral sustained-release products in the late 1940s and early 1950s, and to the development of controlled release of marine antifoulants from rubber in the 1950s. It was in this latter field, and in other agrochemical applications, that CRS was conceived in 1973. Five years later, CRS was incorporated as a not-forprofit organization, devoted to the advancement of the science and technology of controlled release. Interest in controlled release has grown and broadened in scope ever since, due to the realization of the economic, therapeutic, and social benefits that can be derived from controlled-release technology. A clear understanding of the "added value" of controlled release is crucial for all parties involved in human and animal healthcare and other applications.

#### **Science**

Controlled release is the field of scientific activity concerned with the control in time and space of the biological effects of therapeutic agents in human and animal health, and of other active agents in environmental, consumer, and industrial applications. The objective may be to prolong the duration of action of an active agent, to minimize adverse reactions, or to maximize efficacy. This objective may be achieved by control of diffusion, reaction rates, or other physicochemical parameters through the use of rate-controlling materials, manipulation of the appropriate biological barriers, targeting, or manipulation of the fate of the agent once beyond these barriers. Controlled release draws upon the expertise of many disciplines: chemistry, chemical engineering, pharmaceutics, physics, materials science, and the biological sciences—biochemistry, biophysics, molecular biology, physiology, cell biology, medicine, etc. Newer approaches, such as gene therapy, are being addressed as other forms of controlled release. The science of controlled release has become a research discipline whose future depends on a thorough understanding of the interactions between the delivery system and the biological or environmental barriers to delivery of active substances.

#### You are cordially invited.....



#### degussa.

creating essentials

#### **USA**

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E: pharma.polymers@degussa.com
Website: www.pharma-polymers.com



#### Who we are

The Pharma Polymers business line belongs to the Specialty Acrylics unit of the Röhm GmbH & Co. KG, a subsidiary of the Degussa AG, the global leader in specialty chemistry.

Pharma Polymers is one of the world leaders in the manufacturing and supplying of functional coatings for the pharmaceutical industry. Based on more than 50 years of know how, Pharma Polymers is a strategic

partner for the industry and supports the customer at all stages of formulation development.

#### **EUDRAGIT®**

EUDRAGIT® is the trade name for copolymers derived from esters of acrylic and methacrylic acid, whose properties are determined by functional groups. EUDRAGIT® polymers are today's products of choice for solid oral formulations. The following possibilities exist for controlled drug release:

- Enteric Coatings (GI targeting,)
- Sustained-release Formulations (delayed drug release).
- Protective Coatings (taste and odor masking, protection against moisture)

#### **Drug Delivery Technologies**

Based on more than 50 years of experience in EUDRAGIT® polymer design and formulation know-how for pharmaceutical applications, Pharma Polymers has developed advanced oral drug delivery technologies:

- **EUDRACOL**™
  - Colon-targeted sustained-release oral drug delivery technology
- EUDRAPULSE<sup>TM</sup>

Oral drug delivery technology providing variable lag times and pulsatile release profiles

**EUDRAMODE**<sup>TM</sup>

Oral drug delivery technology platform providing diffusion- and time controlled modulated release

#### **Customer Benefits**

Pharma Polymers is a strategic partner, providing global support for local custom-tailored applications: from formulation development via enhanced formulation technologies to unique customer products with individually designed release profiles.

#### Pharma Polymer belps you to:

- increase your efficiency of R&D
- reduce time to market
- make your production efficient
- mange the Life Cycle of your product

Our international network of technical service centers gives you on-site support at every stage of pharmaceutical development, with the same high quality standard and flexible performance anywhere in the world.

#### Capabilities

- Design: product development, formulation modifications, feasibility studies
- Process: process optimization, scale-up/ technology transfer, GMP conditions
- EUDRAGIT\*: portfolio with enteric, protective or sustained-release properties
- Solutions to Customers: flexible drug delivery design and life cycle management

ecember 2005 Vol 5 No 10



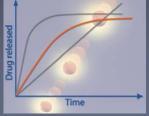
#### creating essentials

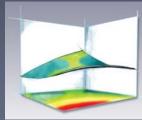
#### EUDRAGIT Power Through Flexibility

Add flexibility and power to your development process with EUDRAGIT. Our wide range of polymers allows you to design any number of combinations to match your targeted release profile.

#### **Designing Drug Delivery**









ect Target

Optimization

Product







Dow Corning Corporation
PO Box 0994
Midland, MI 48686
T: (989) 496-6000 • F: (989) 496-6731
E: product.info@dowcorning.com

Website: www.dowcorning.com/content/healthcare



**Dow Corning** is the global leader for healthcare solutions using silicone technology. For more than five decades, Dow Corning has drawn upon the versatility and biocompatibility of silicones to help customers develop innovative solutions for drug delivery, pharmaceutical processing, wound care, and medical device

fabrication. Our approach to provide solutions for delivery systems can help extend the life of key products, improve the clinical efficacy of drugs, and provide enhanced aesthetics for better patient compliance. Our continued experience in the healthcare industry as well as the quality, reliability, and innovation we bring to every project helps the materials engineer, formulator, or fabricator to develop new or improve existing products. We offer one of the most expansive lines of performance-enhancing materials for healthcare in the industry materials that are safe and beneficial in numerous applications. For more information visit Dow Corning's website or sign up for our newsletter updates on emerging technologies in healthcare!



Dow Corning can help you create optimal delivery systems for the controlled release of active ingredients. Our silicone materials, technologies and expertise deliver:

- Improved bio-availability of actives
- Biocompatibility, nonirritating, and nonsensitizing
- Customization of existing technologies to meet your needs
- Properties desirable for controlled release: conformability, barrier properties
- Improved comfort and aesthetics
- Solutions

Visit us on the web at www.dowcorning.com/healthcare.



Adhesives for transdermal drug delivery systems

Film-forming technologies to form in situ drug delivery patches

Excipients for topical drug delivery systems

Elastomers for controlled release devices-films, inserts and implants

**Coatings** 

Fluids and emulsions

Active Pharmaceutical Ingredients



36



Dowpharma
The Dow Chemical Company
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San Diego, California 92121
T: (800) 745-7475 • F: (858) 352-4560
E: dowpharma@dow.com
Website: www.dowpharma.com

#### Dowpharma is a business unit of The Dow Chemical Company.



Dowpharma<sup>SM</sup> contract manufacturing services delivers innovative technologies, products, and services in drug discovery, development, delivery, and manufacturing to pharmaceutical and biopharmaceutical companies. Dowpharma has one of the broadest capabilities in the global outsourcing industry with services that include process development, route selection, methods development, custom solubilization, chiral capabilities, and associated analytical services, as well as manufacturing and scale-up from feasibility, through clinical trials, to commercial manufacturing. Customers can leverage Dowpharma's experience and track record to transport their biopharmaceuticals from discovery to commercialization.

Dowpharma offers a broad spectrum of process development and manufacturing services for the production of recombinant proteins, peptides, and vaccines from microbial hosts.

- Systems biology approach
- Application of bioinformatics, genomics, functional genomics & genome scale metabolic modeling
- Unmatched fermentation infrastructure enabling innovative experimental design & rapid execution
- · World-class analytical capability enables complete characterization of proteins
- Structured & disciplined project execution teams

Dowpharma's P fenex Expression Technology M, a P seudomonas-based technology for the production of recombinant proteins is built around specially designed strains of P seudomonas fluorescens.

#### Pfenex Expression Technology:

- Improves yields through very high cell density fermentation and higher specific protein expression per cell
- Avoids the complexity and inefficiency of protein refolding through soluble expression
- Enables expression of hard-to-express proteins, peptides, Fab's, single-chain fragments, and antigens
- Contains a full set of applicable host vectors & promoters
- Does not require the use of antibiotics or animal-derived components at any point in the production process

Pfenex Expression Technology is a cost-effective alternative to traditional synthetic methods and a more efficient long-term option for the production of peptides exceeding 25 amino acids. The improved yields translate into lower cost of goods, while strain optimization helps to eliminate production problems early and avoid costly delays on the back end. This technology can be combined with other Dowpharma technologies, such as PEGylation and the BioAqueous<sup>SM</sup> solubilization services, to positively impact a product's bottom line.

Dowpharma also develops high-quality activated PEGs with fully characterized functionality and lot-to-lot consistency. PEGs are a proven drug delivery technology that can extend the half-life of a drug candidate and reduce dosing frequency. Customers can take advantage of Dowpharma's royalty-free pricing and complete PEGylation conjugation services and support to PEGylate a protein, peptide, antibody, or oligonucleotide fragment-based biopharmaceutical. Molecular weights can range from 5 to 40 kDa. Additionally, Dow offers BioAqueous<sup>SM</sup> solubilization services designed to help pharmaceutical and biopharmaceutical companies address complex challenges of dissolution-rate limited drug compounds. Based on a portfolio of solubilization technologies, Dow provides evaluation of customers' drug compounds, development of tailored solutions for drug solubilization, provision of materials for clinical trials, and licensing of technology to help their clients successfully develop their drugs.

With its biopharmaceutical enterprise headquartered in San Diego, Dowpharma is focused on becoming a process development partner with its customers, as well as providing control and flexibility in enhancing the expression and production of therapeutics. Dowpharma has the infrastructure to handle the rapid and linear scale-up of process development programs from analytical development through a technology transfer to a cGMP manufacturing facility, such as those in Dow's external Contract Manufacturing Network. Customers can jump onto Dowpharma's process development pathway at any phase.

Dowpharma's San Diego site consists of four facilities housing commercial, project management and operational staff, as well as researchers and scientists working and operating in microbiology laboratories and pilot plants. Capabilities at the site include:

- Molecular biology
- Bioprocessing, including process development & scale-up for fermentation (20 L- 1500 L), recovery & purification for microbial-based processes
- Analytical method development
- Pfenex Expression Technology for the production of therapeutic proteins, peptides, scFvs, and fAbs
- Solvent Extraction Technology for the efficient recovery of protein from production media



#### **Build a better PEGylation team**

If you're looking for a PEG supplier who is responsive and affordable, Dowpharma<sup>SM</sup> contract manufacturing services is the perfect fit. As a part of your team, we'll focus on delivering quality activated PEGs with the known functionality and lot-to-lot consistency. Take advantage of Dowpharma's complete PEGylation conjugation services and support for PEGylating your antibody fragment, protein or peptide. We'll leverage our process knowledge, analytical and regulatory expertise as well as our production capabilities to assist you in taking your product through clinical development and into commercialization.

- Quality activated PEGs
- Fully-characterized
- Competitively priced
- · Royalty-free business model
- Complete PEG conjugation services and support

Come talk to us. We start by listening.



#### www.dowpharma.com

dowpharma@dow.com 1-866-332-5805 in the U.S. and Canada; +44-1223-728048 in Europe

#### **Dowpharma**<sup>ss</sup>





#### **DPT**

318 McCullough

San Antonio, TX 78215 T: (866) CALL DPT • F: (210) 829-8733

> E: confidence@dptlabs.com Website: www.dptlabs.com

Founded: 1990 No. of Employees: 1500



#### **Key Personnel**

Paul Dorman, CEO; John Feik, COO; Paul Johnson, President; Paul Josephs, Vice President Sales and Commercial Operations; Marc Iacobucci, Vice President Project Management and Marketing

#### **Company Description**

**DPT**, a DFB Pharmaceuticals, Inc. company, has a reputation for quality, expertise, leading-edge technologies, and an excellent regulatory compliance record - reasons why DPT is the market leader in semi-solid and liquid contract services. DPT provides customers confidence in full-service, turnkey, or stand-alone development, production, packaging, and worldwide distribution services for a variety of semi-solid and liquid, Rx, biopharmaceutical, and consumer products. DPT has turned the science of formulation into an art. Employing over 100 of the industry's top scientists, DPT can find a solution for every formulation. DPT scientists have expertise in pre-formulation, formulation and analytical development, scale-up, validation, and stability. DPT provides distinctive platform technologies with proven performance benefits to optimize delivery and stability of active ingredients. And as one of the fastest growing R&D groups in the industry, DPT offers two of the newest drug delivery methods – aerosol foam and intranasal.

#### **Services**

#### **Advanced Development Solutions**

DPT has expertise in pre-formulation, formulation and analytical development, validation, and stability. DPT can find a solution for every formulation and manage your product through to commercialization.

#### **Specialized Production Solutions**

DPT conducts scale-up, site transfers, and commercial manufacturing of complicated Rx, biotech, and consumer products – even hard-to-handle substances – in various batch sizes.

#### **Innovative Packaging Solutions**

Offering comprehensive packaging solutions from solid and semi-solid to liquid, DPT also specializes in unique delivery systems, such as aerosol foam and intranasal.

#### **Facilities**

Headquartered in San Antonio, Texas, DPT has four facilities there and two in Lakewood, New Jersey, with approximately 1 million square feet of state-of-the-art development, manufacturing, packaging, and distribution space.



#### THE ART OF DEVELOPMENT

Formulation. It's a science. But add the ingredient of passion and the process becomes an art. Our passion for creating unique formulations is what enables us to approach every formula from a fresh and creative perspective. It's what allows us to exceed our customers' expectations. And it's what makes us a leader in pharmaceutical development and full service commercial manufacturing. Visit us online at www.dptlabs.com or call 1.866.CALL.OPT to discover how we can add passion to your next formula. SEMI-SOLIDS. LIQUIDS. NASAL SPRAY. AEROSOL FORM. COMPLEX DELIVERY FORMS.

#### **Company Profile**

10th Annual Drug Delivery Partnerships January 25-27, 2006 JW Marriott Desert Ridge Resort & Spa Pheonix, AZ

## Drug Delivery Partnerships<sup>™</sup>

Drug Delivery Partnerships (IIR)
708 Third Avenue, 4th Floor
New York, New York 10017
Conference Director: Lesly Atlas
T 212-661-3500 • F 212-599-2192
Website: www.drugdeliverypartnerships.com

#### **Drug Delivery Partnerships**

Over the past nine years, Drug Delivery Partnerships (DDP) has become the premier international industry event focusing on business alliances between pharmaceutical and drug delivery companies. The drug delivery industry is currently seeing a shift and DDP 2006 reflects changes in the industry that are driving the growth of specialty pharma as a successful business model and how companies are steering product development through alliances and partnerships.

Additional themes in 2006 address innovation, partnering and drug delivery technology advances, responding to the generic drug market with lifecycle management strategies, approaches for combination products and much more.

As we reach our milestone 10th anniversary, our goal is to provide an unparalleled educational and networking forum to assist in getting you one step closer to the deal.

#### **DDP 2006 PROGRAM HIGHLIGHTS**

#### **KEYNOTE ADDRESSES**

Using Disruptive Innovation to Create Tomorrow's Growth Today

Michael E. Raynor, PhD, Director at Deloitte and Co-Author with Clayton Christensen of the bestselling The Innovator's Solution: Creating and Sustaining Successful Growth

Building Drug Delivery into a Global Biotech Opportunity
Frank Baldino Jr, PhD, Chairman and CEO of CEPHALON

Specialty Pharma - Opportunities through Acquisition, Developing, and Partnering

Carol A. Ammon, Chairman of ENDO PHARMACEUTICALS

#### "PARTNERSHIPS" ADDRESS

Partnerships for Better Health: Realizing the Promise of the Biomedical Endeavor

Peter B. Corr, PhD, Senior Vice President, Science and Technology at PFIZER

#### SENIOR EXECUTIVE KEYNOTE PANEL

Portfolio Balance and Optimization: The Pipeline Challenge
Pat McCullough, Group Vice President, Corporate Planning and
Business Development, TARO PHARMACEUTICALS

Klaus Nickisch, Vice President Portfolio Management, BERLEX PHARMACEUTICALS

Jim Schaeffer, Executive Director Licensing and External Research, MERCK RESEARCH LABORATORIES

Michael D. Step, Senior Vice President, Corporate Development, SANTARUS

#### WALL STREET ADDRESS

Drug Delivery and Specialty Pharmaceuticals: Past Successes and Future Challenges

David M. Steinberg, Managing Director, Equity Research, Specialty
Pharmaceuticals and Drug Delivery, DEUTSCHE BANK

The only event with an intensive full-day **Specialty Pharma Forum** 

The largest comprehensive Drug Delivery and Specialty Pharma event driving product development through alliances and partnerships

January 25-27, 2006 • JW Marriott Desert Ridge Resort & Spa, Phoenix, AZ

# The 10th Annual

The Event that Gets You One Step Closer to the Deal

#### **KEYNOTE AND FEATURED SPEAKERS**



Michael E. Raynor, PhD THE INNOVATOR'S SOLUTION



Frank Baldino Jr, PhD Chairman and Chief **Executive Officer** CEPHALON



Carol A. Ammon Chairman ENDO **PHARMACEUTICALS** 



Peter B. Corr, PhD SVP, Science and Technology PFIZER



Managing Partner WINDHOVER INFORMATION



Pat McCullough Group VP, Corporate Planning & BD PHARMACEUTICALS



Nickisch, PhD VP & Project Portfolio Management BERLEX



Michael D. Step SVP, Corporate Development SANTARUS



James Schaeffer, PhD Exec. Director Licensing & External Research MERCK



#### **KEY DELIVERABLES YOU WILL TAKE AWAY**

#### Create Your Ideal Conference Experience:

- 35+ perspectives on building partnerships and managing successful alliances
- 40+ insights on addressing challenges of the specialty pharma business model
- 40+ perspectives on differentiating your products in a crowded marketplace 30+ views on the current market value and future potential of drug delivery and
- specialty pharma
- 35+ presentations on business development, innovative technology, delivering to biotech, responding to the generic drug market and approaches for combination products

...and much more

#### BUSINESS EXCHANGE SERVICES AND OPPORTUNITIES

#### Leverage your investment further by taking advantage of:

- DDP's brand new on-line networking service enabling you to set up meetings before you arrive
- Exclusive access to 300+ companies representing pharma, biotech, specialty pharma, drug delivery markets and more
- Private meeting space for one-on-one and group meetings
- Meeting planning services for large company on-site meetings
- Exhibit hall showcasing over 100 companies' products and services
- 2 receptions to extend your interactive event experience into the evening

#### ND M&A ADVISORS



DEUTSCHE BANK



**Bob Maggiacomo** SYNERGY ADVISORS



**Todd Davis** PAUL CAPITAL PARTNERS

Robert More

DOMAIN ASSOCIATES



Donald Filis THOMAS WEISEL PARTNERS LLC



lan Sanderson SG COWEN



A.M. PAPPAS & **ASSOCIATES** 

Arthur J. Klausner



VERSANT VENTURES



David Palella **BIOSCIENCE VENTURES** 



Philip L Smith, PhD SR ONE

To Register CALL 888-670-8200 or 941-951-7885 FAX 941-365-2507 EMAIL register@iirusa.com

www.drugdeliverypartnerships.com

Please mention priority code P1136DDT2 when registering.





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E: info@emersonresources.com Website: www.emersonresources.com Contact: Walter Strathy, Business Development

Date Founded: 1987



#### **Corporate Description**

Emerson Resources, Inc. delivers industry-leading research, development, technical services, technical training, and value-added ingredients to the pharmaceutical industry. Emerson Resources, Inc., as it exists today, is the result of three technology companies joining forces. The principals of the current corporation have over 120 years of combined experience in the industries we serve. All our associates in Emerson Resources, Inc. are highly educated and seasoned professionals.

Emerson Resources, Inc. was built on two core concepts: unmatched service quality and complete client satisfaction. Our

mission is to deliver unparalleled, value-added service, ingredients, and expertise to our customers with a dedication to honesty, innovation, creativity, and hard work; and an unrelenting commitment to quality.

#### Services

Emerson Resources, Inc. has three areas of focus: Formulation development and technical support (Emerson Pharma Services, Inc.), Technical training (Emerson Science Center), and Value-added ingredient supply (Emerson Ingredient Technology).

Emerson Pharma Services, Inc. provides delivery system development and technical services including: characterization, preformulation studies, excipient compatibility studies, analytical method development and validation, formulation development, stability studies, Phase I and II clinical supply batch preparation, process development and engineering, process capability studies, and process validation. Our lab has a schedule II-V control license.

#### **Delivery System Capability & Expertise**

- All Oral Solid Dosage Forms
- Extrusion/Spheronization
- Controlled Release Technology
- Tablet & Particle Coating
- Oral Liquids & Suspensions
- Topical (Creams, Lotions, Gels, Ointments)

Emerson Science Center provides technical and operations training. Some training offerings include: Hands-on Formulation Development, Training for Operators, Science-Based Tablet Development, Design of Experiments, and Solid Dosage Forms for Non-technical Professionals.

Emerson Ingredient Technology provides value-added coating ingredients that solve unique coating challenges. Marcoat provides a oxygen and moisture barrier film that improves delivery system stability. Plasacryl is an additive for acrylic coating systems that improves processing. Emgloss is a coating that imparts a high shine to tablets.

#### **Facilities**

Emerson Resources, Inc. is located in its own well-equipped 46,000-sq-ft building in Norristown, PA. Norristown is strategically located in the heart of "Pharma Country" at the cross roads of all major transportation routes. The building houses our development laboratory, GMP pilot plant, ingredient manufacturing facility, and classroom. The pilot plant is certified class 10,000 for manufacturing Phase I and II clinical supplies. The facility has a schedule II–V control license.



#### **RULES FOR FORMULATING FLAWLESS DOSAGE SOLUTIONS**



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When you give us your product to develop, you're putting your success in our hands. So naturally, your challenge becomes our challenge. Your success becomes our success. Our business is built on

delivering on every promise we make. And on people who inherently accept nothing less than absolute success. To transfer ownership of your next challenge, call Emerson at 610-279-7450.





#### **Eurand**

Via M. Luther King, 13 20060 – Pessano con Bornago, (Milan) Italy T: +39-02-95428-309

T: +39-02-95428-309 F: + 39-02-95745018/12 845 Center Drive Vandalia, Ohio 45377 T: (937) 898-9669 F: 937-898-9529

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EURAND'S VANDALIA, OHIO FACILITY

**Eurand** is a specialty pharmaceutical company that develops enhanced pharmaceutical and biopharmaceutical products using our innovative drug delivery technologies. Eurand is dedicated to the continued development and commercialization of breakthrough

technologies and products that better satisfy

patients' needs. To this end, the Company develops treatment options with superior safety, enhanced efficacy and convenient dosing.

For more than 30 years, Eurand has been a world leader in drug delivery. We offer comprehensive technology platforms designed to optimize the delivery of drug substances. Using these technologies, Eurand turns difficult drug candidates into easy-to-administer, successful pharmaceutical products. Additionally, our technologies can be used to enable the creation of innovative and effective products for life-cycle management. Eurand has a well-established technology portfolio that is one of the broadest in the industry. The Company's drug development efforts are based on four commercialized technology platforms:

- Bioavailability enhancement of poorly soluble drugs;
- Customized release;
- Taste masking
- Fast-disintegrating formulations.

Our commercialized technology platforms are made up of 13 novel drug delivery technologies that can be used alone or in tandem to provide unique drug delivery solutions. Eurand has a fifth technology platform, drug targeting, that, once commercialized, can be applied to small molecule and biotechnology derived products for improved drug delivery. The breadth of our technology platforms enables us to have more than one solution for any drug delivery problem.

We are experts in using our technologies to solve the most difficult drug delivery challenges and to develop novel pharmaceutical products. To date, more than 50 products, marketed by Eurand customers in over 50 countries, have been developed using our technologies.

Eurand is a global company with more than 500 employees. Its principal operating offices are in Milan, Italy. The Company has research, development, and manufacturing facilities throughout the world, including sites in Milan and Trieste, Italy; Dayton, Ohio (US) and Paris, France. For more information, please call us or visit our website, where you will find detailed technical information on our drug delivery systems.



Unparalleled Flexible Versatile Robust

#### AdvaTab The next generation ODT

Eurand's AdvaTab is an orally disintegrating tablet (ODT) technology that combines superior taste and mouth feel properties in a robust tablet. AdvaTab is unique, offering both high dose capacity and modified drug release making it the most broadly applicable ODT available. Utilization of standard tabletting processes allows for cost-efficient manufacturing and conventional packaging. The next generation ODT is here!



www.eurand.com

USA +01-937-898-9669 EU +39-02-95428-309

CUSTOMIZED RELEASE

TASTE MASKING

ENHANCED BIOAVAILABILITY



#### Company Profile



Facet Technologies, LLC
A Division of Matria Healthcare
1850 Parkway Place, Suite 900
Marietta, GA 30067
T: (770) 767-8344
F: (770) 767-7320

Website: www.FacetTechnologies.com

**Product Specialty** A critical component of many medical, diagnostic and drug delivery systems is the **patient interface device** – the hand-held component and related disposables that enable the patient (or caregiver) to safely, easily and confidently administer the course of therapy. Facet Technologies, a leader in the design, development and manufacture of hand-held devices, has the experience and available resources necessary to ensure that pharmaceutical delivery performance is optimized in the hands of the end-user.

**Corporate Description** A division of Matria Healthcare, Inc. (Nasdaq: MATR), Facet is an ISO-13485:2003 certified, FDA registered engineering and manufacturing organization providing design, development and manufacturing services to Clients in the medical and drug delivery industries. Facet has established its expertise as a leading developer and manufacturer of complex, hand-held devices, which are intuitive and precise in the hands of the end-user.

**Facilities & Clients** Located in Atlanta (Marietta and McDonough sites) and Northampton, UK, Facet has demonstrated their commitment to the stringent standards of the FDA as well as to the requirements of the international medical community. Facet's Project Managers are highly adept at driving new (or next generation) product innovations to market quickly. They continue to serve the needs of such *Fortune 100* OEM organizations as ALZA Corporation, Abbott Laboratories, Bayer, BD, Roche Diagnostics and LifeScan, Inc. (a Johnson & Johnson Co.), to name a few.

**Core Competencies** Facet's designers, engineers and support professionals are available to create proprietary designs that facilitate the safety, comfort, and efficacy of your diagnostic, medical or drug delivery technology in the hands of the end-user. Core capabilities and contract services include:

- Industrial Design
- Mechanical Engineering
- Mechanical Design
- Manufacturing Engineering Mgmt.
- Low and High Volume Manufacturing
- Regulatory Affairs
- Clinical Support/User Studies
- Distribution Logistics & Supply Chain

## Delivery Devices Engineered for Precise Performance



A critical component of many drug delivery systems is the hand-held user interface device...the device that enables the patient to safely and confidently self-dose.

Facet Technologies®, a leader in the design and development of hand-held dosing devices, has the necessary experience to ensure that your drug delivery platform is optimized in the hands of the patient.

If your delivery platform requires a handheld dosing device, contact us today. Our designers, engineers and support specialists can create proprietary design concepts and mechanisms that ensure safety and comfort to your patients.





Call 800-526-2387 (ext. 8344) Email BusDev@FacetTechnologies.com Visit www.FacetTechnologies.com





FILTERTEK INC. 11411 Price Road

Hebron, Illinois 60034 T: (800) 648-0791 (Main)

Contact: Chris Maar, Marketing Specialist

T: (815) 648-2416 E: cmaar@filtertek.com

Website: www.filtertek.com



Pinpoint precision and strict attention to details keep *Filtertek* medical filters, valves, and critical components in line with leading edge medical technology and the needs of our customers. Filtertek develops and manufactures a full range of products for use in the medical industry including products for drug delivery, respiratory therapies, surgical preparation, pharmaceutical processing, and equipment protection.

Meeting the needs of large and small OEM suppliers, the company has developed and produced hundreds of product innovations designed to provide high-performance filtration and fluid control solutions. Filtertek has cost-effective, high-quality products for any medical application from simple, traditional components to highly sophisticated devices. If the right product is not yet available, we have the expertise to design custom parts from basic specifications, such as flow rate, pressure drop, and application to better serve the needs of the ever-evolving

medical market.

Drug delivery and bioprocessing science continue to advance, providing new product development programs for Filtertek in separations technology applications. For small-scale fermentation vessels and bioreactors used in pharmaceutical applications, Filtertek is introducing a new line of 50-mm vent filters. This new 50-mm product platform will also be widely used as a medical device for procedures including laproscopic surgery, laser smoke removal, and drug admixture.

Filtertek is committed to proactive, solution-driven product development to help our customers achieve optimal results. A close collaboration with its suppliers and customers keeps Filtertek in pace with "tomorrow's" medical technology. With its wide range of product applications expertise, medical clean rooms, and strategic manufacturing locations, Filtertek is uniquely positioned as a global partner in the development of advanced products for growing medical markets. Customers' growing desire for "turn-key" projects affords Filtertek the opportunity to quickly and efficiently offer finished products tailored to the most widely used drug applications.

With so much riding on product quality and performance, designing and developing components for critical medical applications takes design ingenuity, technical knowledge, and manufacturing precision. By choosing Filtertek to produce your medical filtration and drug delivery components, you're assured of partnering with a source that puts as much into the development of your product as you do.

Filtertek, a worldwide leader in the design and manufacture of filters for the automotive, commercial, and medical industries, has nearly 1000 employees located across three continents and annual revenues of over \$90 million. The company, recognized for its innovation in the filtration industry, designs custom solutions that meet or exceed customer requirements for performance, durability, delivery and cost. Visit www.filtertek.com or call 1-800-648-0791 for more information.



## TO STAY AHEAD OF YOUR COMPETITION, IT PAYS TO HAVE THE RIGHT CONNECTIONS.



When the patent on your drug expires, so do many of your hopes for maintaining market share. But Filtertek gives you the edge you need. The first of its kind, and the last word in needle-safe drug transfer, our breakthrough technology eliminates the potential for needlesticks, contamination and waste by combining venting and transfer into one safe, spill-proof action—providing unmatched protection for those administering and receiving your drug. And unmatched protection for your bottom line. Because when your customers know they won't get stuck by a needle, they'll be more likely to stick by your drug. For more information, call 1-800-648-0791 and connect with us today.







#### Glatt Pharmaceutical Services 20 Spear Road

Ramsey, New Jersey 07446
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E: glattpharmaceuticals@glattair.com
Website: www.glattpharmaceuticals.com

Year Founded: 1954

Number of Employees: Glatt Air Techniques, Inc., USA ~ 150 Glatt Group, Worldwide ~ 1500

#### **VITAL STATISTICS**

**Key Personnel:** Glatt Pharmaceutical Services Division: Oliver W. Mueller, Executive Vice President; David Jones, Vice President Process Technology; Thomas Salus, Director Business Development; Christopher Sheehan, Manager, Manufacturing; Richard A. Collins, Manager, Product Development; Susan Saffar, Manager, Corporate Compliance; Mary Anne Dorman, Plant Engineer & Safety Manager.

Who We Are: Glatt Pharmaceutical Services is the leading global provider of solid dosage form product development, drug delivery technology, and contract manufacturing to the pharmaceutical industry. With over 30 years of experience and innovation, this division of Glatt Air Techniques, Inc., in collaboration with its global Glatt Group affiliates, continues to successfully partner with pharmaceutical companies to bring their immediate-release and complex controlled-release products to market. All of our services are provided with the greatest attention to quality and customer service.

#### **SERVICES OFFERED**

#### **Product Development**

We feature a highly experienced and accomplished group of scientists who participate in a teamwork-focused environment in the development of your products. Our R&D team has succeeded in developing products from a broad list of categories, including New Chemical Entities, Product Line Extensions, Over-the-Counter, and Generic Drug Products. Our R&D services are supported by a complete line of analytical capabilities in our newly expanded laboratory. Building on our expertise in fluid bed and solid dosage technology, we deliver a complete R&D program including:

- Formulation Development
- Process Development (Aqueous and Organic Solvent Processing)
- cGMP Clinical Trial Material Production
- Process Scale-Up
- Technology Transfer for Manufacturing

#### **Drug Delivery Technologies**

With a focus on controlled release, Glatt offers new and novel enabling proprietary technologies for both ANDA and NDA products including:

#### CPS Technology™ - Controlled Release Pellet System

Direct Pelletization
High Drug Loading (up to ~ 90%)
Dense, Spherical, and Uniform Pellets

#### $ZRx^{\text{TM}}$ Technology – Zero-Order Release Tablet System

Extended-Release Tablet Matrix System Zero- or First-Order Release Characteristics Once-per-Day Dosing

#### **Contract Manufacturing**

Our experienced staff provides first-class cGMP manufacturing of both bulk intermediates and final solid dosage form products. We are committed to a schedule of up to 24 hours/7 days a week to meet the market demands placed on the supply of your products. Our pellet manufacturing capabilities are expanding to further focus on Wurster HS drug layering and functional film coating and direct pelletization using our CPS Technology<sup>TM</sup>.

#### Glatt Pharmaceutical Services



#### Glatt Pharmaceutical Services

offers premier solid dosage form product development, drug delivery technologies, and contract manufacturing to the pharmaceutical industry. With our facilities in Ramsey, NJ; Binzen and Dresden, Germany: and Reinach, Switzerland, we provide our clients services ranging from formulation development and process scale-up, to clinical supply manufacturing and full-scale cGMP production. For over 5 decades, we have helped to produce some of the world's leading pharmaceutical products. Our global R&D and manufacturing team will treat your products with the same skill and care as we would our own.



#### **Product Development**

Solid Dosage Forms

Modified Release & Immediate Release Products

Multi-particulate Systems

#### **Drug Delivery Technologies**

CPS Technology<sup>™</sup> - Controlled Release Pellet System
ZRx<sup>™</sup> Technology - Zero Order Release Tablet System
MicroPx<sup>™</sup> Technology - Micro Pellet Delivery System

#### **Contract Manufacturing**

Global cGMP Production Sites Commercial Scale Wurster HS Systems Pelletizing & Modified Release Coating Granulating/Drying & Blending







#### Delivering Solid Experience



20 Spear Road, Ramsey, NJ 07446 • 201.825.8700 Fax: 201.825.0389 www.glattpharmaceuticals.com • e-mail: glattpharmaceuticals@glattair.com





Hovione SA Sete Casas 2674-506 Loures Portugal

T: + 351 21 982 9000 F: + 351 21 982 9118

Website: www.hovione.com

**Contact: Isabel Pina, Corporate Communications** 



#### Exclusively Focused on Pharmaceutical Fine Chemicals

Hovione is a fine chemicals Company dedicated to the process development and manufacture of active pharmaceutical ingredients (APIs) and regulated intermediates for the Pharmaceutical Industry. With FDA-inspected

plants in Europe and the Far East and a Technology Transfer Centre in New Jersey, Hovione is committed to the highest levels of service and quality. Our capabilities include process chemistry, analytical development, worldwide regulatory affairs, and kilo to multi-ton manufacture of APIs under FDA and ICH cGMP standards. With more than 45 years experience, our ability to provide customers with timely and reliable solutions that are dependable and economical has given us a worldwide reputation for quality products, superior customer service, and regulatory compliance.

#### Particle Design Technologies & cGMP Spray Drying

Hovione has recently developed new capabilities in the area of particle design, enabling the production of advanced APIs (aAPI<sup>TM</sup>). Building on our accumulated expertise in micronization, freeze-drying, and jet milling, our new state-of-the-art cGMP spray drying facilities give us greater control in optimizing crystal characteristics. With operating units at every scale, our technology supports both API synthesis and product formulation development. From just a few grams for feasibility testing at lab scale to full commercial production, Hovione can carry out complete R&D and analytical studies on particle design as per your specific product requirements. No manufacturing partner is better equipped to meet the challenges of bringing new APIs to market quickly, while ensuring "right first-time" delivery.

Your API is now available in multiple

## shapes and siZeS.

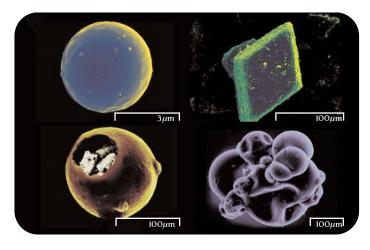
Announcing GMP spray drying at every scale.

Building on our accumulated expertise in all major areas of API development and cGMP manufacture, Hovione has further expanded its specialist capabilities in the latest particle design technology.

We have completed the installation of a state-of-the-art cGMP spray drying facility operating from just a few grams in a lab scale unit to full commercial scale, designed to support both API synthesis and drug product formulations.

Hovione offers APIs for all drug delivery systems, from oral to injectable and from inhalation to topical applications. With FDA inspected plants in Europe and the Far East and a Technology Transfer Center in New Jersey, no manufacturing partner is better positioned to support your pharmaceutical development from gram scale to commercialization.

To find out more, call us on +1 609 918 2600 in the USA and +351 21 982 9245 in Europe or visit us at www.hovione.com



Summary of the benefits provided by Hovione's spray drying equipment:

- Improved bioavailability
- Elimination of micronization issues associated with conventional grinding and jet milling processes
- Reduction of OVIs and residual solvents
- Variety of encapsulation options
- Improved product stability
- Suitable for thermally labile compounds
- Optimal sizing and shaping of particles.







#### HUBER ENGINEERED MATERIALS

Huber Engineered Materials
USA Headquarters
1000 Parkwood Circle, Suite 1000
Atlanta, Georgia 30339
T: (678) 247-7300 F: (678) 247-2797

Website: www.hubermaterials.com

#### Huber Engineered Materials - Your Expert Partner for Oral Dosage

*Huber's* expertise and innovation in oral dosage is embodied in the company's recently announced excipients and granulation options for oral dosage formulations. From carriers and glidants, to custom granulation options and advanced fast-disintegration excipients, Huber's broad portfolio of options can assist in any oral dosage challenge.

#### **RXCIPIENTS® Rapid-Disintegration Excipients (www.rxcipients.com)**

- Efficient, complete disintegration for smooth mouthfeel
- Create robust tablets for bottles or push-through blister packs
- Manufacture on your own equipment (no outsourcing)
- Avoid paying royalty fees

#### **Hubercal® Granulation (www.hubermaterials.com)**

- Naturally mined and oyster shell calcium carbonate granulation
- Customizable binder systems
- Continuous, high-volume, high-shear granulation production
- Trusted supplier to national brands

#### **RXCIPIENTS® Glidants (www.rxcipients.com)**

- Precipitated silica, not colloidal
- Create smooth, consistent powder flow
- Enables faster tablet production
- Significantly less dust

#### **Huber Carriers (www.hubermaterials.com)**

- Convert liquid API's into free-flowing powders
- Create oral solid dosage forms of liquid formulations
- Load up to 70% by weight
- Active ingredients are effectively released into the body

Huber technologists work diligently with their own tableting and excipient production equipment to simulate customer requirements. This focused approach to serving its customers has been a hallmark of the company's values for decades.

Huber Engineered Materials is part of the family-owned J.M. Huber Corporation. J.M. Huber Corporation, headquartered in Edison, NJ, is a diversified, multinational supplier of engineered materials, natural resources and technology-based services to customers spanning many industries from paper and energy to plastics and construction. With announced sales exceeding \$2 billion, J.M. Huber Corporation is one of the largest family-owned companies in the United States.



Introducing RxCIPIENTS® FM1000 from Huber Engineered Materials, an excipient that enhances tablet disintegration. It's **fast**, with tablet disintegration in 5-30 seconds. It's **strong** – low tablet friability allows for standard packaging. It provides **consistent tablet disintegration**. It's the excipient you can **formulate in house** without need for a drug delivery company. Request a sample or learn more at www.rxcipients.com or by calling Huber Engineered Materials at 866-881-6480.









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Contact: Fred H. Miller

# Arthritis Relief Solubilized Ibuprofen (outer capsule) Anti-Emetic Solution (outer capsule)

Solid COX II Inhibitor

(inner capsule)

Chemotherapy Agent

(inner capsule)

#### INNERCAP Technologies, Inc.,

introduces the new NOVACAPS<sup>TM</sup> multi-phase, multi-compartment single pill solution for difficult combination drugs. The proprietary NOVACAPS<sup>TM</sup> delivery system accommodates otherwise incompatible pharmaceutical agents, solid or liquid, in a single-dosage, combination product. The delivery system also provides the option of working with multiple release profiles for the actives administered in the delivery system. Surging worldwide interest in such combination formats is evidenced by the FDA's

recent initiative to advance the development of single-dosage forms for delivery of multiple HIV/AIDS drugs.

With the INNERCAP delivery system, therapeutic entities that have never been combined before can be administered together, via an oral, implanted, or a suppository capsule, in the most advantageous pharmacokinetic profile, utilizing different physical phases. This approach maximizes bioavailability and, at the same time, addresses patient compliance issues that often plague multi-drug regimens. The NOVACAPS<sup>TM</sup> delivery system can be used for all therapeutic classes, such as immunologic, cardiovascular, neurologic, psychiatric, oncologic, and pain management.

The INNERCAP delivery system also provides a solution to overcome the difficult development issues related to bilayer tablets. This will provide companies with a quicker and efficient solution to transition innovations smoothly from development, through the clinical phase, and into commercialization — ultimately reaping the financial fruits of their labor.

NOVACAPS<sup>TM</sup> offers a significant first-to-market advantage by minimizing valuable time in R&D when the product could be in clinical trials determining the patient response to a new combination product.

Companies interested in a novel solution for lifecycle management issues, patent protection, increased compliance, combination drugs, reduced counterfeiting, increased stability, multiple release profiles, increased bioavailability, barriers to entry, higher perceived value and branding opportunities with difficult formulation issues can contact INNERCAP Technologies.

#### THE

### ADVANTAGES

OF MULTI-PHASE, MULTI-COMPARTMENT CAPSULES ARE CLEAR

#### **Higher Perceived Value**

Consumers view multi-phase, multi-compartment capsules as having a higher perceived value than ordinary tablets, capsules and soft gels.

#### Choice of HPMC or Gelatin Capsules

With multi-phase, multi-compartment capsules you are not limited to just gelatin (animal-based product) but have the option of natural HPMC (hydroxypropyl methyl- cellulose) and alternative capsule materials.

#### **Better Visual Appeal**

Multi-phase, multi-compartment capsules have none of the dust and residue associated with powder capsules. Better visual product appearance translates to higher perceived value.

#### Increased Absorption and Bioavailability

Liquids naturally offer faster and increased absorption and availability of active ingredients.

#### **Increased Profit Potential**

Add up all the advantages. Expect higher sales...and high margins!

#### **Deliver Incompatible**

Compounds Deliver incompatible compounds in a single dosage form with different release profiles.

#### **Multiple Release Profiles**

Incorporate one or more release profiles into a single dosage form such as immediate, enteric, targeted, chronotherapy and pulsatile.

#### **Smaller Capsules**

Hard-shell capsules have thinner wall construction, allowing them to contain more ingredient in a smaller capsule versus thicker-shelled soft gel capsules. Hard shells have faster and more complete dissolution than soft gels.

#### Less Odor and Less Irritation

Reduces unpleasant ingredient taste and odor commonly found with tablets and traditional capsules. And, liquids provide less irritation than traditional delivery methods.

#### **Tamper Proof Sealing**

Band sealing reduces tampering and provides a non-permeable barrier to retard oxidation and increase shelf-life.

#### Unique Appearance

This new delivery system stands apart from look-alike products that crowd retail shelves.

#### **Faster Development**

Multi-phase, multi-compartment capsules reduce the development time compared to bi-layer tablets to get a new product into clinical trials faster.

#### Compounds

Deliver Pharmaceutical, bio-pharmaceutical and nutraceuticals in a single dosage form.

#### **Multi-Phase System**

Compounds can be delivered with the most advantageous pharmacokinetic profile such as liquids and solids



Patent Pending US-2005-0008690-A1





#### Kurve Technology Inc. 19125 North Creek Parkway Bothell, WA 98011

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E: info@kurvetech.com Website: www.kurvetech.com



*Kurve Technology, Inc.* offers pharmaceutical companies nasal delivery device systems for local, systemic, and nose-to-brain medical therapies.

#### Controlled Particle Dispersion (CPD)™

Kurve Technology's flexible CPD technology platform can deliver a wide range of formulations with greater efficacy and efficiency than traditional devices. Clinical results

show that the average area of intranasal deposition was as much as 300% greater for CPD compared to spray pumps.

Using the principal of vortical flow, CPD effectively disrupts inherent nasal cavity airflows to deliver formulations to the entire nasal cavity, the olfactory region and the paranasal sinuses. CPD optimizes droplet size and trajectory to saturate the nasal cavity, lengthen compound residence time, and minimize deposition to the lungs.

#### ViaNase IDTM Electronic Atomizer

The first nasal delivery device to incorporate CPD technology and electronic intelligent delivery, ViaNase  $\mathrm{ID^{TM}}$  offers superior efficacy, rapid onset of action, improved patient compliance, compliance monitoring, and abuse control.

With built-in electronics and power, ViaNase ID includes the following features:

- **Drug Recognition** recognizes specific drug information, such as product identification and expiration date, by reading a coding technology placed on the drug packaging or unit dose ampoule.
- **Lockout Control** powers up device only if it reads the correct product code and the drug is not past its expiration date.
- **Operational Parameter Control** sets droplet size, atomization rate, and vortex characteristics based on drug type.
- Dosing/Abuse Controls:
  - Sets specific atomization time in min/day or number of doses/day
  - Sets the total number of doses per prescription
  - Sounds an alarm when a dose is required
- Data Storage & Transmission. Information, such as drug ID, time/date of doses, total amount of drug
  delivered, and operating parameter records, can be saved to a data storage card or downloaded to a PC
  or PDA.

#### **Corporate Relationships Sought**

Kurve Technology is offering global, exclusive licenses in topical, systemic and nose-to-brain therapy areas to pharmaceutical companies.

## Still relying on yesterday's technology?











Yesterday's spray bottles are no match for today's drug formulations.

Deliver your drug therapies with the most cutting edge nasal drug delivery device available today – ViaNase ID.™

ViaNase ID stands alone as an electronic atomizer that saturates the entire nasal cavity to deliver topical, systemic and nose-to-brain formulations with greater efficacy and efficiency than traditional nasal delivery devices. The first nasal drug delivery device to incorporate drug pedigree confirmation, lock-out technology, and an electronic display, ViaNase ID helps curb counterfeit drug use and abuse. ViaNase ID also improves patient compliance – users see the drug name, number of doses delivered and a dose timer.

Combining Controlled Particle Dispersion™ and intelligent nasal drug delivery technologies, ViaNase ID delivers on the promise of your advanced drug therapies.

Find out more about the ViaNase family of electronic atomizers. Contact Kurve Technology at (425) 640-9249 or info@kurvtech.com.

www.kurvetech.com







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E: busdev@medpharm.co.uk Website: www.medpharm.co.uk



**MedPharm** is a drug delivery and formulation development company of international reputation, focusing in particular on topical (skin, nail, mucous membranes) and airway drug formulations. Established in 1999 to provide fee-for-service pharmaceutical development to the industry, the Company today boasts a hybrid business model comprising a first-class service offering together with a product development pipeline based on its innovative delivery systems. With over 50 customers worldwide, MedPharm's contract service business spans the

entire pharmaceutical development process, from simple feasibility studies, dosage design, and optimization through to the production of GMP supplies for Phase I/II clinical trials. It has GLP-accredited laboratories in central London and a GMP manufacturing facility in Scotland. MedPharm has its own portfolio of patents describing novel drug delivery systems, which it is exploiting in its internal drug development pipeline. The strategy is to reformulate existing and proven off-patent drugs where innovative drug delivery systems offer a significant competitive advantage. The Company is developing spray formulations for eczema and acne, a nail lacquer for onychomycosis and, in collaboration with OptiNose, a nasally delivered sedative for insomnia. The aim is to take each product to clinic before licensing out for further development and marketing, in return for a share of future success.

#### **MEDPHARM DEVELOPMENT SERVICES**

Particular focus is on design and development of topical (dermal, nasal, pulmonary, other mucous surfaces), injectable, and oral (capsules) dosage forms. Services include:

- Mathematical modelling of drug absorption
- Analytical development
- Preformulation
- Formulation development and optimization
- In vitro performance and efficacy studies
- Small-scale GMP manufacture and stability studies for all pharmaceuticals, except tablets
- Scale-up to Phase III/IV supplies manufacturing sites
- Preclinical support advices
- Clinical trials services dermatology

#### LICENSING OPPORTUNITIES

Technologies that MedPharm is exploiting in its drug development pipeline are also available, either as part

of the service offering or as stand-alone licences, for instance in non-competing indications. These technologies include:

- MedNail® a novel ungual penetration system
- MedSpray<sup>™</sup> a novel, "patch-in-a-can" topical

In addition, MedPharm is seeking to out-license that IP for which it has no further plans to develop internally. Such opportunities include several technologies that could enhance drug delivery via the airways, for instance:

- MedAir®, MedAir® HP for small molecules
- MedEole® for biologicals
- MedCrys™ to control recrystallization of therapeutic agents

As well as via the skin:

D<sup>3</sup>S<sup>TM</sup> - a device for dermal drug delivery, eg, of large molecules like peptides

**Lexington, Kentucky Keystone, Colorado** 1990 Williamsburg, Virginia 1992 Richmond, Virginia 1994 Phoenix, Arizona 1996 Hilton Head, South Carolina 1998 **Tarpon Springs, Florida** 2000 **Tucson, Arizona** 2002 **Palm Desert, California** 2004 RDDX April 23-27, 2006 Boca Raton, Florida

www.rddonline.com

#### **NOF CORPORATION**

#### **NOF Corporation**

NOF America Corporation
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White plains, NY 10606
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#### **Promoting Innovative Drug Delivery System**

As an integrated chemical manufacturer featuring all kinds of human activity from Biosphere to Outer Space, NOF CORP has now focused on the development on innovative drug modifier, carrier and solubilizer such as PEG, phospholipids, highly purified oleic acid nonionic surfactants, cholesterol pullulan, MPC polymers and chitosan.

As a worldwide leader for DDS, NOF will provide excellent quality of these products in view of pharmaceutical field.

#### 1. PEGYLATION TECHNOLOGY

We produce not only excellent purity of methoxypolyethylene glycols ranging from 200 to 30,000 molecular weight, but also activated PEG derivatives such as methoxy-PEG amines, maleimides and carboxlic acid. With arranging terminal group of PEG, various kinds of customers' drugs can be modified. In addition, half-life of drugs in the blood stream can be lengthened when our PEG modified phospholipids are injected as liposomal formulation.

#### 2. PHOSPHOLIPIDS and EMPTY LIPOSOME

We have successfully supplied our GMP grade of phospholipids for worldwide drug products since 90's with customer's good reputation. Not only developing new types of phospholipids, but also formulated lyophilized liposomes so called EMPTY LIPOSOME (EL-series) have been developed, with which customers can easily encapsulate their drugs by their hand. Special cationic type EL-01-D is recently commercialized for gene delivery in which better transfection efficiency can be obtained.

#### 3. Ultra-Pure Polysorbate 80 and PEG 200, 300, and 400

NOFABLE ESO-9920 (Polysorbate 80) of NOF CORPORATION, which consists of ultra-purified Oleic Acid (99% up) and an extremely low impurity profile, provides the following great features of Polysorbate 80:

- Low Deguranulation (Low Allergic Reaction)
- Low Cell Toxicity
- Low Hemolysis
- Multi-Compendial-ND, EP, JP

Ultrapurified PEGs and PEG 200, 300, and 400 are only available at NOF CORPORATION, and feature extremely low impurities (EG and DEG) and low POV. NOF's PEG 200, 300, and 400 meet with multi-compendial of NF, EP, and JP.

#### 4. Novel Solubilizing Kit for PUREBRIGHT SL Series

PUREBRIGHT SL Series are Novel Solubilizing Kit for any Hydrophobic Drugs (Protein, Peptide and small

molecular etc.)

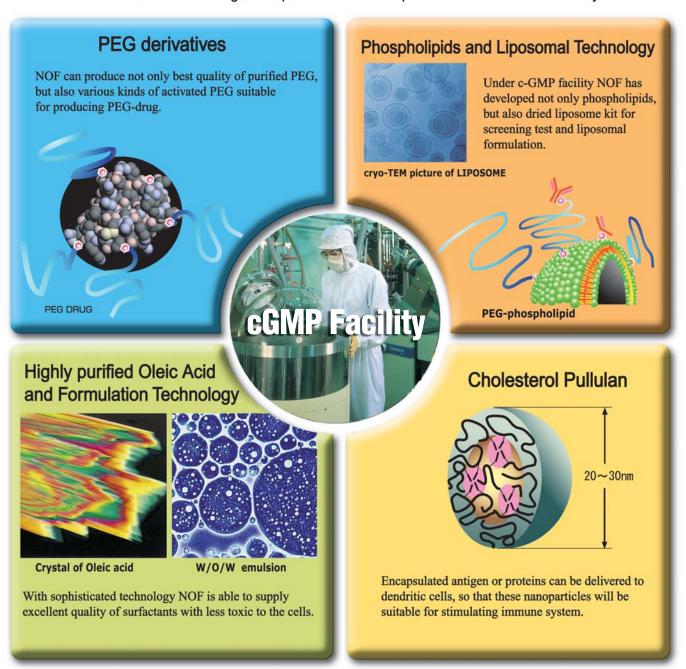
- 1. PUREBRIGHT SL-100 series MPC polymer base formulation
- 2. PUREBRIGHT SL-200 series PEG Phospholipids base formulation
- 3. PUREBRIGHT SL-300 series Cholesterol PEG base formulation
- 4. PUREBRIGHT SL-400 series
  Phospholipids mixture base formulation

Drug Delivery Tec

## NOF CORPORATION

#### Innovative and world-wide leader for DDS

NOF CORPORATION provides excellent quality of innovative drug modifiers, carriers and emulsifiers. NOF has good reputation of these products under c-GMP facility.



#### NOF CORPORATION Yebisu Garden Place Tow Tokyo 150-6019, JAPAN

#### DDS development department

Yebisu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6019, JAPAN Tel: +81-3-5424-6741 Fax: +81-

Tel: +81-3-5424-6741 Fax: +81-3-5424-6769 http://www.nof.co.jp/dds/ e-mail: ddsinfo@nof.co.jp





When it comes to drug delivery, NuSil provides numerous solutions that fit a variety of material needs. NuSil's acquisition of Simethicone product lines in 2004 offers customers an even wider range of silicone material and compound options - for transdermal, transmucosal, implanted intrathecal and external delivery devices, as well as ingestible materials.

NuSil offers research and development capabilities for those looking for proprietary, custom formulations. All products are developed with FDA regulatory concerns in mind.

Regardless of batch size, you can count on NuSil to deliver quality, high-performance silicone materials based on your unique property requirements, as well as provide precise, custom formulations - all backed by years of pharmaceutical materials expertise and first-hand regulatory knowledge.

What? Where? When? If it's NuSil, it's no problem.

Visit www.nusil.com







Remmele Engineering - Automation Division 677 Transfer Road St. Paul, MN 55114

T: (651) 643-3700 • F: (651) 642-5665

E: automation@remmele.com
Website: www.remmeleautomation.com



Since 1949, *Remmele Engineering* has designed and built custom manufacturing equipment for leading suppliers in the drug delivery industry worldwide. From implantable devices to transdermal patches to pulmonary dosage forms, Remmele is the ideal partner to help you bring your drug delivery system to market.

Remmele operates under an ISO 9001:2000certified quality system and provides manufacturing solutions from proof-of-concept through commercial production. Our core competencies include

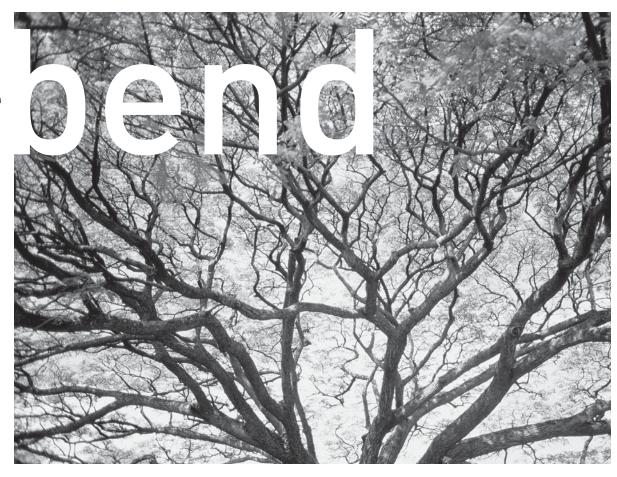
comprehensive Project Management, best-of-class engineering, and superior collaboration through our Client Relationship Process. Our expertise encompasses such critical issues as clean-room environments, lights-out manufacturing, curing, liquid-filling, and validation support. Our goal is to make our clients more profitable and competitive.

Whether you're beginning development of a new drug delivery system or ramping up production on a proven winner to meet market demand, our world-class facility is equipped to streamline critical manufacturing while reducing risk in even the most complex applications. We have experience throughout all phases of the product development process, including pilot lines, proofs-of-principle, clinical manufacturing, commercial manufacturing, and validation testing. We utilize leading edge applied technologies for web processing, discrete assembly, and packaging & filling. Our recent acquisition of May Coating Technologies adds continuous web handling capabilities to our existing arsenal of technology solutions.

No one can rival our ability to identify your unique needs. We are experts in providing sophisticated custom equipment for products that require stringent process controls to maximize production yields. Our culture, systems, and processes make us an industry leader in on-time delivery and client satisfaction.

Remmele Engineering — your custom equipment partner for drug delivery solutions.

we



#### but we never sway.

#### We never sway from our commitment to success.

Detailing our financial strength to gain your trust. Collaborating on design to strengthen your product. Documenting the process to meet your requirements. From process development and proof-of-principle work to the most advanced manufacturing systems, we provide exactly what you need when you need it. Delivering technically challenging projects on time with an unbending commitment to quality. Call 1-800-854-7742 or visit www.remmeleautomation.com.



#### Profile

# 





COMPANY:

**Safety**Syringes,Inc.™

CORPORATE HEADQUARTERS: Carlsbad, CA

PHONE:

760.918.9908

FAX:

760.918.0565

NEB:

www.safetysyringes.com

Christer Andreasson, Chairman and CEO of Safety Syringes, Inc., presented at the PDA Conference, "The Universe of Prefilled Syringes" October 2005.



#### A commitment to safety

Albert Einstein observed: "The significant problems we face cannot be solved at the same level of thinking we were at when we created them." We wholeheartedly agree. And since 1991, Safety Syringes has led the way in the development of anti-needlestick devices for the healthcare industry. Our commitment to innovative safety technology has consistently helped us bring new products to market. Our core competency is drug delivery systems for prefilled pharmaceutical glass syringes.

That commitment has become indispensable to our customers which include companies such as Amgen, AstraZeneca, Bayer, Johnson & Johnson, and Pfizer. They have found Safety Syringes to be an intuitive and dependable partner with patented technology that allows them to gain a competitive advantage. What's more, our UltraSafe\* product platform has delivered over 100 million devices worldwide while our partner count has increased steadily. Within the next 6 to 12 months we will have a total of 12 partners with over 20 drug products on the market.

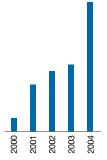
#### **Industry-leading solutions**

Safety Syringes, Inc. is actively developing and marketing its delivery systems for prefilled glass syringes used for vaccines, low molecular weight heparins, and other medicines—including many of the newer biotechnology drugs. As the first and only provider of an overt deterrent—the Tamper Evident UltraSafe Passive® Delivery System—we are also actively attacking the threat of drug counterfeiting. This industry-leading delivery system effectively helps prevent or make evident attempts to adulterate—or counterfeit—unit-dosed, prefilled pharmaceutical presentations.

Keep in mind that the Tamper Evident UltraSafe Passive\* Delivery System is available now. And, it's because we have stayed focused on our partners' problems and industry trends while maintaining a steadfast desire to make a real difference. In other words, we put our money where our future is, and the resulting investment has become a clear asset for our partners. That's the way we think. And that's why business leaders think of us.



#### At last. A drug delivery system that helps stop counterfeiting.



Counterfeit drug cases opened by the FDA each vear continue to climb.\*

With the number of counterfeit drug cases almost tripling between 2000 and 2004, we knew something had to be done. Drug counterfeiting costs billions of dollars and undermines your brand name.

The result is our Tamper Evident UltraSafe Passive® Delivery System. It's the industry's first—and only—overt deterrent designed to help ensure the integrity of unit-dose, prefilled pharmaceutical presentations. Tamper evident, safe and available *today*, it combines the ultimate in user preference, compliance, and passive needle protection. For more information, call **760.918.9908** or go to **www.safetysyringes.com.** 



We live up to our name everyday

# 70

#### SCOLR Pharma, Inc.

SCOLR Pharma, Inc. 3625 132nd Avenue SE, Suite 300 Bellevue, Washington 98006 T: (425) 373-0171 • F: (425) 373-0181

E: productdevelopment@scolr.com Website: www.scolr.com



#### **Background**

Based in Bellevue, Washington, *SCOLR Pharma* is a specialty pharmaceutical company that leverages its formulation expertise, and its proprietary and patented drug delivery technologies to introduce distinctive and novel pharmaceutical, Over-the-Counter, and nutritional products.

The Company enjoys a significant differentiated intellectual property position in drug delivery consisting of four (4) young and broadly applicable patents. Its first unique robust technology was licensed from Temple University

in 1998. Since then, SCOLR has expanded its intellectual property to include a full platform of related delivery technologies capable of handling challenging classes of drugs and nutritional ingredients.

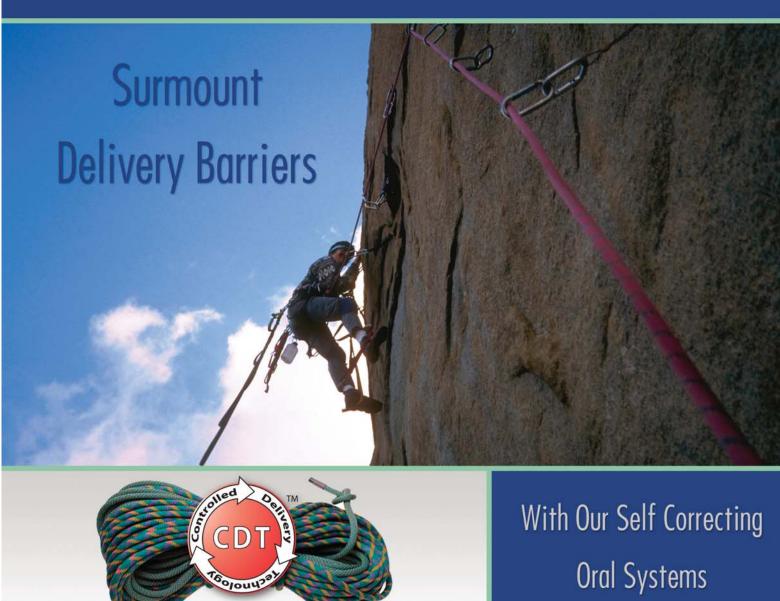
The Company believes its lead OTC pharmaceutical product candidate to be the only 12-hour extended-release ibuprofen formulation currently in clinical evaluation for the US OTC market. It also believes that its lead prescription drug candidate also in clinical evaluation, an immediate-release CDT-Raloxifene formulation for osteoporosis, will potentially be easier to manufacture and use less drug than currently approved formulations.

In the area of dietary supplements, the Company's efforts are concentrated on meaningful improvements and value-added formulations for human nutritional product applications. The Company has successfully created multiple private label products for large retailers that generate a source of royalty revenues.

For further information, visit us at Drug Delivery Partnerships 2006 booth No. 215.

#### **Technology Summary**

- Electrolyte Platform (US Patent No. 6,090,411-Issued July 18, 2001) "Salt Patent" allows for simple two step processing and uses ionic interactions to correct for limitations in other first generation matrix-based systems.
- Dual Polymer Platform (US Patent No. 6,337,091-Issued January 8, 2002) "Dual-Polymer Patent" allows for simple production of tablets and capsules and uses ionic and anionic polymers to correct for limitations in other biphasic/triphasic systems.
- Amino Acid Platform (US Patent No. 6,517,868 Issued February 11, 2003, US Patent No. 6,936,275 Issued August 30, 2005)
   "Amino Acids Patents" allows for simple production of tablets and uses hydrophobic/polar interactions to facilitate solubility and potentially permeability.



Our suite of patented self-correcting oral delivery systems can handle your most challenging drug or nutritional ingredient. CDT®'s simple but elegant technology provides partners with rapid product development and the highest possible success in clinical trials.

- Our "Dual Polymer" platform allows production of novel Matrix tablets and capsules regardless of their initial flow properties.
- Our "Electrolyte" platform is capable of custom tailored release profiles, including zero order, that can
  emulate complex delivery systems. (i.e. osmotic pumps, bead systems, layered tablets)
- Our "Amino Acid" platform can enhance solubility to allow precision controlled delivery in simple monolithic dosage forms.

SCOLR, CDT Logo & Design are trademarks of SCOLR Pharma, Inc. • CDT is a registered trademark of SCOLR Pharma, Inc.





**Shire Laboratories** 1550 East Gude Drive Rockville, Maryland 20850

T: (301) 838-2681 • F: (301) 424-1364

E: wbryan@shirelabs.com Website: www.shirelabs.com

Contact: Jones W. (Woody) Bryan, PhD

Shire Laboratories dedicates multidisciplinary teams of highly experienced scientists to solve its partner's drug delivery challenges.

Shire has a multi-faceted portfolio of technologies containing powerful in silico (ProPhile<sup>SM</sup>), in vitro (ProScreen®) and in vivo (RADAR®) models to identify barriers and mechanisms to oral delivery. These models create a focused path to bioavailability enhancement and establish critical baseline information that can be used to assess viability of controlled release for selected compounds.

Once these rate-limiting factors and mechanisms have been identified, Shire uses its OptiScreen® platform to select appropriate enhancers to overcome the specific barriers, Emutrol<sup>TM</sup> to enhance oral bioavailability or to apply the appropriate controlled-release platform for efficient oral delivery.

ProPhile<sup>SM</sup>, ProScreen®, RADAR<sup>SM</sup> and OptiScreen® have been applied in concert to:

- Identify the best preclinical candidates for oral delivery;
- Assess critical region of absorption characteristics;
- Enhance bioavailability of clinical stage compounds; and
- Optimize delivery of marketed products as a line extension or brand management initiative.

Shire has parlayed its oral candidate profiling (ProPhile<sup>SM</sup>), selection expertise (ProScreen\*), and in vivo screening (RADAR<sup>SM</sup>) into an enabling feature for its broad based portfolio of patented controlled-release technology platforms.

Shire's innovative controlled-release platforms include:

Microtrol® — a multiparticulate platform that has been successfully applied to deliver an array of soluble and insoluble compounds ranging from low to high dose. Customization of the multiparticulate populations can yield first-order, pulsatile, delayed- and extended-release profiles.

**Solutrol**<sup>®</sup> — is an innovative platform capable of delivering soluble compounds or combining solubility enhancement expertise with matrix release to enable delivery of compounds that are poorly soluble or have pH dependent solubility profiles. Solutrol® can be customized to yield first order, zero order and pulsed release profiles of single and combination presentations.

**EnSoTrol**<sup>®</sup> — is an enabling osmotic platform that is driven by Shire's expertise in solubility enhancement and is capable of accommodating soluble and poorly soluble compounds while generating zero-order and non-zero-order release profiles.

All three of Shire's controlled-release platforms are proven with human clinical data and protected by multiple

Avert<sup>™</sup> — is a platform to reduce abuse potential of formulations designed to deliver scheduled substances. Its mini-tablet or multiparticulate construct makes the abuse-resistant formulation an incremental application to existing products or can be designed into a new formulation. Avert<sup>sM</sup> uses a combination of malodorous agents, coloring agents, and precipitants. Multiple patent applications have been filed for Avertsm.

# Shire Technologies...

**Your Perfect Move** 



# Oral Controlled Release Technologies:

Shire Laboratories Inc. is the only drug delivery company with proven and patented technologies that span all 3 categories of oral controlled release.

- \* EnSoTrol® Osmotic (Zero order release and Customized profiles)
- \* Solutrol® Matrix (Zero and 1st order release)
- \* Microtrol® Multiparticulate (1st order, pulsatile and delayed release)

# **Bioavailability Assessment and Enhancement:**

- \* ProPhile<sup>SM</sup> In Silico Modeling
- \* ProScreen® and OptiScreen® Predictive bioavailability enhancement
- \* RADAR<sup>SM</sup> Region of Absorption Evaluation

## Save Your Molecule With The Perfect Move

CALL us at (301) 838-2681

or VISIT: www.shirelabs.com

or v1511: www.snirelabs.com

**Shire**Shire Laboratories





Weiler Engineering, Inc.
Global Sales & Service Department
1395 Gateway Drive
Elgin, Illinois 60123
T: (847) 697-4900

E: solutions@weilerengineering.com Website: www.weilerengineering.com



The corporate focus of **Weiler Engineering**, **Inc.** is to provide the most advanced aseptic liquid processing technology available through the application of customized ASEP-TECH® Blow/Fill/Seal machinery and integrated services. Weiler's unique combination of world-class engineering and cutting-edge technical expertise helps ensure its continuing world-wide leadership position, serving the marketplace with the latest in advanced, sterile, aseptic liquid packaging technology.

Weiler's manufacturing facilities and corporate offices are conveniently located near Chicago's O'Hare International Airport. ASEP-TECH® Blow/Fill/Seal machines are designed and built in a 120,000-sq-ft, state-of-the-art manufacturing plant. All equipment is designed and manufactured in the USA. Approximately 100 people are involved in the design and construction of these machines, providing 21st Century Solutions® for parenterals, ophthalmics, respiratory drugs, biologicals, nutraceuticals, and other complex solutions. Weiler began manufacturing BFS machines more than 30 years ago under the Bottlepack® brand, continued with the ALP® trademark and is now building the latest generation of ASEP-TECH® Blow/Fill/Seal Systems. The Weiler design incorporates the three-step process of blow molding, aseptic filling, and hermetic sealing of liquid products in one sequential operation on a compact machine frame. The ASEP-TECH® brand identity provides increased focus for future development and advancement of Blow/Fill/Seal technology as a core competency.

Weiler's patented electronically controlled fill system, automatic sterilization system with integral data collection, and filter integrity test system are provided as standard equipment for each machine configuration. Each machine is also equipped with a HEPA air shower to ensure a Class 100 environment under dynamic conditions in the nozzle shroud area. Optional parison shrouding is available to ensure a Class 10,000 environment under dynamic conditions in the extrusion zone and the critical transport area.

Weiler Engineering continues to place a strong emphasis on the science of Blow/Fill/Seal technology as it relates to the optimization of machine design to enhance process capabilities relating to sterility assurance. These efforts are recognized by the worldwide regulatory community and will change the future of aseptic manufacturing. Weiler's proactive stance has positioned it prominently at the forefront of these developments. We are continually applying the results of our scientific research to the design of our next-generation Blow/Fill/Seal machines, firmly setting the standards to the highest level of sterility assurance for aseptic technology.

Our customer commitment extends beyond that of typical machine builders, providing expertise and support derived from years of design and manufacture of high quality, automated equipment. Weiler has the ability to integrate complete finishing lines with its Blow/Fill/Seal systems for deflashing, leak detection, labeling, and final packaging.

Our Technical Services staff is available to assist with container design and development, and technical support. Our R&D department can assist with prototyping, product trials, and outsourcing of key support functions, such as process validation to help complete your project package.

# KISS YOUR GLASS GOODBYE...

WITH THE ADVANTAGES OF PLASTIC USING ASEP-TECH® BLOW/FILL/SEAL TECHNOLOGY



ASEP-TECH® Blow/Fill/Seal packaging machines from Weiler Engineering are simply the better alternative to conventional filling of glass vials for parenteral (injectable) products. This advanced aseptic technology is also widely used to package ophthalmic and respiratory therapy products.

Check the ASEP-TECH® Blow/Fill/Seal Advantage:

- $\checkmark$  Increased safety for both the patient and healthcare provider
- ✓ Lower product to market cost
- ✓ "Green" container manufacturing recyclable container materials
- ✓ Improved product quality no aluminum leaching issues
- ✓ Less material handling reduces probability of product contamination
- ✓ Fewer packaging steps
- ✓ Reduced raw material inventory

Now is the time to kiss your glass goodbye and switch to ASEP-TECH® Blow/Fill/Seal packaging machines from Weiler Engineering. To learn more, visit our website at www.weilerengineering.com or call 847-697-4900.



Driven by Science and Technology



**VISIT US AT INTERPHEX BOOTH # C347** 

1395 Gateway Drive • Elgin, Illinois 60123 • Phone: 847-697-4900 • Fax: 847-697-4915 E-mail: solutions@weilerengineering.com • Website: www.weilerengineering.com



# Featuring:

- > Drug Delivery Technologies
- > Excipients, Polymers, Liposomes & Lipids
- Contract Pharmaceutical & Biological Development Services
- > Laboratory Testing & Analysis Instruments and Software Systems

SPECIAL REPORT

### **3M** Drug Delivery Systems

3M Center, Bldg. 275-3E-10 St. Paul, MN 55144-1000

Phone: (800) 643-8086 Fax: (651) 737-5265

www.3m.com/dds

	,	
Current Technologies/Platforms:	Application(s):	Current Partner(s):
Inhalation Drug Delivery Systems (MDI & DPI)	Systemic/Pulmonary/Nasal	Schering-Plough Corporation, Forest Pharmaceuticals, Inc., Boehringer Ingelheim Pharmaceuticals, Inc., Novartis Pharmaceuticals Corporation, GlaxoSmithKline, Sepracor, IVAX
Transdermal Drug Delivery Systems	Transdermal	Schering AG, Berlex Laboratories, Inc.
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Novel Excipients	Pulmonary/Nasal	
Microstructured Transdermal Systems Proteins & Peptides, Vaccines		
Contact: Business Development - Carl Dabruzzi, email: Cdabruzzi@mmm.com		

#### DRUG DELIVERY TECHNOLOGIES



AKINA, Inc. Business & Technology Center 1291 Cumberland Avenue West Lafayette, IN 47906-1385 Phone: (765) 464-0390 www.akinainc.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Frosta®	Oral fast melting tablets	Samyang Corp.
HytroCelle™	Delivery of poorly soluble drugs (oral and parenteral)	
PolyShell™	Delivery of protein drugs (parenteral)	
Aquagel™	Gastric retention devices and diet control	Kos Pharmaceuticals
Sentrix™	Drug delivery from stents	

Contact: Kinam Park, (765) 464-0390, email: kp@akinainc.com

#### DRUG DELIVERY TECHNOLOGIES

American Peptide Company, Inc. 777 East Evelyn Avenue Sunnyvale, CA 94086 Phone: (408) 733-7604, x204 www.americanpeptide.com

Current Technologies/Platforms:
---------------------------------

Catalog Peptide, Custom Peptides CGMP Peptides, Oligo-Nucleotides, Dye Ptoducts, Process Development

#### Application(s):

Research in Cell Biology, Microbiology, Immunology, and Drug Discovery. Clinical trial and new drug

#### Current Partner(s):

Biotechnology and Pharmaceutical companies; as well as Diagnostic and Antibody companies

Contact: Gary Hu, (800) 926-8272, x204

#### **DRUG DELIVERY TECHNOLOGIES**



Antares Pharma, Inc. 707 Eagleview Boulevard, Suite 414 Exton, PA 19341 Phone: (610) 458-6200 Fax: (610) 458-0756

www.antarespharma.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Medi-Jector VISION® needle-free injectors	Insulin, growth hormone	Ferring, JCR, SciGen
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Antares Pharma Vibex™ mini-needle injectors - single-dose, disposable	Large and small molecule delivery	Clinical trials
Needle-free injection technology	Diabetes, obesity	Lilly
ATD™ Advanced Transdermal Gel Easy Tec™ Oral Dissolving Tablet	Transdermal delivery Oral delivery	Clinical trials Pre-clinical

Contact: Mike Kasprick: mkasprick@antarespharma.com, Jim Hattersley: jhattersley@antarespharma.com

#### DRUG DELIVERY TECHNOLOGIES



**ALZA** Corporation 1900 Charleston Road Mountain View, CA 94043 Phone: (650) 564-5000 www.alza.com

**Current Partner(s):** 

OROS°  D-TRANS°	Oral Transdermal	Pharmacia Corporation (Covera- HS®), Novartis (DynaCirc CR®), Pfizer (Cardura® XL Glucotrol® XL, Procardia XL®, Sudafed® 24 Hour), Muro Pharmaceutical, Inc. (Volmax®), Ortho-McNeil Pharmaceutical (Ditropan) XL®), McNeil Consumer & Speciality Pharmaceuticals (Concerta®) GSK (Nicoderm® CQ® and Clear Nicoderm® CQ®, Boehringer Ingelheim Pharmaceuticals (Catapres-TTS), Janssen Pharmaceuticals Inc. (Duragesic®), Novartis (Transderm-Nitro®, Transderm Scop®, Estraderm®) Ortho-McNeil Pharmaceutical (Testoderm®)
DUROS°	Implant	Baver (Viadur®)
	·	, , , ,
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Macroflux <sup>®</sup> DUROS® Omega STEALTH <sup>®</sup> her2 STEALTH <sup>®</sup> CKD 602 E-TRANS® fentanyl	Transdermal/Theratechnologies Collaboration BMI Collaboration for hepatitis Liposomal targeted oncology Liposomal oncology Transdermal, Acute pain in post operative setting	Pre-clinical Pre-clinical Pre-clinical Pre-clinical Phase II
L-OROS™ ALZAMER®	Liquid formulation OROS, oral delivery Depot	Actively Seeking Partner Actively Seeking Partner
- Al 7A is actively seeking partners for all of its technology platforms -		

ALZA is actively seeking partners for all of its technology platforms

Contact: busdev@alza.com (for business development/partnership inquiries) (650) 564-5555 (for business development/partnership inquiries)



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#### **MORE INFO:**

**EAST/MIDWEST** Victoria Geis Cheryl Stratos 703-212-7735

WEST Warren DeGraff 415-721-0644 INTERNATIONAL Ralph Vitaro 973-299-1200



Aradigm Corporation 3929 Point Eden Way Hayward, CA 94545

Phone: (510) 265-9000 Fax: (510) 265-0277 www.aradigm.com

Current Technologies/Platforms: | Application(s): AERx Pulmonary Delivery System

Insulin Respiratory Anthrax Treatment Cystic Fibrosis Smoking Cessation Pulmonary Hypertension

Sumatriptan/Migraine

Novo Nordisk APT Pharmaceuticals Undisclosed Canadian Gov't. Self-initiated Undisclosed United Therapeutics

To be Partnered

**Current Partner(s):** 

Organon, Schering-Plough

Prototype for mechanical

Concept for electronic

GSK. Merck

Medimmune

GE Amersham

Current Partner(s):

Intraject Needle-Free Delivery

Contact: Jonathan Rigby, (510) 265-9355, email: rigbyj@aradigm.com

**DRUG DELIVERY TECHNOLOGIES** 

## Baxter

Baxter Healthcare Corporation Route 120 & Wilson Road Round Lake, IL 60073

Phone: (800) 422-9837 Fax: (847) 948-3642 email: onebaxter@baxter.com www.baxterbiopharmasolutions.com

Current Technologies/Platforms: | Application(s):

Enhanced Packaging Ready-to-use Systems

- Ready-to-mix Systems

Contact: David McDonough, (847) 270-3715

Premixed, Parenteral, Formulations



#### **DRUG DELIVERY TECHNOLOGIES**



BD (Becton, Dickinson & Company) 1 Becton Drive Franklin Lakes, NJ 07417

Phone: (800) 225-3310 Fax: (201) 847-4847 www.bdpharma.com

Current Technologies/Platforms:

BD Hvpak™ BDTM Pens BD MonovialTN BD Accuspray BD Sterifill™

Application(s): **Current Partner(s):** Parenteral (prefillable glass syringes) Aventis, Amgen, Teva

Parenteral (self-injection devices) Reconstitution of dry drugs/transfer of liquid drugs

Nasal drug delivery Plastic prefillable syringe

Contact: (800) 225-3310

#### DRUG DELIVERY TECHNOLOGIES

Bespak, Inc. 2450 Laura Duncan Road Apex, North Carolina 27523

Phone: (919) 387-0112 Fax: (919) 387-1241

email: Bizdev@bespakinc.com www.Bespak.com

Current Technologies/Platforms: | Application(s): Current Partner(s): Metered Dose Inhaler Valves Pulmonary, Nasal, Buccal, & General Aerosolisation Aldo Union, Armstrong, Atlanta. Andrx, Aventis, Boehringer Ingelheim. Chiesi, Cipla, Generex, GlaxoSmithKline IVAX Novartis, Sepracor. Schering-Plough, Viatris Metered Dose Inhaler Actuators Pulmonary, Nasal, Buccal, & General Aerosolisation Aldo Union, Armstrong, Forest, Aventis, Chiesi, Cipla, Generex, IVAX, Sepracor, Schering-Plough Medical Check Valves Hudson Mallinkrodt Tyco Catheters Pipeline Technologies/Platforms: Application(s): Development stage: Single Dose Nasal Dry Powder Device Systemic & Local Nasal Delivery Test Data Package Available Single Dose Nasal Liquid Devices Systemic & Local Nasal Delivery Concept Development Breath Coordination/Actuation Device Respiratory Metered Dose Inhaler Concept

Respiratory / Nasal Metered Dose Inhaler

#### DRUG DELIVERY TECHNOLOGIES



BioDelivery Sciences International, Inc. 2501 Aerial Center Parkway, Suite 205 Morrisville, NC 27560

Phone: (919) 653-5160 Fax: (919) 653-5161 email: bds-info@bdsinternational.com www.bdsinternational.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Bioral® cochleate technology for oral delivery of products not normally available orally (hydrophobic drugs, nucleotides, vaccines, etc.)	Oral delivery	Sigma-Tau Accentia Biopharmaceuticals
BEMA™ technology for transmucosal membrane administration of drugs	Transmucosal delivery	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
Emezine®	Nausea and vomiting	NDA under review
BEMA™ Fentanyl	Breakthrough Cancer Pain	Phase III
BEMA Long Acting Analgesic	Pain	Preclinical
Bioral® Amphotericin B	Oral Antifungal	Preclinical
BEMA™ Zolpidem	Insomnia	Preclinical
Bioral® siRNAs	Oral delivery	Preclinical
Contact: Evan Gothard, egothard@bdsinternational.com		

#### **DRUG DELIVERY TECHNOLOGIES**

BioJect Medical Technologies, Inc. 211 Somerville Road, Route 202N Bedminster, NJ 07921

Phone: (908) 470-2800 Fax: (908) 470-1728 email: cheer@bioject.com

Needle-free injections - CO2 Power

www.bioject.com Current Technologies/Platforms: | Application(s):

UltraJet® Needle-free injections Spring Power Drug Reconstitution Systems Mixing of lyophilied Medication w/o needles

Pipeline Technologies/Platforms: IJECT™

LIFCT-RTM VETJET™

BioJector® 2000

Application(s): Disposable needle-free injection Prefilled Disposable Syringes Needle-free injections for food production **Current Partner(s):** 

Alkermes Merial

> Development stage: Clinical trials Pre-clinical

Pre-clinical

DRUG DELIVERY TECHNOLOGIES

valv

BioValve Technologies, Inc. 155 Flanders Road Westborough, MA 01581

Phone: (508) 366-2300 Fax: (508) 366-9852 email: plarsen@biovalve.net www.biovalve.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Mini-Ject™	Pre-filled, Disposable Needle-free Delivery	Johnson & Johnson (2), Schering Plough, NIH, Undisclosed (2)
e-Patch™	Controlled Release Disposable Micro Pump System	BioValve (Diabetes, Analgesia, CDI, Nocturia, Testosterone, Parkinson's)
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
Micro-Trans™	Microneedle Transdermal Delivery	Pre-Clinical, Phase II
Contact: Peter Larsen, (508) 366-2300, ext 275, email: plarsen@biovalve.net		

Countina

Mechanical & Electronic Dose

# Drug Delivery TECHNOLOGIES

#### DRUG DELIVERY TECHNOLOGIES



Brookwood Pharmaceuticals, Inc. 756 Tom Martin Drive Birmingham, AL 35211 Phone: (205) 917-2200 www.brookwoodpharma.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Microparticles	Biodegradable microparticle formulations for the delivery of small molecules, peptides, and proteins for weeks or months using various routes of systemic or local administration.	Undisclosed
Injectable solid implants	Biodegradable polymeric rods loaded with drug (small molecules, peptides, and proteins) for systemic or local delivery for weeks or months.	Undisclosed
VAXCAP™ vaccine delivery	Microparticle-based, targeted delivery to antigen presenting cells to elicit systemic and mucosal immune responses, antibody and cell-mediated responses, and auto boosting by all routes of administration	Undisclosed
Injectable hydrophobic drug particles	Clinical trial and commercial manufacturing of hydrophobic drug particles to produce long-acting injectable formulations.	Undisclosed
Biodegradable polymers	cGMP lactide/glycolide biodegradable polymers for drug-delivery formulations and medical devices.	Undisclosed

Contact: Tom Tice, PhD, (205) 917-2220

#### DRUG DELIVERY TECHNOLOGIES



Camurus Ideon Science Park, Solvegatan 41 Lund, NA SE-22370 Sweden

Phone: +46 46 2865730 Fax: +46 46 2865739 email: info@camurus.ideon.se www.camurus.se

<b>Current Technologies/Platforms:</b>	Application(s):	Current Partner(s):
Liquid Crystals (LC)	Oral, Parenteral (s.c. depot), Topical	Non-disclosed US, Eur. and Japanese companies
Liquid Crystal Nanoparticles (LCNP)	Oral, Parenteral (i.v.), Topical	Non-disclosed US, Eur. and companies
	Applicable to peptides, proteins and sparingly soluble small molecules	
	Available as capsules, solutions, sprays, gels, etc.	
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Low density powder for inhalation	Pulmonary (systemic or local)	Pre-clinical/Exploratory

Contact: Bengt Westrin, VP Bus Dev, +46 46 2865730

#### **DRUG DELIVERY TECHNOLOGIES**

Capsugel

535 North Emerald Road Greenwood, SC 29646 Phone: (888) 783-6361 Fax: (888) 783-6360 email: Glenda.oliver-smith@pfizer.com www.capsugel.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Capsules	Hard gelatin, HPMC and pullulan	
Licaps®	Liquid-filled gelatin & HPMC capsules	
Contact: Glenda Oliver-Smith		

#### DRUG DELIVERY TECHNOLOGIES



Cardinal Health 14 Schoolhouse Road Somerset, New Jersey 08873 Phone: (866) 720-3148 Fax: (732) 537-5949 email: pts@cardinal.com www.cardinal.com/pts

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Guitetti tecililologies/Flatiotilis.	Application(5).	Guitelit Faither(S).
Zydis <sup>®</sup>	Oral (fast-dissolve tablets)	
Capsules	Soft gelatin & hardshell gelatin	
Microsponge®	Topical (Cross-linked polymethacrylate copolymer particles)	- ANN
EnSolv <sup>®</sup>	Oral Modified Release	See Company Profile
EnCirc®	Oral Modified Release	Proj.
EnVel®	Oral Modified Release	
Contact: (866) 720-3148		

#### **DRUG DELIVERY TECHNOLOGIES**

Celsion Corporation 10220-L Old Columbia Road Columbia, MD 21046

Phone: (410) 290-5390 Fax: (410) 290-5394

email: celsion@celsion.com www.celsion.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Adaptive Phased Array Treatment	Focused microwave heating (Breast Cancer)	MIT
Thermodynamic Therapy Drug Delivery System	Focused delivery of encapsulated drugs using thermosensitive liposomes (Prostate, Liver,	Duke University (in Phase I for Prostate Cancer and entering Phase I for Liver Cancer)
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Targeted Gene Therapy Technology	Heat-activated Gene Expression	Preclinical (Memorial Sloan Kettering)

Contact: Anthony Deasey, EVP & COO, (410) 290-5390 x4899

#### DRUG DELIVERY TECHNOLOGIES

Chr. Hansen 9015 W. Maple Street Milwaukee, WI 53214

Phone: (800) 558-0802 Fax: (414) 607-5959 email: Innovations@chr-hansen-us.com www.chr-hansen.com

Current Technologies/Platforms: Application(s): Current Partner(s):

Chr. Hansen Sugar Spheres NF Timed release

Contact: Margot Connor, VP of Sales, Human Health & Nutrition

CIMA LABS INC. 10000 Valley View Road Eden Prairie, MN 55344 Phone: (952) 947-8700 www.cimalabs.com

**Current Technologies/Platforms:** Application(s): Current Partner(s): OraSolv<sup>e</sup> An orally disentegrating tablet that combines taste Bristol-Meyers Squibb (Tempra FirsTabs), Novartis masked active drug ingredients with a low (Triaminic Softchews), effervescence system; blistered Organon (Remeron SolTab) Alamo (FazaClo), Schering-Plough (CLARINEX Reditabs) DuraSolv<sup>a</sup> AstraZeneca (Zomig-ZMT). An orally disentegrating tablet that combines taste masked active drug ingredients with or without a Schwarz-Pharma (NuLev), low effervescence system; blistered or bottled Wyeth (Alavert & Dimetapp ND). Schwarz-Pharma (NuLev, Parcopa, Niravam) All partners utilize PakSolv PakSolv<sup>4</sup> Light and moisture proof proprietary packaging system: also physically protects ODTs as either product or trade sample packaging OraVescent<sup>e</sup> Enhanced-absorption drug delivery system Cephalon (fentanyl) intended to improve the transport of active drug ingredients across mucosal membranes; may improve biovailability and accelerate the onset of action of some active drug ingredients Contact: Business Development, (952) 947-8700

#### DRUG DELIVERY TECHNOLOGIES



Cirrus Pharmaceuticals, Inc. P.O. Box 14748 Research Triangle Park, NC 27709-4748 Phone: (919) 884-2064 Fax: (919) 884-2075 email: info@cirruspharm.com www.cirruspharm.com

Current Partner(s):

Current Technologies/Platforms: | Application(s):

Dry Powder Inhaler Formulation &

Meter Dose Inhaler Formulation & Development

Nasal Spray Formulation & Development

Nebulizer Solution Formulation & Develonment

Parenteral Formulation & Develonment

Oral Drug Formulation & Development

Topical Formulation & Development

Peptide & Protein Formulation &

Contact: Michael Branciforti & Kathy Meserve

#### DRUG DELIVERY TECHNOLOGIES



Corium International 2686 Middlefield Road, Suite G Redwood City, CA 94063 Phone: (650) 298-8255 www.coriumgroup.com

Current Technologies/Platforms: | Application(s): Cornlex™ Hydroael

Advanced Microneedle Delivery System

Delivery Modifiers/Permeation

Bx Transdermal and Mucosal Products

**Current Partner(s):** Pharmaceutical Co. Wound Care Co, Generic and Specialty

Co, Oral Care Co, Device Co

Contact: Deborah Fox PhD, V.P. of Business Development, (203) 775-7124, email: debfox@coriumtech.com

#### **DRUG DELIVERY TECHNOLOGIES**

CP Kelco 8355 Aero Drive San Diego, CA 92123

Phone: (858) 292-4900 Fax: (858) 292-4901 email: solutions@cpkelco.com www.cpkelco.com

Current Technologies/Platforms: | Application(s):

KELTROL® xanthan gum XANTURAL® xanthan gum KELCOGEL® gellan gum GELRITE® gellan gum GENU® pectin GENU<sup>®</sup> carrageenan

Oral drug delivery systems Mucosal drug delivery Transdermal drug delivery Controlled & sustained drug release Colonic drug delivery Edible film delivery systems

Contact: Anne Sinha, (858) 467-6615

#### **DRUG DELIVERY TECHNOLOGIES**

CyDex, Inc. 10513 West 84th Terrace Lenexa, KS 66214

Phone: (913) 685-8850 Fax: (913) 685-8856

email: cd\_info@cydexinc.com www.cydexinc.com

Current Technologies/Platforms: | Application(s):

CAPTISOL® (sulfobutylether betacyclodextrin) drug delivery technology

Parenteral, Oral Pulmonary, Onhthalmic Other

IV antiarrhythmic

Allergan, Inc.: Bristol-Myers Squibb; Daiichi Suntory Pharma

Co., Ltd.; Merck & Co., Inc.; OSI Pharmaceuticals, Inc.; Pfizer Inc. OncoPept AG; Taisho Pharmaceutical Co. Ltd : TargeGen, Inc.; Teva Pharmaceutical Industries Ltd.

Current Partner(s):

**Current Partner(s):** 

CAPTISOL® - gamma (sulfobutylether | Parenteral, Oral, Pulmonary, Ophthalmic, Other gamma-cyclodextrin) drug delivery technology

Pipeline Technologies/Platforms: Application(s): Captisol-Enabled® Formulations:

. Amiodarone Rudoconido

Fexofenadine Fosphenytoin Melphalan

Inhaled steroid Oral antihistamine IV anti-epilepsy IV Oncology Propofol IV anesthetic Sertraline Oral antidepressant Development stage:

Preclinical - Clinical; Seeking development/marketing partners

Contact: John M. Siebert, PhD

#### DRUG DELIVERY TECHNOLOGIES

DelSite Biotechnologies, Inc. 1505 Walnut Hill Lane Irving, TX 75038

Phone: (972) 717-5009 Fax: (972) 831-1132

email: info@delsite.com www.delsite.com

Pipeline Technologies/Platforms: | Application(s): GelVac™ Nasal Powder System GelSite® Polymer Injectable System

Vaccine delivery Injectable delivery of protein & peptide drugs Development stage: Phase I completed

Pre-clinical

Contact: Jean Anne Mire, Director, Business Development, (972) 650-7320, email: jamire@delsite.com

Dendritic Nanotechnologies, Inc. 2625 Denison Drive Mount Pleasant, MI 48858

Phone: (989) 774-6565 Fax: (989) 774-2322 email: hayes@dnanotech.com www.dnanotech.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
STARBURST™ Dendrimer Platform	Drug Delivery, Imaging Enhanced Drug Solubility	Large Pharma Companies Actively Seeking Partner
Priostar™ Dendrimer Platform	Drug Delivery, Imaging Enhanced Drug Solubility	Actively Seeking Partner Actively Seeking Partner
Pipeline Technologies/Platforms:	Application(s):	Development stage:
MRI Agent undisclosed Cisplatin-Dendrimer formulation Drug Formulation undisclosed siRNA Formulation	Blood pool, targeted organs Ovarian cancer Oncology Transfection	Pre-clinical Pre-clinical Late Development Pre-clinical
Contact: Ryan Hayes, PhD, Director of Business Development, (989) 774-6565		

#### **DRUG DELIVERY TECHNOLOGIES**

Depomed, Inc. 1360 O'Brien Drive Menlo Park, CA 94025 Phone: (650) 462-5900 www.depomed.com

er(s):
iotics and
stage:
I phase III

Contact: Thadd Vargas, (650) 462-5900



The Dow Chemical Company Midland, MI 48674 Phone: (800) 436-9876 Fax: (989) 636-6964 International: (989) 638-1565 email: bioaqueous@dow.com www.bioaqueous.com

Current Technologies/Platforms:	
BioAqueous™ solubilization services from Dowpharma. A portfolio of advanced particle engineering technologies to improve bioavailability of poorly soluble drug compounds.	O

Application(s): Current Partner(s): Oral, Parenteral, Pulmonary Currently partnering with big and emerging pharma companies to enable them to overcome peformance challenges with poorly soluble drug compounds and support their advancement through development and into commercialization.

Contact: Rob Connors, (989) 636-2616

Dowpharma 574 Building Midland, MI 48667

Phone: NA (866) 332-5805; EU 44-1223-728048 Fax: (989) 636-0986 email: dowpharma@dow.com www.dowpharm.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
PEGs	Drug Delivery, Drug Formulation	
Pfenex	Expression Systems, Drug R&D, Custom Strain Engineering, Manufacturing Scale-Up	
Contact: dowpharma@dow.com		

#### **DRUG DELIVERY TECHNOLOGIES**

Healthcare Solutions

Dow Corning Corporation PO Box 0994 Midland, MI 48686

Phone: (989) 496-6000 Fax: (989) 496-6731 email: product.info@dowcorning.com www.dowcorning.com/content/healthcare

Current Technologies/Platforms:	Application(s):	Current Partner(s):
_		
Adhesives	Adhesives, pressure sensitive adhesives (silicone, acrylic and rubber based) and soft skin adhesives for transdermal drug delivery applications	
Tubing	Tubing for use in devices that deliver life-saving drugs or nutritional therapy	
Wound care	Silicone, acrylic and synthetic rubber adhesives for skin protection or delivery of actives	See Company Profile
Topical excipients	Volatile excipients, fluids, blends, waxes and emulsifiers to aid the delivery of topical forms and actives	Profitt

Contact: Stacey Chapin, (989) 496-7759, lifesciences@dowcorning.com

#### **DRUG DELIVERY TECHNOLOGIES**

DPT 318 McCullough San Antonio, TX 78215 Phone: (210) 476-8159 Fax: (210) 829-8733 email: confidence@dptlabs.com

www.dptlabs.com

Current Technologies/Platforms: | Application(s): Topical, Oral, Nasal

creams, lotions, ointments, gels, solutions,

suspensions, aerosol foams

Contact: Paul Josephs

**Current Partner(s):** 

#### **DRUG DELIVERY TECHNOLOGIES**

DURECT Corporation 10240 Bubb Road Cupertino, CA 95014 Phone: (408) 777-1417 Fax: (408) 777-3577 email: IR@DURECT.COM

www.durect.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
DUROS°	systemic and site-directed implantable	Endo Pharmaceuticals
SABER°	parenteral, oral, dermal and others	Cardinal Health, BioPartners, Pain Therapeutics
DURIN™	biodegradable implant	Voyager Pharmaceuticals
MICRODUR™	microsphere injectables	
LACTEL®	biodegradable polymers	Various

Contact: Schond Greenway, (408) 777-1417



#### **EASTMAN**

Eastman Chemical Company 200 S Wilcox Drive, Box 431 Kingsport, TN 37662

Phone: (800) 327-8626 Fax: (423) 229-2707 www.eastman.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
C-A-P NF	Enteric coating	
Eastacryl™ 30D NF acrylic coating material	Enteric coating	
Eastman CA-398-10 NF	Sustained/Controlled Release; Taste Masking; Semi-Permeable Films	
Eastman CAB-171-15-PG	Sustained/Controlled Release; Taste Masking; Semi-Permeable Films	
Eastman Vitamin E TPGS NF	Absorption Enhancer, Solubilizer, Bioavailability Enhancer	

Contact: Carolyn Baker, (423) 229-2987

#### **DRUG DELIVERY TECHNOLOGIES**



The miracles of science

E.I. DuPont de Nemours Company DuPont Fluorochemicals, Chestnut Run Plaza Wilmington, DE 19880-0711

Phone: (302) 224-0426 Fax: (302) 224-0427 www.dupont.com/dymel

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Technical Service Assistance (i.e. Basic Propellant Properties and Characteristics, Formulation Properties Data, Formulation Testing Analytical Services, Toxicity Information, Regulatory Assistance, Safe Storage and Handling	Metered Dose Inhalers, Dry Powder Inhalers and other medical aerosols	Confidential
Particle Science Technology, Engineering Evaluations for Heat, Mass & Momentum Transfer, Quality Management and Technology, Chemical & Reaction Engineering, Electrical & Energy Engineering, Environmental and Process Safety	Metered Dose Inhalers, Dry Powder Inhalers and other medical aerosols	Confidential

Contact: Mr. Joe Creazzo, email: Joseph.A.Creazzo@usa.dupont.com

#### **DRUG DELIVERY TECHNOLOGIES**

Elan Drug Technologies Monksland

Athlone, Co Westmeath, Ireland Phone: +353 90 64 95000 Fax: +353 90 64 95807

www.elan.com/EDT

www.etan.com/ED1		
Current Technologies/Platforms:	Application(s):	Current Partner(s):
NanoCrystal® Technology	Oral: enhanced bioavailability, rapid absorption, decreased fed/fasted variability. Solid oral dosage forms, waterless tablets, oral liquids  Parenteral: low volume, high dose aqueous formulations for IV, IM and Sub-Q administration	Number of clients including commercialized products with Merck, Wyeth, Fournier/Abbott and Par.
	Respiratory: liquid and dry powder formulations for upper respiratory or deep lung delivery; sterile, preservative-free aqueous nasal spray suspensions	
Oral Controlled Release Platform which includes:	Solid oral — tablets and capsules	Number of clients including commercialized products with Ligand, Mitsubishi,
SODAS® Technology	Multiparticulate delivery system	Novartis, Schwarz Pharma Tanabe, Watson
CODAS™ Technology	Delayed Release technology	ianabe, watsun
IPDAS® Technology	Controlled Release technology	
PRODAS® Technology	Multiparticulate minitab technology system	
Contact: Sarah Carty PhD +353 1 709	94046	

#### **DRUG DELIVERY TECHNOLOGIES**

Emisphere Technologies, Inc. 765 Old Saw Mill River Road Tarrytown, NY 10591 Phone: (914) 347-2220 www.emisphere.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
eligen™ Oral Drug Delivery Technology	Oral delivery of macromolecules and other non- orally available therapeutics	Proprietary Technology
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Heparin Solid Dose	Cardiovascular (oral)	Phase I
LMWH Solid Dose	Cardiovascular (oral)	Phase I
Salmon Calcitonin	Osteoporosis (oral)	Phase II
Recombinant Parathyroid Hormone1-34 (Terapeptide)	Osteoporosis (oral)	Phase I
Insulin	Diabetes (oral)	Phase II
Cromolyn Sodium	Asthma/allergies (oral)	Phase II
Recombinant Human Growth Hormone (Somatropin)	Growth disorders (oral)	Phase I
Ciliary Neurotrophic Growth Factor (CNGF)	Obesity (oral)	Pre-clinical
Daptomycin	Anti-infectives (oral)	Pre-clinical
Contact: Dory Lombardo - Valiquette, (914) 593-8240		

#### DRUG DELIVERY TECHNOLOGIES

Ethypharm 194 Bureaux de la Colline 92213 Saint-Cloud Cedex - France Phone: +33 1 41 12 17 20 www.ethypharm.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Oral Modified Release	Oral, site-specific, sustained, delayed	Biovail, Astra
Taste-Masking, Orodispersible	Oral, rapid dispersion	Jansen, BMS
Oral Enhanced Absorption	Oral, pulmonary (macromolecules)	Novartis, Sanofi
Injectable Modified Release	Parenteral / implantation parenteral	
Vaccine Delivery/Cancer & Adiuvants	Parenteral	

Contact: Bruno Delie, Senior VP, Business Development, +33 1 41 12 17 20

#### DRUG DELIVERY TECHNOLOGIES



Eurand, Inc. 845 Center Drive Vandalia, OH 45377

Phone: (937) 898-9669 Fax: (937) 898-1093 email: bizdev@eurand.com www.eurand.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
AdvaTab™	Taste Masking/Fast Dissolve	
Biorise®	Bioavailability Enhancement	Multiple International Partners
Diffucaps <sup>®</sup>	Customized Release	
Diffutabs <sup>®</sup>	Customized Release	
Liquitard	Taste Masking/Suspension	
Microcaps®	Taste Masking/Fast Dissolve	nam
Minitabs <sup>®</sup>	Customized Release	See Company Profile
Orbexa™	Customized Release	
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Drug Targeting/Drug Conjugation	Parenteral	Pre-Clinical

Ferris Pharmaceuticals Inc. 16W300 83rd Street Burr Ridge, IL 60527-5848

Phone: (630) 734-7810 Fax: (630) 887-1008 email: info@ferrispolymem.com www.FerrisCares.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Polyurethane matrix (contains	Wound dressings	Marketed by Ferris Mfg.
absorbent starch, glycerol, surfactant) drug free		Corp.
Polyurethane matrix containing antimicrobial (nanocrystalline silver)	Antimicrobial dressings	Marketed by Ferris Mfg. Corp.
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Loaded foam and gel formulations to which drugs, carriers, biologicals, or	Transdermal - healthy or injured skin/tissue Mucosal - (mouth, nose, rectum) healthy/injured	

Contact: Paul Kay

cosmetics (dry or liquid form) can be added without heat/shear

degradation, sterile/non-sterile

#### DRUG DELIVERY TECHNOLOGIES

Fertin Pharma A/S Industrivej 8 DK-7120 Veile Denmark

Phone: (+45) 72 15 13 00 Fax: (+45) 72 15 13 01

email: fertin@fertin.com www.fertin.com

<b>Current Technologies/Platforms:</b>	Application(s):	Current Partner(s):
MediChew®	Oral, Buccal	Novartis, GlaxoSmithKline

#### **DRUG DELIVERY TECHNOLOGIES**



Filtertek Inc. 11411 Price Road Hebron, IL 60034

Phone: (800) 648-0791 Fax: (800) 648-2929 www.filtertek.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Needles Access Products	Drug Delivery/Transfer	Various
Various Filters and Fluid Control Components	Intravenous Drug Delivery	Various
Air and Liquid Filters	Pharmaceutical/Laboratory Processing	Various

Contact: Bruce Daniels, VP Medical Marketing

#### DRUG DELIVERY TECHNOLOGIES

Flamel Technologies S.A. Parc Club Du Moulin á Vent 33, Avenue du Docteur Georges Lévy 69693 Vénissieux Cedex - France Phone: (+33) 4-72-78-34-34 www.flamel.com

Current Technologies/Platforms	: Application(s):	Current Partner(s):
MicroPump MEDUSA	Oral (MicroPump) Parenteral	GSK, Servier Monde, Merck & Co. (all with MicroPump)
Pipeline Technologies/Platforms	: Application(s):	Development stage:
Genvir (MicroPump)	Oral	Phase III
Metformin XL (MicroPump)	Oral	Phase I
Ace Inhibitor (MicroPump)	Oral	Confidential
ACE INITIDITOR (WINCTOPULLIP)		
Augmentin SR (MicroPump)	Oral	Confidential
	1	Confidential Phase I (completed)

#### **DRUG DELIVERY TECHNOLOGIES**

Generex Biotechnology Corporation 33 Harbour Square, Suite 202 Toronto, ON, Canada M5J 2G2 Phone: (416) 364-2251 Fax: (416) 364-9363

email: info@generex.com

www.generex.com		
Current Technologies/Platforms:	Application(s):	Current Partner(s):
RapidMist™	pMDI to the Buccal Mucosa	
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Oral-lyn™ - Oral insulin spray for the treatment of diabetes	Insulin spray absorbed in the Buccal Mucosa	
Fentanyl Morphine		

#### **DRUG DELIVERY TECHNOLOGIES**

Contact: Fabio Chianelli, Business Development, email: fchianelli@generex.com, (416) 364-2551, x 240



Low Molecular Weight Heparin

Glatt Pharmaceutical Services 20 Spear Road Ramsey, NJ 07446 Phone: (201) 825-8700

A Division of Glaff Air Te	chniques, Inc. www.glattph	narmaceuticals.com
Current Technologies/Platforms:	Application(s):	Current Partner(s):
CPS™	Proprietary Drug Delivery Technology, High Potency Pellets, Uniformly Distributed Low Doses, Advantages over Extrusion/ Spheronization, Dense, Spherical, Uniform Pellets	
MicroPx™	Proprietary Drug Delivery Technology, High Potency Pellets, Pellets sizes of 50 micro and larger, Continuous Process, Dense, Spherical, Uniform	See Company Profile
ZRx™	Zero-Order Release Tablet System, Extended Release Tablet Matrix System, Zero or First- Order Release Characteristics	
Contact: Thomas M. Salus, (201) 818	-3778	

#### **DRUG DELIVERY TECHNOLOGIES**

Honeywell Speciality Films 101 Columbia Road Morristown, NJ 07962

Phone: (973) 455-2491 Fax: (973) 455-2487

www.aclar.com

	www.actar.com	
Current Technologies/Platforms:	Application(s):	Current Partner(s):
Aclar® Film Aclar® Cx Coextrusions Aclar® Coated Films Caprar® Emblem® Biaxially Oriented Nylon Capran Medallion® Biaxially Oriented Nylon	Blister packaging for oral solid dosage forms, including fast-dissolve systems, Secondary blister or flexible packaging for solid and liquid dosage forms for oral and parenteral applications, Primary blister or flexible packaging for solid or liquid dosage forms for oral or pulmonary systems	

#### **DRUG DELIVERY TECHNOLOGIES**

Hospira, Inc. One 2 One D988, H1 275 North Field Drive Lake Forest, IL 60045

Phone: (224) 212-2267 Fax: (224) 212-3210 email: one2one@hospira.com

www.hospira.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Ansyr Syringe®	Pre-filled plastic syringe compatible with IV systems	Multiple
ADD-Vantage System®	IV admixture system used when medication is not stable in a premix format	Multiple
Carpuject Syringe System®	Pre-filled unit-dose injection system designed for compatibility with IV sets	Multiple
Premix IV medication containers	Ready-to-use IV medication delivery	Multiple

HOVIONE

Hovione Sete Casas 2674-506 Loures Portugal

Phone: + 351 219 829 000 Fax: + 351 219 829 388 email: comsales@hovione.com

www.hovione.com

Current Technologies/Platforms: | Application(s): Sprav Drving

Encapsulation, agglomeration, reduction residual solvents, particle sizing and shaping Particle size control

Freeze Drving

Processing thermally labile APIs Application(s):

Pipeline Technologies/Platforms:

Sonocrystallization Super critical crystallization Contact: Mrs Carla Vozone

Micronization

Development Stage:

Current Partner(s):

Manipulate degree of crystallinity

#### DRUG DELIVERY TECHNOLOGIES



INNERCAP Technologies, Inc. 5420 Bay Center Drive, Suite 100 Tampa, FL 33609 Phone: (813) 837-0796 Fax: (813) 837-0207

email: fmiller@innercap.com www.innercap.com

Pipeline Technologies/Platforms: | Application(s):

Development stage: Multi-Phase, Multi-Compartment Capsules Actively seeking Licensees Multiple Dual Drug Delivery and partners Controlled and Site Specific Drug Delivery

Contact: Fred H. Miller, (813) 837-0796

#### DRUG DELIVERY TECHNOLOGIES

Incompatible combination drugs

Pulsatile Drug Delivery



International Specialty Products (ISP) 1361 Alps Road Wayne, NJ 07470

Phone: (973) 628-4000 Fax: (973) 628-4117 email: info@ispcorp.com

INTERNATIONAL SPECIALTY PRODUCTS

Current Technologies/Platforms: | Application(s): Solid Dispersions

www.ispcorp.com Current Partner(s):

Contact: Dr.Tim Bee

Nasally delivered THC

#### **DRUG DELIVERY TECHNOLOGIES**

Bioavailability Enhancement

Intranasal Therapeutics, Inc. (formerly Intranasal Technology, Inc.)
1513 Bull Lea Boulevard
Lexington, KY 40511-1200
Phone: (859) 252-5080 Fax: (859) 252-7280

email: bizdev@intranasal.com

www.intranasal.com Current Technologies/Platforms: Application(s):

Aseptic filling Sterile nasal spray drug products Pipeline Technologies/Platforms: Application(s): Nasally delivered butorphanol Migrane pain Nasally delivered hydromorphone Acute/breakthrough pain Nasally delivered lorazepam

Phase 3 Phase 1/2 Sedation; anxiety; seizures Phase 1 Nasally delivered midazolam Procedural sedation; anxiety; amnesia Phase 1 Anorexia: antiemetic Preclinical Nasally delivered calcitonin Preclinical

Contact: Ralph Johnston, Vice President Business Development

#### DRUG DELIVERY TECHNOLOGIES



Kurve Technology, Inc. 19125 North Creek Parkway, Suite 120 Bothell, WA 98011 Phone: (425) 640-9249 Fax: (425) 483-1058 email: info@kurvetech.com

www.kurvetech.com Pipeline Technologies/Platforms: | Application(s): Development stage:

therapies Contact: Robert Kamp, VP Corporate Development

Controlled Particle Dispersion™

Nasal drug delivery of topical and systemic

Current Partner(s):

Development stage:

#### DRUG DELIVERY TECHNOLOGIES

Laureate Pharma, Inc. 201 College Road East Princeton, NJ 08540

Phone: (609) 919-3400 Fax: (609) 452-7211 email: info@laureatepharma.com www.laureatepharma.com

Current Technologies/Platforms: Application(s): Current Partner(s): Microspheres & Microparticle Parenteral, Extended/Sustained Release Southern Researh Institute

Contact: Stan Zeichner, (609) 919-3325

#### **DRUG DELIVERY TECHNOLOGIES**



Linocine Inc. 675 Arapeen Drive, Suite 202 Salt Lake City, UT 84103

Phone: (801) 994-7383 Fax: (801) 994-7388 email: GTS@lipocine.com www.lipocine.com

Current Technologies/Platforms: | Application(s): Current Partner(s): Oral poorly water soluble compounds Schwarz Pharma Lip'ral® SSR Oral extended release for poorly water soluble Schwarz Pharma compounds Hydroance<sup>®</sup> Oral poorly permeable compounds N/A I iIVTM Parenteral delivery N/A Contact: Jerry Simmons, Corporate Business Development Officer

#### **DRUG DELIVERY TECHNOLOGIES**



neutic vaccines

Contact: Dr. Peter Laing

Lipoxen Technologies Ltd. Suite 303, Hamilton House, Mabledon Place London, England WC1H 9BB

Phone: ++44(0)20 7753 5822 Fax: +44(0)20 7753 5820 www.lipoxen.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
PolyXen™ (employs polysialic acids; see below)		Please see website
lmuXen™ (employs liposomes; see below)	Genetic, Protein and Polysaccharide vaccines	Please see website
VesicAll <sup>™</sup> (employs liposomes; see below)	Oncology therapeutics	Please see website
Pipeline Technologies/Platforms:	Application(s):	Development stage:
A variety of peptide and protein therapeutics, small oncology drugs, and an array of prophylactic/thera-	Haematology, cancer, infectious diseases	Various stages of development

#### DRUG DELIVERY TECHNOLOGIES

MacroMed, Inc. 9520 South State Street Sandy, UT 84070

Phone: (801) 565-8561 Fax: (801) 565-8562 email: macromed@macromed.com www.macromed.com

Current Technologies/Platforms: | Application(s): **Current Partner(s):** ReGel Parenteral Depot HySolv Parenteral/Oral Solubilizer SOZael Oral Sustained Release Contact: Alex S. Kim. Executive Vice President. (801) 565-8561



MedPharm Ltd Business Centre - Sheep Street Charlbury 0X7 3RR Oxfordshire, United Kingdom Phone: +44 (0) 16 0881 9267 Fax: +44 (0) 16 0881 9268

email: busdev@medpharm.co.uk

www.medpharm.co.uk

Pipeline Technologies/Platforms: Application(s): MedSpray™ MedNail® **ПЗ**ЅТМ MedAir®. MedAir® HP

MedFole

MedCrys™

a novel topical/transdermal spray a novel ungual penetration system A device for dermal drug delivery

Pulmonary drug delivery technology (DDT) for small molecules Pulmonary DDT for biologicals

Pulmonary DDT to control re-crystallization of therapeutic agents

Contact: Dr. Simon Bennett, Director of Business Development

Profile

#### www.nanocrystal.com

Current Technologies/Platforms: | Application(s):

NanoCrystal® Technology

Development Stage:

Seeking out-licensing

Seeking out-licensing

Seeking out-licensing

Seeking out-licensing

Pre-clinical

Pre-clinical

nartner

partner

partner

Oral: enhanced bioavailability, rapid absorption, decreased fed/fasted variability. Solid oral dosage forms, waterless tablets, oral liquids.

**DRUG DELIVERY TECHNOLOGIES** 

NanoSystems

3000 Horizon Drive, 3500 Horizon Drive

King of Prussia, PA 19406

Phone: (610) 313-5100 Fax: (610) 313-5170

Parenteral: low volume, high dose aqueous formulations for IV, IM or Sub-Q administration

Respiratory: liquid and dry powder formulations for upper respiratory or deep lung delivery; sterile, preservative-free aqueous nasal spray suspensions.

Pipeline Technologies/Platforms:

Bioadhesive NanoCrystal<sup>e</sup> **Formulations** 

Application(s):

mucosa, skin, and hair.

Development stage:

Current Partner(s):

Merck & Co. (Emend®), Wyeth

(Rapamune®), Various undisclosed

Topical: increased particle residence time on Preclinical

Contact: Elaine Liversidge, PhD, (610) 313-5130

#### DRUG DELIVERY TECHNOLOGIES

Merrion Pharmaceuticals, Inc. 219 Racine Drive, Suite D Wilmington, NC 28403-8702 Phone: (910) 799-1847 Fax: (910) 395-1843 email: info@merrionpharma.com

www.merrionpharma.com

Current Technologies/Platforms: Gastrointestinal Permeation Enhancement Technology (GIPET) for poorly permeable compounds

Applicable to solid and liquid-filled dosage forms. GIPET is an enhancer-based technology for oral administration of small molecules, macro-molecules, peptides, biologics, and polysaccharides

Application(s):

Application(s):

Gastrointestinal Retention System (GIRES) - capsule containing a controlled-release tablet inside an inflatable pouch

Applicable to a wide range of drugs; there is no change in the chemical composition of API. Targeted at once-a-day dosing for compounds with short biological half-lives, narrow absorption windows, narrow therapeutic indices, or which require local delivery to GIT.

Pipeline Technologies/Platforms: Blood Brain Barrier (BBB) Delivery

Oral Vaccine Delivery Systems Contact: Michael J. McKenna, PhD

#### **Current Partner(s):**

Development stage:

Preclinical

Preclinical

#### **DRUG DELIVERY TECHNOLOGIES**



MGlas AG Otto-Liebmann-Strasse 2 Münnerstadt, Germany 97702 Phone: +49(0)9733 808-0 Fax: +49(0)9733 808-160 email: info@mglas.de www.mglas.de

Current Technologies/Platforms: Containers made of tubular glass: Syringes, cartridges (one- and twochamber), vials, amnoules, specialities on customer request

Oral Diagnostic Pipeline Technologies/Platforms: Application(s):

Parenteral

parenterals

Manufacture of containers for

Needle-free devices Innovative needles (V Bevel®/Spoon Point<sup>®</sup>/Spoon Point Plus<sup>®</sup>) Pre-washed/pre-sterilized

cartridges for aseptic filling Laser technology

Application(s): Current Partner(s): Parenteral Pharmcos, among others: Nasal Apotex, Aradigm, AstraZeneca, Biotage Chiron Sanofi Aventis Sanofi Pasteur, Baxter, Glaxo-

Schering-Plough, Vetter Development stage: Transdermal Clinical Phase II

Development

Market & Developmet

Market

SmithKline, Roche Diagnostics,

Contact: Mr. Wolfgang Heidl. +49(0)9733 808-125

### DRUG DELIVERY TECHNOLOGIES

Nastech Pharmaceutical Company, Inc.

3450 Monte Ville Parkway Bothell, WA 98021

45 Adams Avenue Haupauge, NY 11788

Current Partner(s):

Phone: (212) 845-4268 www.nastech.com

Current Technologies/Platforms: Application(s): Current Partner(s): STAT-TTM - Systemic Transnasal Pharmacia, Phol-Boskamp Absorption Technology PTS™ - Paracellular Transport Intranasal Seeking additional System partnerships for these technologies JAT™ - Junction Activator Intranasal Technology Contact: Robert Stanislaro, (212) 845-4268

#### DRUG DELIVERY TECHNOLOGIES



Current Technologies/Platforms: | Application(s):

Nektar Therapeutics 150 Industrial Road San Carlos, CA 94070 Phone: (650) 631-3100 www.nektar.com

PEG-INTRON®	Parenteral	Schering-Plough
Neulasta™ (PEG-filgrastim)	Parenteral	Amgen
Pipeline Technologies/Platforms:	Application(s):	Development stage:
PEGASYS® (PEG-a-interferon) Somavert® (PEG-hGHra) Exubera® (Inhaled Insulin) EYEDO1 (PEG)dated aptumer) SprayGet™ adhesion barrier system (PEG) CDP870 (PEG)ated antibody fragment) Inhaled alpha I Inhaled alpha I Inhaled torte (PTH) Inhaled tobramycin Inhaled leuprolide PEG-HOE (HEG) PEG-PTO PEG-PTO PEG-prostacyclin PEG proteins	Parenteral Parenteral Inhalation Parenteral Gel Parenteral Inhalation Inhalation Inhalation Inhalation Parenteral	Roche Pharmacia Pfizer Eyetech Confluent  Pharmacia  Phase I P
Inhaled dronabinol (MDI) Inhaled small molecules Single chain antibodies PA2794	Inhalation Inhalation Inhalation Inhalation	Pre-clinical Pre-clinical Pre-clinical Pre-clinical
Contact: Joyce Strand, (650) 631-313	38	

NeoPharm Inc. 1850 Lakeside Drive Waukegan, IL 60085

Phone: (847) 887-0800 Fax: (847) 887-9281 email: ssheikh@neophrm.com www.neophrnm.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
NeoLipid® Technology	Delivery of broad range of difficult to formulate drugs	
NeoPhectin (In Vitro)	Delivery of Nucleic acids (plasmid, antisense, siRNA)	
NeoPhectin-AT (In Vivo)	Delivery of Nucleic acids (plasmid, antisense, siRNA)	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
NeoLipid® Technology	Easy to use Liposome based drugs for treatment of cancer	Liposome based SN-38 (LE-SN38), SN-38 is an active metabolite of Campostar® - Phase II Liposome based Paclitaxel (LEP-ETU) - Phase I/II Liposome based raf antisense (LErafAONETU) - Phase I/II Phase I/II Liposome based raf
Contact: Saif Sheikh		

#### **DRUG DELIVERY TECHNOLOGIES**

NOVAGALI PHARMA 1 rue Pierre Fontaine / Genavenir IV Evry, France 91058

Phone: 00 33 1 69 87 40 20 Fax: 00 33 1 69 87 40 20 email: jean-sebastien.garrigue@novagali.com www.novagali.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Submicron Cationic Emulsions	Topical, Oral, Injectable, Ophthalmic	
Cationic Self-Emulsifying Systems	Oral, Subcutaneous, Intramuscular	
Self-Nano-Emulsifying Oily Formulations	Oral	
Immuno-Emulsions	Injectable	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
Active-free cationic emulsion for ophthalmic use (Cationorm™)	Treatment of dry eye syndrome	Phase II
Cyclosporine A cationic emulsion for ophthalmic use	Treatment of severe dry eye syndrome	Phase I
Oral Paclitaxel Self-Nano- Emulsifying Oily Formulation	Oral oncology	Phase I
Contact: Jean-Sebastien Garrigue, 00 3	3 1 69 87 40 28	

**DRUG DELIVERY TECHNOLOGIES** 

#### **S NOF CORPORATION**



**NOF** Corporation 11 Martin Avenue, Suite 1170 White Plains, NY 10606 Phone: (914) 681-9790 Fax: (914) 681-9791 International: + 81-3-5424-6741 email: ddsinfo@nof.co.jp www.nof.co.jp/dds

Current Technologies/Platforms:	Application(s):	Current Partner(s):
PEG Derivitives	Suitable & ideal for producing PEGylated drugs	N/A
Phospholipids & Liposomes	Ideal for screening tests and liposomal formulations	N/A
Highly Purified Oleic Acid	Formulation development	N/A
	Encapsulated antigen or protein can be delivered to dendritic cells, so these nanoparticles can be suitable for stimulating immune system	N/A

Contact: ddsinfo@nof.co.jp

#### **DRUG DELIVERY TECHNOLOGIES**

NovaDel Pharma, Inc. 25 Minneakoning Road, Suite 101 Flemington, New Jersey 08822 Phone: (908) 782-3431 Fax: (908) 782-2445 email: bcohen@novadel.com www.novadel.com

#### Current Technologies/Platforms:

Oral spray technology platform applicable to a broad range of therapeutic areas & product categories:

- · Currently marketed Rx and OTC druas
- New molecular entities in development

Contact: Barry Cohen

Application(s): Current Partner(s):

Par Pharmaceuticals

Hanna Biosciences -

lingual aerosol)

oral sprav)

NitroMist™ (nitroglycerin

Zensane™ (ondansetron

for Diprivan (Propofol)

Manhattan Pharmaceuticals

- Oral spray technology potentially achieves: rapid delivery of drugs directly to bloodstream quick onset of action
- Lower doses
- Avoids the GI tract and first pass liver metabolism
- Strong patent position

SILICONE TECHNOLOGY Creative Partners in a Material World

**DRUG DELIVERY TECHNOLOGIES** 

NuSil Technology 1050 Cindy Lane Carpinteria, CA 93013 Phone: (805) 684-8780 Fax: (805) 566-9905

email: silicone@nusil.com www.nusil.com

Current Technologies/Platforms: | Application(s): silicone elastomers pressure sensitive adhesives silicone gels silicone fluids custom develonment

transdermal, mucosal, in-vitro



Contact: Mark Paulsen, (805) 684-8780

### **DRUG DELIVERY TECHNOLOGIES**



Oakwood Laboratories, L.L.C. 7670 First Place, Suite A Oakwood Village, OH 44146 Phone: (440) 359-0000 Fax: (440) 359-0001 email: info@oakwoodlabs.com

www.0akwoodlabs.com

Current Technologies/Platforms: Application(s): **Current Partner(s):** CHRONIJECT™ Injectables Sustained Release of Parenteral Injectables Domestic & International Microsphere Technology NMEs, Peptides, Approved APIs Sterile Lyophilized Dosage Forms Pipeline Technologies/Platforms: Application(s): Development stage: Novel Advanced Drug Delivery

Contact: Michael G. Lanzilotti, EVP & COO

Technologies





Octoplus 0 Zernikedreef 12 2333 CL Leiden Netherlands

Phone: +31 71 5244044 Fax: +31 71 5244043 email: info@octoplus.nl www.octoplus.nl

Current Technologies/Platforms:	Application(s):	Current Partner(s):
OctoDEX™	A biodegradable dextran-based drug delivery system for the controlled release of proteins and particulate systems	Undisclosed
PolyActive™	A biodegradable polymeric drug delivery system for the controlled release of proteins and lipophilic small molecules	Undisclosed
SynBiosys™	A biodegradable polymeric drug delivery system for peptides and small molecules	InnoCore
Pipeline Technologies/Platforms:	Application(s):	Development stage:
OctoDEX™-hGH	Metabolic diseases	Phase I completed succesfully
Locteron™, a controlled-release formulation of alfa interferon	Hepatitis, cancer	Pre-clinical
Japanese encephalitis vaccine (single-shot delivery)	Japanese encephalitis	Pre-clinical

Contact Person: Dr. Henrik Luessen, Director Business Development

#### DRUG DELIVERY TECHNOLOGIES

OSG Norwich Pharmaceuticals, Inc. 6826 State Highway 12 Norwich, NY 13815

Phone: (607) 335-3000 Fax: (607) 335-3100 email: Bob.Calabro@norwichpharma.com

	www.norwicnpnarma.com	
<b>Current Technologies/Platforms:</b>	Application(s):	Current Partner(s):
Tablets	., ,,	Numerous
Capsules		Numerous
Non-sterile liquids		Numerous

Contact Person: Bob Calabro

#### DRUG DELIVERY TECHNOLOGIES

Oxford Lasers Inc. 29 King Street Littleton, MA 01460-1528 Phone: (978) 742-9000 Fax: (978) 742-9100 email: EnVision@Oxfordlasers.com www.oxfordlasers.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
EnVision System range (high quality	Automatic measurements systems: One system	Chiesi, Vectura, Bespal
high speed imaging system)	for Nasal, MDI, DPI and softmist devices.	GlaxoSmithKline
EnVision QC system (information for	Information obtained: Spray Pattern, Plume	
FDA submissions)	geometry, Event duration and high speed imaging.	
Enlision DOD /Eull quite of	DOD application; additional information on flow	

field velocity through the actuation of the device

Micro-Machining Systems For machining of small hole and feature in a wide Micro-Machining Application Labs

capability to provide detailed

information on the device)

Contact Person: Dr. Seamus D. Murphy, (978) 742-9000, email: seamus.Murphy@oxfordlasers.com

Particle and Coating Technologies, Inc. 5445 Highland Park Drive St. Louis, MO 63110

**DRUG DELIVERY TECHNOLOGIES** 

Phone: (314) 535-1516 Fax: (314) 535-1514 email: rsparks@pctincusa.com www.pctincusa.com

ı	Current Technologies/Platforms:	Application(s):	Current Partner(s):
	Spinning-disk coating	Many	(confidential)
	Micro-capacity spray dryer (marketed early 2006	Preformulation Biotechnology Samples	Several
	Mini-Fluid-Bed (marketed early 2006)	Expensive Materials	Several
	Forming narrow-size distributions	Many	
	Fluid-bed coating, spray-drying, spray-chilling	Many	
	Bioavailability enhancement	Hydrophobic drugs	
١	Fast-melt tablets	Pharmaceuticals	
	Pipeline Partners:	Application(s):	Development stage:
	Coating liquid droplets Very fast coater, high capacity Coating particles down to 1 micron Extended release technology	Widely applicable Feed, seed, fertilizer Widely applicable Fragrance, flavor, biocides, etc.	Successful initial applications Successful initial applications Successful initial applications Successful initial applications
	Contact: Robert Sparks		

#### DRUG DELIVERY TECHNOLOGIES

Pfeiffer of America 12 Roszel Road, Suite C-104 Princeton, NJ 08540

Phone: (609) 987-0223 Fax: (609) 987-1511 email: Richard\_sica@pfeifferusa.com www.Pfeiffer.de

**Current Partner(s):** 

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Metered dose dispensing systems for Aqueous solutions & suspensions	Nasal, Bucal, Topical & Dermal	N/A
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
Microhaler	Pulmonary	

Contact: Richard Sica

#### **DRUG DELIVERY TECHNOLOGIES**

Pharmaceutical Profiles Mere Way, Ruddington Fields, Ruddington Nottingham, NG11 6JS, United Kingdom Phone: +44 115 974 9000 www.pharmprofiles.com

Gamma Scintigraphy	Oral drug development Pulmonary drug development Nasal, drug development, rectal drug development, vaginal drug development	Pharma & Biotech companies
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Confidential at precent	Confidential	Confidential

Contact: Dr. Paul J. Clewlow, Business Development Director, +44(0) 115 974 9000

Current Technologies/Platforms: Application(s):



Polygenetics, Inc. PO Box 33115 Los Gatos, CA 95031

Phone: (408) 356-1815 Fax: (408) 356-7094 email: J-Benson@polygenetics.com www.polygenetics.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Cavilink™ Porous Polymers	Drug delivery, embolotherapy	Boston Scientific Corp.
Cavilink™ Polymers	Zero-order release	Boston Scientific
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Cavilink™	Gene therapy	Intermediate
Cavilink™	Artificial organs	Preliminary
	· ·	•

#### DRUG DELIVERY TECHNOLOGIES

Respirics, Inc. 6008 Triangle Drive, Suite 101 Raleigh, NC 27617 Phone: (919) 789-4220 Fax: (919) 789-4254 www.respirics.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
MD Turbo™	Breath-triggered device with electronic dose counter for use with pMDIs	TEAMM Pharmaceuticals (U.S. Market Only)
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
,		
Acu-Breathe™ Single Dose	Pulmonary DPI; for infrequent dosing; single blister	Pre-Clinical
Acu-Breathe™ 15-Dose	Pulmonary DPI; for chronic dosing; replaceable cartridge	Pre-Clinical
Acu-Breathe™ 30-Dose	Pulmonary DPI; for chronic dosing; disposable	Pre-Clinical
Δcu-Rreathe™ Twin	Pulmonary DPI: for two or more drugs	Design Development

Contact: Gilbert S. Mott, Jr., President & CEO

Contact: Dr. James Benson, (408) 356-1815

#### **DRUG DELIVERY TECHNOLOGIES**

# REXAM

REXAM PHARMA 287 Bowman Avenue, Suite 302

Purchase, NY 10577
Phone: (914) 251-8420 Fax: (914) 251-1450
email: mailboxpharma@rexam.com www.rexam.com/pharma

Current Technologies/Platforms:	Application(s):	Current Partner(s):	
The Sof' Bag: 2 components delivered by Rexam: a multilayer bag in a plastic bottle combined a metering pump to guarantee a maximum protection against contamination and oxidation	Dermal	N/A	
Pill jars & value added closures with or without tamper evidence, child resistance or dessicant	Oral	N/A	
Our patented Safe'n Sound safety system for prefilled syringes Transfer sets, veterinary syringes, auto- injectors, implanters, injectable vials	Parenteral	N/A	
Diabolo: COC vials closed with a TPE cap in a class 100A room and sterilized to avoid any additional step before filling	Parenteral	Aseptic Technologies	
Dry Powder Inhalers and pressurized Metered Dose Inhalers	Pulmonary	N/A	
Pumps, valves and applicators	Nasal, Buccal & Auricular	N/A	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:	
Preservative Free solutions, ophthalmic pumps and devices	Ophthalmics		
Contact: Philippe DEPOIS			

#### DRUG DELIVERY TECHNOLOGIES

RxKinetix, Inc. 1172 Century Drive, Suite 260 Louisville, CO 80027 Phone: (303) 926-1900 Fax: (303) 926-1906

email: info@rxkinetix.com www.rxkinetix.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
	Parenteral, topical, mucosal Parenteral, pulmonary, oral	n/a n/a

#### Contact: Christopher Bonny, (303) 926-1900

#### DRUG DELIVERY TECHNOLOGIES

SafetySyringes, Inc.

SafetySyringes, Inc. 1939 Palomar Oaks Way (Suite A) Carlsbad, CA 92011

Phone: (760) 918-9908 Fax: (760) 918-2216 email: info@safetysyringes.com www.safetysyringes.com

Current Tech	nnologie	s/Platfori	ns:
--------------	----------	------------	-----

Configurations available for staked. luer and luer-lock applications w/ svringe sizes from 0.5mL to 2.25mL

Auto-Injector compatible

Tamper Evident configuration available

UltraSafe Passive® Delivery System available since 2002

#### Application(s):

SafetySyringes specializes in the development of anti-needle stick devices for prefilled pharmaceutical glass syringes

#### Current Partner(s):

AMGEN, AstraZeneca, Ortho-Clinical Diagnostics, Pfizer, Talecris Biotherapeutics, YPSOMED

### Contact: Mark Hassett, VP - Marketing/Business Development

#### **DRUG DELIVERY TECHNOLOGIES** Sciarra Laboratories, Inc.

485-09 S. Broadway Hicksville, NY 11801 Phone: (516) 933-7853 Fax: (516) 933-7807

email: sciarralabs@att.net www.sciarralabs.com

<b>Current Technologies/Platforms:</b>	Application(s):	Current Partner(s):
Metered Dose Inhalers	Asthma Medication	
Pharmacoutical Aprocole	Foame Colutions	

Contact: John J. Sciarra

#### **DRUG DELIVERY TECHNOLOGIES**



SCOLR Pharma, Inc. 3625 132nd Avenue SE, Suite 300 Bellevue, WA 98006 Phone: (425) 373-0171 Fax: (424) 373-0181

email: info@scolr.com TATTATTAT CCOlr com

	www.scott.com	
<b>Current Technologies/Platforms:</b>	Application(s):	Current Partner(s):
CDT <sup>®</sup> Controlled Delivery Technologies Platform consists of Three Issued Patents:	Solid Oral Delivery, Small Molecule	See Company Profile
"Dual Polymer" technology	BCS class 1 & 2	
"Salt" technology	BCS class 1 & 2	ADM, Sinphar Pharmaceuticals
"Amino Acid" technology	BCS class 2, 3 & potentially 4	
Pipeline Technologies/Platforms:	Application(s):	Development stage:
CDT® "Asymmetrical" technology #4	Combinatition, cocktail therapies, Gastric retention and site specific	Pre-Clinical, Patent pending



Sensirion - the sensor company Laubisruetistr. 50 Staefa, Zurich CH-8712, Switzerland

Phone: +41 44 306 4000 Fax: +41 44 306 4030

email: info@sensirion.com www.sensirion.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Micro fluidic flow sensors and systems based on digital CMOS chips	Dosing and metering of liquid drugs in the micro liter and nano liter range	Medical device manufacturers and bio-tech companies
CMOSens Technology - The combina- tion of sensor elements and digital signal processing on one single micro chip	Calibrated, digital, ready to use sensor solutions	
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Disposable Flow Sensors	Dosing and metering of liquid drugs in the micro liter and nano liter range	Functional samples available

Contact: Ulf Kanne +41 44 306 4000

#### **DRUG DELIVERY TECHNOLOGIES**

SHARMATEK, Inc. 12 Walnut Drive Long Valley, NJ 07853 Phone: (908) 852-5087 email: vksharma@stk-inc.net www.stk-inc.net

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Pulsatile Macroparticulate Drug Delivery System (PM <u>DDS</u> ™)	Oral, pulsatile, site-specific, diltiazem hydrochloride, capsules, qd	Wockhardt Limited
Hydrophilic Matrix Drug Delivery System (HM <u>DDS</u> ™)	Oral, Swelling/Erosion Controlled Super Case II release mechanism, felodipine, extended release tablets, qd	Wockhardt Limited
Delayed Release Drug Delivery System (DRDDS™)	Oral, enteric delayed release, omeprazole, capsules, qd	Wockhardt Limited
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Biphasic HM <u>DDS</u> ™	Oral, biphasic release, hydrophilic matrices, qd, as applied to ciprofloxacin, clarithromycin, or metoprolol succinate	Seeking partners
Convolution-Based Predictive Modeling Using Fractional Release Times/In-Vitro In-Vivo Correlation (FRT/IVIVCTM)	Applied to the design of modified release products for cost-effective and timely clinical optimization	Seeking partners
Stochastic Design and Convolution- Based Predictive Modeling of Pelletized Drug Delivery Systems	Development of non-commodotized, new products such as Methylphenidate PMDDS™, and Carvedilol PMDDS™	Phase I (Modeling) completed, seeking partners
Programmable Tabsule Drug Delivery System- (PT <u>DDS</u> ™)	Oral, <i>multi-phasic release</i> , site-specific, minitablets named as Tabsules™, bid or qd	Currently in progress in conjunction with stochastic design and convolution-based predictive modeling
Microfluidization Processing Technology (MPT™)	Low solubility, high permeability drug candidates	Seeking partners

Contact: Vinay K. Sharma, PhD , Chairman, (908) 852-5087, Mobile: (908) 616-3319

#### **DRUG DELIVERY TECHNOLOGIES**

Shionogi Qualicaps 6505 Franz Warner Parkway Whitsett, NC 27377 Phone: (336) 449-3900

**Current Partner(s):** 

www.qualicaps.com

Current Technologies/Platforms: | Application(s):

 Quali-V° capsules
 Empty two-piece capsule of non-gelatin origin

 F/S Machine
 Combination filling and sealing encapsulation

Contact: Tamara Smith, (336) 449-3953

#### DRUG DELIVERY TECHNOLOGIES

Shire

Shire Laboratories, Inc. 1550 East Gude Drive Rockville, MD 20850

Phone: (301) 838-2681 Fax: (301) 424-1364 email: wbryan@shirelabs.com www.shirelabs.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
EnSoTrol®	Osmotic	
Solutrol <sup>®</sup>	Matrix	
Microtrol <sup>®</sup>	Multiparticulate	See Company Profile
OptiScreen®	Predictive, Bioavailability Enhancement	Profile
ProScreen™	Oral candidate selection	
Avert <sup>sm</sup>	Reduce abuse potential	
RADAR <sup>SM</sup> /PROPHILE <sup>SM</sup>	In silico modeling/In vivo evaluation	
Emutrol™	Enhanced Oral Bioavailability	CollaGenex Pharmaceuticals Indevus Pharmaceuticals QRx Pharmaceuticals

Contact: Woody Bryan, PhD

#### **DRUG DELIVERY TECHNOLOGIES**

SAFC 3050 Spruce Street St. Louis, MO 63103 Phone: (800) 336-9719 www.sigmaaldrich.com

Current Technologies/Platforms: Application(s): Current Partner(s): Polyamineo Acids Carrier/excipient Linosomes Lipisomes Carrier/excipient Detergent/surfactant . Tween 20/80 GMP, Low Peroxide Pipeline Technologies/Platforms: Application(s): Development stage: PEGylation Stability, solubility Prototype

Contact: Tom Gelineau, (314) 301-2077, email: tgelineau@sial.com

#### DRUG DELIVERY TECHNOLOGIES

SOLIQS
SOLIQS Business Unit
ABBOTT GmbH & Co. KG
PO Box 21 08 05

67008 Ludwigshafen, Germany
Phone: +49-621 589 2427 Fax: +49-621 589 3092
email: welcome@soliqs.com

mail: welcome@soliqs.con www.soliqs.com

Pipeline Technologies/Platforms: Application(s): Development stage: Meltrex™ Melt extrusion technology n/a Xellux™ Polymeric film technology n/a NanoMorph™ n/a Amorphous nanoparticle technology SoliScreen™ Qualitative & quantitative screening systems n/a Contact: welcome@soliqs.com

Drug Delivery Technology November/December 2005 Vol 5 No 10 89

Sontra Medical Corporation 10 Forge Parkway Franklin, MA 02038

Phone: (508) 553-8850 Fax: (508) 553-8760

email: info@sontra.com www.sontra.com

Pipeline Technologies/Platforms: | Application(s): Development stage: Transdermal delivery of skin anesthetic, Accelerates SonoPrep® Topical Anesthesia Final product development 510k submission Phase I clinicals R&D Symphony™ Diabetes Management Continuous non-invasive glucose monitor System partnership with Bayer Diagnostics Pre-clinical Ultrasonic skin permeation for non-invasive SonoPren® vaccine delivery transdermal vaccinations SonoPrep® dermatology drug Ultrasonic skin permeation for non-invasive Pre-clinical

transdermal skin treatment

Contact: Thomas W. Davison, PhD (508) 553-8850, ext. 229

delivery

#### **DRUG DELIVERY TECHNOLOGIES**

Travanti Pharma Inc. (formerly Birch Point Medical Inc.) 473 Hayward Avenue North

St. Paul, MN 55128

Phone: (651) 730-1008 Fax: (651) 730-1013

www.travantipharma.com

Current Technologies/Platforms: | Application(s): Current Partner(s): Pain, Inflammation WEDD® (Wearable Electronic Undisclosed Disposable Drug Delivery) Technology --Proprietary active transdermal (iontophoretic) drug delivery system that is self-contained, portable & Pipeline Technologies/Platforms: Application(s): Development Stage: WEDD® Active Transdermal Drug Pain, Inflammation, Nausea/Emesis, Thrombosis, Phase I Clinical Delivery System Osteoporosis, Cosmetic, among others

#### DRUG DELIVERY TECHNOLOGIES



SPI Pharma 321 Cherry Lane New Castle, Delaware 19720 Phone: (302) 576-8500 x 8554 Fax: (302) 576-8567 www.spipharma.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Pharmaburst™ Fast Melt Excipient System	Oral Dispersible Tablet	Generic & Brand Rx
Pharmafreeze™ Fast Melt Lyophilized System	ODT, Sublingual Tablet	Brand Rx
Pharmasperse™ Dry Powder Suspension	Reconstitutable Syrup	Generic Rx, OTC
Pharmagum™ DC Chewing Gum Powder	Buccal Gum Tablet	Rx, OTC, Nutraceutical
Taste-masking/Controlled release	Solid Oral Dose	Rx, OTC
Custom Processing	Granulation, Chilsonation Micronizing, Extrusion	Rx, OTC
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
Pharmachew™ Excipient System Pharmatab™ Excipient System	Chewable Tablet Platform Swallow Tablet Platform	OTC, Nutraceutical Rx, OTC

Contact: Filen London

#### **DRUG DELIVERY TECHNOLOGIES**

Sympatec, Inc. 9A Princess Road Lawrenceville, NJ 08648 Phone: (609) 844-1020 www.sympatec.com

Current Technologies/Platforms: | Application(s): Current Partner(s): Inhaler module for DPI/MDI/Nebulizers, sprayer for All major pharma companies Helos Laser Particle/Droplet Analyzer MDI/Nasal, dry powders

Contact: Joe Wolfgang, (609) 844-1020

#### DRUG DELIVERY TECHNOLOGIES

www.upm-inc.com

UPM Pharmaceuticals, Inc. 6200 Seaforth Street Baltimore, MD 21224 Phone: (410) 843-3738 Fax: (410) 633-4438 askus@upm-inc.com

Application(s): Current Technologies/Platforms: Current Partner(s): Cushioning Beads™ Pediatric, geriatric, HIV patients undisclosed Accomodates high and low dose drugs, quick Tran & Trigger™ Pediatric, geriatric, HIV, cancer patients undisclosed Application(s): Current Partner(s): **Current Technologies/Platforms:** Cushioning Beads™ Oral quick dissolve tab early Trap & Trigger™ Oral SR suspension for electrolytic drugs Contact: Rich Ryzenga

DRUG DELIVERY TECHNOLOGIES

Contact: Robert Arnold



Contact: Pierre Carlotti - VP Marketing

Current Technologies/Platforms: | Application(s):

Valois 50 Avenue de l'Europe Marly-le-Roi, France 78164

Phone: +33 (0) 1 39 17 20 20 Fax: +33 (0) 1 39 58 12 98 www.valoispharma.com

Current Partner(s):

Nasal, Throat, Dermal/Transdermal, Ear Metering Spray Pumps Metering Valves for pMDIs Pulmonary (Asthma, COPD) Unit-Dose Nasal Spray Devices Nasal Pipeline Technologies/Platforms: Application(s): Development Stage: Dose Indicator for pMDIs Dry Powder Inhaler Flectronic Devices New Pumps, Valves and Unit-Doses

#### DRUG DELIVERY TECHNOLOGIES

## **TEXMAC**

Texmac Inc. 3001 Stafford Drive Charlotte, NC 28208

Phone: (704) 393-6555 Fax: (704) 392-1621 email: yosaka@texmacusa.com

www.texmac.com

Pipeline Technologies/Platforms: | Application(s): Development Stage: Soluble Microneedle Technology Distribute sample microneedles for customer's evaluation Cosmeceutical Distribute sample microneedles for customer's evaluation

Contact: Yashi Osaka



Vectura Limited One Prospect West Chippenham Wiltshire, SN14 6FH United Kingdom

Phone: (+44) 1249 66700 Fax: (+44) 1249 667701

enquires@vectura.com www.vectura.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
POWDERHALE	Pulmonary (DPI formulation)	Zambon, GSK
ASPIRAIR	Pulmonary (DPI Device)	Available
ACCUSTAR	Oral (Device for powders)	Available
MAXSOL	Oral (Bioavailability enhancer)	Available
GENCONTAB	Oral (Controlled release tablet)	Ranbaxy
PANDERMAL	Dermal (Unit dose presentation)	Available
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
Pipeline Product VR004 Pipeline Product AD237 Pipeline Product VR478 Pipeline Product VR496 Pipeline Product VR694	Inhaled apomorphine for MGD Inhaled bronchodilator for COPD Inhaled drug for epilepsy Inhaled drug for COPD/CF Inhaled drug for asthma	Phase II (partner=Arakis) Pre-clinical Pre-clinical Pre-clinical

#### DRUG DELIVERY TECHNOLOGIES

Ventaira Pharmaceuticals, Inc. 1801 Watermark Drive, Suite 100 Columbus, OH 43235

Phone: (614) 340-2325 Fax: (614) 340-2320

email: Williams@ventaira.com www.ventaira.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Mystic drug inhalation technology (uses electrostatic energy to form a uniform fine particle spray)	Pulmonary	
Drug formulation technology (allowing the company to optimize the delivery of drugs - small molecules and are expanding to biomolecules)	Pulmonary	Seeking qualified strategic partners for co-develop opportunities
Internal Pipeline Technologies Partners:	Application(s):	Development stage:
Internal Pipeline Technologies Partners: Fluticasone Propionate	Application(s): Asthma	<b>Development stage:</b> Completed Phase I clinical trial
Technologies Partners:	., ,	
Technologies Partners: Fluticasone Propionate	Asthma	Completed Phase I clinical trial
Technologies Partners: Fluticasone Propionate Undisclosed	Asthma	Completed Phase I clinical trial Formulation

#### DRUG DELIVERY TECHNOLOGIES

Vyteris, Inc. 13-01 Pollitt Drive Fair Lawn, NJ 07410 Phone: (201) 703-2299 www.vyteris.com

www.vyteris.com		
Current Technologies/Platforms:	Application(s):	Current Partner(s):
Active Transdermal Systems	Transdermal	B. Braun
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Lidocaine System	Transdermal	NDA filed on Lidocaine System

#### DRUG DELIVERY TECHNOLOGIES

West Pharmaceutical Services, Inc.
Drug Delivery Systems
101 Gordon Drive
Lionville, PA 19341
Phone: (610) 594-3157
www.westdrugdelivery.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
ChiSys® Pectin-based	Nasal Drug Delivery Technologies	
TARGIT®	Oral Colonic Targeting	
Pipeline Technologies/Platforms:	Application(s):	Development stage:
Gastrorentention	Oral	Proof of Principle
Contact: Vinod Vilivalam, (610) 594-315	7	l

#### DRUG DELIVERY TECHNOLOGIES

YPSOMED SELFCARE SOLUTIONS

Reusable and disposable auto

injector systems

Current Technologies/Platforms: | Application(s):

Ypsomed AG Brunnmattstrasse 6 CH-3400 Burgdorf Switzerland

Phone: +41 34 424 41 11 Fax: +41 34 424 41 22 email: info@ypsomed.com www.ypsomed.com

**Current Partner(s):** 

Ongoing development programmes with a number of

partners

Reusasble injection pens	Regular subcutaneous self-injections	Aventis (insulin), Dongbao (insulin), Pfizer (hGH), Eli Lilly (hGH), Genentech (hGH) and Roche (EPO and alfa-interferon)
Disposable injection pens	Regular subcutaneous self-injections	Aventis (insulin) and Serono (FSH)
Pipeline Technologies/Platforms:	Application(s):	Development stage:

Subcutaneous and intramuscular self-

injection of bio-molecules

Contact: Ian Thompson, Manager Business Development, ian.thompson@ypsomed.com

# Excipients, Polymers, LIPIDS, COATINGS

#### EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS



AKINA, Inc. Business & Technology Center 1291 Cumberland Avenue, #E130 West Lafayette, IN 47906-1385 Phone: (765) 464-0390 www.akinainc.com

Current Technologies/Platforms:

**Current Partner(s):** 

Current Partner(s):

J&J (Retin-A-Micro®),

Actively seeking partners

Actively seeking partners

Actively seeking partners

Development Stage

Aventis (Carac<sup>TM</sup>)

Current Partner(s):

Highly Plastic granules

Fast melting tablets

Samyang Corp.

Contact: Pedro Salcedo, (763) 464-0390

#### EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS

A.P. Pharma 123 Saginaw Drive Redwood City, California 94063 Phone: (650) 366-2626 Fax: (650) 365-6490 E-mail: busdev@appharma.com www.appharma.com

Current Technologies/Platforms: Application(s):

MICROSPONGE®

BIOCHRONOMFR™ BIOERODIMERT ALGINATES

Pipeline Technologies/Platforms:

OSTEOARTHRITIS ANTI-NAUSEA/VOMITING ANTI-ADHESIONS

Topical

Parenteral Parenteral

Application(s):

Parenteral, Post-operative Pain Relief Parenteral, Local Anti-inflammatory Parenteral, Post-chemotherapy Relief Parenteral, Post-surgical

Contact: Mike O'Connell, (650) 366--2626

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Aqualon Division, Hercules Incorporated 1313 North Market Street Wilmington, DE 19894 Phone: (800) 345-0447 www.aqualon.com

Current Technologies/Platforms: Application(s):

Klucel® hydroxypropylcellulose (HPC) | Applications for all 4 products/technologies: Natrosol® hydroxyethylcellulose (HEC) solid dosage (immediate and controlled Aqualon® ethylcellulose (EC) Aqualon® carboxymethylcellulose (CMC)

release), film coatings, liquid system thickeners (oral, topical, nasal)

Contact: Richard Salzstein, PhD, Pharmaceutical Sales Manager, (302) 995-3173

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



BASF 100 Campus Drive Florham Park, NJ 07932 Phone: (800) 443-0627, Fax: (973) 245-6763 email: pharmasolutions@basf.com www.basf.com/pharma

Current Technologies/Platforms: Application(s): **Current Partner(s):** Kollicoat<sup>e</sup> Coatings & Coating Systems Kollidon Binders & disintegrants Ludipress<sup>6</sup> Direct compression aids Lutrol® & Lutrol® Micro Solubilizers Solutof Solubilizer Cremophor<sup>e</sup> Solubilizer & emulsifier

Contact: BASF Pharma Solutions, (800) 443-0627

#### EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS

Baxter Healthcare Corporation Route 120 & Wilson Road Round Lake, Illinois 60073 Phone: (800) 422-9837 Fax: (847) 948-3642 email: onebaxter@baxter.com www.baxterbiopharmasolutions.com

Current Technologies/Platforms: PROMAXX Microsphere Technology

NANOEDGE Dispersion Technology

Protein/Peptides/Organic Drugs/DNA Injectable Drug Delivery Inhalable Drug Delivery Ophthalmic -Lyophilized

Application(s):

-Aseptic & Terminally Sterilized Parenterals -Direct Homogenization Microprecipitation with Homogenization

Contact: Tom Westerkamp (847) 270-3472

# Not Disclosed

Current Partner(s):

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



Camurus Ideon Science Park, Solvegatan 41 Lund, NA SE-22370 Sweden

Phone: +46 46 2865730 Fax: +46 46 2865739 email: info@camurus.ideon.se www.camurus.se

Current Technologies/Platforms: | Application(s): Cubosome(R), Hexosome(R) and Flexosome(R) LCNP

Oral, Parenteral (i.v.), Topical

Current Partner(s): Non-disclosed US and Eur. companies

Contact: Bengt Westrin, VP Bus Dev, +46 46 2865730

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



14 Schoolhouse Road Somerset, New Jersey 08873 Phone: (732) 537-6200 Fax: (732) 537-5949

email: pts@cardinal.com www.cardinal.com/pts

Cardinal Health

Current Technologies/Platforms: Application(s): Current Partner(s): Matrix Tablets All are for oral applications for functional release Tablet Coating N/A N/A Drug Lavering Fine-Particle Coating Contact: (866) 720-3148, email: pts@cardinal.com

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Chr. Hansen 9015 W. Maple Street Milwaukee, WI 53214 Phone: (800) 558-0802 Fax: (414) 607-5959 www.chr-hansen.com

**Current Technologies/Platforms:** Application(s): **Current Partner(s):** Pigmented and clear coating systems. solid dosage forms Chroma-Tone™ Dri-Klear™ Chroma Tone™. Chroma-Kote™. Chroma-Teric™, Chroma-SRF™, Chroma-GDF™, Chroma-Seal™, Gel-Klear™ Compressible excipients: Foremost® solid dosage forms Lactose, Nu-Tab®, Cal-Carb®, Pharma-Carb Contact: Margot Connor, VP of Sales, Human Health & Nutrition

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Colorcon 415 Mayer Boulevard West Point, PA 19486-0024 Phone: (215) 699-7733 www.colorcon.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Acryl-EZE <sup>®</sup>	Oral, Enteric, Modified Release, Film coating	
Surelease <sup>®</sup>	Oral, Modified Release, Film coating	
Opaglos® 2	Oral, High Gloss, complete film coating system	
Opadry® II	Oral, High Performance, complete film coating system	
Opadry® AMB	Oral, Aqueous Moisture Barrier, complete film coating system	
Starch 1500°	Partially Pregelatinized Maize Starch, excipient	
Contact: Donna Marano, (215) 661-26	630	

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



Corium International, Inc. Corium Technology Group 2686 Middlefield Road, Suite G Redwood City, CA 94063 Phone: (650) 298-8255 www.coriumtech.com

Application(s):	Current Partner(s):
Wound care, device, diagnostic, mucosal, transmucosal, dermal, transdermal	Pharmaceutical Co., Wound Care Co., Generic Rx Co., Cosmetic Co., Oral Care Co., Device Co.
	Wound care, device, diagnostic, mucosal,

Contact: Gary Cleary, PhD - President, CTO, (650) 298-8255, email: info@coriumtech.com

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

CP Kelco 8355 Aero Drive San Diego, CA 92123

Phone: (858) 292-4900 Fax: (858) 292-4901 email: solutions@cpkelco.com www.cpkelco.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
KELTROL® Xanthan gum	Encapsulation	
XANTURAL® Xanthan gum	Tablet coatings	
GELRITE® Gellan gum	Pharmaceutical Emulsions	
KELCOGEL® Gellan gum	Ostomy & Wound Care Products	
GENU® Pectin	Ointments, Creams & Lotions	
GENU <sup>®</sup> Carrageenan		
GENU® Gum Refined LBG		
NYMCEL® Carmellose Sodium	Tablet Coating	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
KELCOGEL® Gellan Gum	Ophthalmic Compositions	
GENU® Pectin	Edible Film Delivery Systems	

Contact: Anne Sinha, (858) 467-6615

#### **EXIPIENTS, POLYMERS, LIPOSOMES, LIPIDS, COATINGS**

Innovation you can build on™

Croda Inc. 300-A Columbus Circle Edison, NJ 08837

Phone: (732) 417-0800 Fax: (732) 417-0804 email: pharmaceuticals@crodausa.com www.crodausa.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Super Refined® (High-purity triglycerides)	Topical, Oral, Parenteral	
Super Refined® Oleic Acid NF	Topical, Oral, Transdermal (TDD)	
Super Refined® PEG 300 NF, Super Refined® PEG 400 NF, Super Refined® PEG 600 NF	Topical, Oral, Parenteral	
Crillet HP (High purity polysorbate)	Topical, Oral, Parenteral	
Cholesterol HP (High purity cholesterol)	Parenteral	
Medilan™ (Medium Grade Lanolin)	Topical	
Crodamols (Fatty Esters)	Topical, Oral, Parenteral	
Contact: Nigel Langley (732) 417-080	10 evt 4281	

#### **EXIPIENTS, POLYMERS, LIPOSOMES, LIPIDS, COATINGS**

degussa.

creating essentials

Degussa Rohm America, LLC. 2 Turner Place Piscataway, NJ 08855-0365 Phone: (732) 981-5383 www.rohmamerica.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
EUDRAGIT L30D-55	Oral (Enteric Drug Delivery)	
EUDRAGIT L100-55	Oral (Enteric Drug Delivery)	
EUDRAGIT L-100	Oral (Enteric Drug Delivery)	
EUDRAGIT S-100	Oral (Colonic Drug Delivery)	
EUDRAGIT EPO	Oral (Immediate Release Coatings)	
EUDRAGIT E-100	Oral (Immediate Release Coatings)	
EUDRAGIT RL30-D	Oral (Sustained Release Coatings)	See Company Profile
EUDRAGIT RS30-D	Oral (Sustained Release Coatings)	See Profile
EUDRAGIT RL-100	Oral (Sustained Release Coatings)	
EUDRAGIT RS-100	Oral (Sustained Release Coatings)	
EUDRAGIT NE30-D	Oral (Sustained Release Coatings)	
EUDRAGIT NE40-D	Oral (Sustained Release Coatings)	
EUDRAGIT RL/PO	Oral (Matrix Sustained Release Delivery)	
EUDRAGIT RS/PO	Oral (Matrix Sustained Release Delivery)	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
EUPERGIT	Enzyme Immobilization Technology	

Contact: Andrew S. Honeycheck, (732) 981-5383

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

DelSite Biotechnologies, Inc. 1505 Walnut Hill Lane Irving, TX 75038

Phone: (972) 717-5009 Fax: (972) 831-1132

email: info@delsite www.delsite.com

Pipeline Technologies/Platforms:	Application(s):	Development Stage:
GelSite® Polymer	Mucosal	DMF
GelSite® Polymer	Injectable	Preclinical

Contact: Jean Anne Mire - Director, Business Development, (972) 650-7320, email: jamire@delsite.com

# Excipients, Polymers, LIPIDS, COATINGS

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Depomed, Inc. 1360 O'Brien Drive Menlo Park, CA 94025 Phone: (650) 462-5900 www.depomedinc.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Gastric Retention Diffusional Technology	Oral, Liquid, Controlled release of soluble drugs	Biovail, Inc.
Gastric Retention Erosional Technology	Oral, Constant delivery rate of insoluble drugs	
Gastric Retention Bi-Layer Technology	Oral, Controlled release of 2 drugs with different characteristics	
Gastric Retention Combination Technology	Oral, Controlled release of 2 drugs simultaneously or in sequence	Biovail, Inc.

Contact: Thadd Vargas, (650) 462-5900

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

DMV International PO Box 13 Veghel, 5460 BA The Netherlands

Phone: +31 413372222 Fax: +31 413372930 email: pharma@dmv-international.com www.dmv-international-pharma.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Pharmatose®	Direct compression lactose	
Respitose <sup>®</sup>	Inhalation lactose	
Primojel <sup>®</sup>	Superdisintegrant	
Primellose <sup>®</sup>	Superdisintegrant	

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



Dow Chemical Company PO Box 1206 Midland, Michigan 48642 Phone: (800) 447-4369 Fax: (989) 832-1465 www.dow.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
METHOCEL® Cellulose Ethers  ETHOCEL® Ethyl cellulose	Controlled Release Matrix Tablets, Controlled Release Coatings, Conventional Tablet Coating, Conventional Wet Granulation, Bulk Laxatives, Creams, Gels, and Ointments, Ophthalmic Preparations, Suspensions, Antacids	See Company Profile
ETHOGEL <sup>-</sup> Ethyl cellulose	Controlled Release Coatings, Microencapsulation, Solvent-Based Coating for Barrier or Taste Masking Properties, Direct Compression Granulation, Solvent- Based Granulation	•
POLYOX™ Poly (Ethylene Oxide) Resins	Controlled Release Matrix Tablets, Melt Extrusion, Creams, Gels, and Ointments, Mucosal Bioadhesives	
Dow Polyglycols	Suppositories	

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



Healthcare Solutions

Dow Corning Corporation PO Box 0994 Midland, MI 48686

Phone: (989) 496-6000 Fax: (989) 496-6731 email: product.info@dowcorning.com www.dowcorning.com

		3
Current Technologies/Platforms:	Application(s):	<b>Current Partner(s</b>
Topical Excipients	Volatile excipients, fluids, blends, waxes and emulsifiers to aid the delivery of topical forms and actives	See Company Profile

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

#### EASTMAN

Eastman Chemical Company 200 S. Wilcox Drive Kingsport, TN 37662 Phone: (800) 327-8621 www.eastman.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Eastman CAP	Enteric Coating	
Eastman Eastacryl® 30D Acrylic Coating Material	Enteric Coating	
Eastman CA-398-10	NF Sustained/Controlled Release; Taste Masking	
Eastman CAB-171-15-PG	Sustained/Controlled Release	
Eastman Vitamin E TPGS	Absorption Enhancer, Solubilizer, Bioavailability Enhancer	

Contact: Carolyn Baker, (423) 229-2987

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Ethypharm 194 Bureaux de la Colline 92213 Saint-Cloud Cedex - France Phone: +33 1 41 12 17 20 www.ethypharm.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Spherulites®	Vaccines	
Multiparticles, Sustained Release Forms	Enhanced Absorption	
Contact: Bruno Delia Senior VP - Bus	iness Development ±33 1 /1 12 17 20	

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Flamel Technologies 33 Avenue Du Drive Georges Levy Venissieux, France 69693 Phone: +33 472-783-434 Fax: +33 472-783-435 E-mail: simonin@flamel.com

www.flamel.com		
Current Technologies/Platforms:	Application(s):	Current Partner(s):
MEDUSA	Parenteral	Bristol-Myers Squibb & other undisclosed partners
МІСКОРИМР	Oral	Biovail, Merck, Servier GlaxoSmithKline & others undisclosed
Pipeline Technologies/Platforms:	Application(s):	Development Stage
Genvir (MICROPUMP)	Oral	Phase III
Basulin (MEDUSA)	Parenteral	Phase I
Metformin XL (MICROPUMP)	Oral	Phase I
Augmentin SR (MICROPUMP)	Oral	Confidential
Ace Inhibitor (MICROPUMP)	Oral	Confidential
Various MEDUSA & MICROPUMP Projects	Oral & Parenteral	Preclinical
	I	l e

Contact: Federick Simonin, +33 472-783-434

Contact: Stacey Chapin, (989) 496-7759, email: lifesciences@dowcorning.com

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Grain Processing Corporation 1600 Oregon Street Muscatine, IA 52761 Phone: (563) 264-4265 www.grainprocessing.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
MALTRIN <sup>®</sup> Maltodextrins NF	Aqueous Film Coating, Bulking, Carrying, Blending, Capsules, Creams & Lotions, Dry	
PURE-DENT® Corn Starches USP/NF	Granulation, Film Forming, Liquid Pharmaceuticals. Medical Nutritionals. Soaps &	
PURE-COTE®, INSTANT PURE-COTE® Modified Starches	Cleansers, Spray Drying, Tableting, Throat Lozenges, Wet Granulation	
Spress <sup>®</sup> Pregelatinized Starches NF		
WATER LOCK® Superabsorbent Polymers		

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Huber Engineered Materials, part of J.M. Huber Corporation 907 Revolution Street Havre de Grace, Maryland 21078

Phone: (866) 881-6480 Fax: (410) 939-7313 email: hubermaterials@huber.com www.rxcipients.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
RxCIPIENTS™ FM1000	Fast dissolve oral dosage tablets	
Hubersorb® calcium silicate	Carrier	
Zeopharm <sup>e</sup> silica	Glidant	
Contact: Mike Carpenter		

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

INEOS Fluor

The Heath, Runcorn
Cheshire, UK WA7 40X
Phone: +44 (0) 1928 51 5525 Fax: +44 (0) 1928 51 1418
email: info@ineosfluor.com
www.ineosfluor.com
• www.zephex.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
ZEPHEX 134a and ZEPHEX 227ea HFA medical propellants	Metered Dose Inhalers, other medical aerosols and devices	Supply many of the World's leading MDI companies
	Made available to support the smooth transition from CFC propelled MDIs to HFA propelled ones	
Pipeline Technologies/Platforms:	Application(s):	Development Stage
Electrostatic effects from propellant	Enhancing reproducibility and delivery of pulmonary	Early research

Contact: Tim Noakes

interactions with can and drug

Contact: Bob Bahn. (563) 264-4281

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

medications



International Specialty Products (ISP) 1361 Alps Road Wayne, NJ 07470 Phone: (973) 628-4000 Fax: (973) 628-4117

email: info@ispcorp.com

INTERNATIONAL SPECIALTY PRODU	CTS	www.ispcorp.o	com
Current Technologies/Platforms:	Application(s):		Current Partner(s):
Advantia™ Coating Systems	Oral Solids		
Contact: Ann Druffner			

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



JRS Pharma LP 2981 Route 22, Suite 1 Patterson, NY 12563

Phone: (800) 431-2457 Fax: (845) 878-3484 email: info@jrspharma.com www.jrspharma.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
PROSOLV® SMCC Silicified Micro- crystalline cellulose	High Functionality Excipients	
PRUV <sup>®</sup> Sodium Stearyl Fumarate	Lubricant	
EXPLOTAB® Sodium Starch Glycolate	Superdisintegrant	
VIVASTAR® Sodium Starch Glycolate	Superdisintegrant	
EMCOCEL® Microcrystalline Cellulose	Tablet Binder	
VIVAPUR® Microcrystalline Cellulose	Tablet Binder	
LUBRITAB® Hydrogenated Vegetable Oil	Tablet Lubricant	

Contact: Renee Mill. (845) 878-8390

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



Lipoxen Technologies Ltd. Suite 303, Hamilton House, Mabledon Place London, England WC1H 9BB

Phone: ++44(0)20 7753 5822 Fax: +44(0)20 7753 5820 www.lipoxen.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Lipoxen's proprietary drug delivery technologies employ POLYSIALIC ACIDS (a natural biodegradable polymer found in the body and considered a next generation to PEGylation) for peptide and protein delivery, and LIPOSOMES tailored for the delivery of vaccines and oncology drugs	Please see website	Please see website
Contact: Dr. Peter Laing		

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

MacroMed, Inc. 9520 South State Street Sandy, Utah 84070 Phone: (801) 565-8561 Fax: (801) 565-8562 E-mail: macromed@macromed.com

www.macromed.com			
Current Technologies/Platforms:	Application(s):	Current Partner(s):	
		``	
HySolv™	Oral, Parenteral Solubilizer		

Contact: Kirk Fowers

# Excipients, Polymers, LIPIDS, COATINGS

#### EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS

NeoPharm Inc. 150 Field Drive, Suite 195 Lake Forest, IL 60045

Phone: (847) 295-8678 Fax: (847) 295-8854

www.neophrm.com

Current Technologies/Platforms: | Application(s): Current Partner(s): NeoLipid™ Technology Delivery of broad range of difficult to formulate NeoPhectin™ (In Vitro) Delivery of Nucleic acids (siRNA, plasmids, NeoPhectin-AT™ (In Vivo) Delivery of Nucleic acids (siRNA, plasmids, Application(s): Pipeline Technologies/Platforms: **Development Stage:** NeoLinid™ Technology Easy to use Liposome-based drugs for treatment Linosome-based SN38 (LE-SN38), SN-38 is an active metabolite of Camptosar® - Phase I/II Liposome-based Paclitaxel (LEP-ETU) - Phase I/II Liposome-based raf anti-

Contact: Saif Sheikh, PhD, MBA, (847) 295-8678, x363, email: ssheikh@neopharm.com

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Noveon, Inc. 9911 Brecksville Road Cleveland, OH 44141 Phone: (216) 447-5000 www.pharma.noveon.com

Current Technologies/Platforms: Application(s): Current Partner(s): Controlled release solid dosage forms (tabs, caps); Carbobol® Polymers

topical lotions, creams and gels

Pemulen® Polymeric Emulsifiers Topical lotions, creams and gels Noveon® Polycarbophils Bioadhesion in vaginal, buccal and ophthalmic applications: taste masking

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



**Octoplus** Zernikedreef 12 2333 CL Leiden Netherlands

Phone: +31 71 5244044 Fax: +31 71 5244043 email: info@octoplus.nl

www.octoplus.nl

Pipeline Technologies/Platforms: Application(s): Developments: Rindegradable polymer-based drug Microspheres and liposomes for controlled Pharmaceutical and biotech delivery technologies companies worldwide parenteral release

Advanced formulation technologies Pharmaceutical development of biopharmaceuticals Pharmaceutical and hiotech and low soluble compounds companies worldwide

Contact: Dr. Henrik Luessen, Director Business Development

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

OSG Norwich Pharmaceuticals, Inc. 6826 State Highway 12 Norwich, NY 13815

Phone: (607) 335-3000 Fax: (607) 335-3100 email: Bob.Calabro@norwichpharma.com

Current Technologies/Platforms: | Application(s): Current Partner(s): Aqueous and solvent tablet coating Numerous Contact: Bob Calabro

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Particle and Coating Technologies, Inc. 5445 Highland Park Drive St. Louis, MO 63110

Phone: (314) 535-1516 Fax: (314) 535-1514 email: rsparks@pctincusa.com www.pctincusa.com

Current Technologies/Platforms: Application(s): Current Partner(s): Better barriers Very viscous coatings Pipeline Technologies/Platforms: Application(s): Development Stage: New barrier coatings

Contact: Robert Sparks

#### EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS



Paulaur Corporation 105 Melrich road Cranbury, NJ 08512

Phone: (609) 395-8844 Fax: (609) 395-8850 email: amartello@paulaur.com www.paulaur.com

Current Technologies/Platforms: | Application(s): Current Partner(s): Oral, Solid Dosage, Sustained, Controlled & Sugar Spheres USP/NF Extended Release

DURO-TAR Direct Compacting & Tableting Sugar **MEGATAB®** Direct Compacting & Tableting Sucrose MEGADEX® Direct Compacting & Tableting Dextrose

Contact: Alex Martello

sense (LE-rafAON) - Phase I

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

PII.

117-B Docks Corner Road Dayton, New Jersey 08810 Phone: (732) 438-1111 Fax: (732) 438-1414 E-mail: pil4excipients@aol.com

Current Technologies/Platforms: Application(s): Current Partner(s):

**EFFERVES** Quick-Dissolve/Effervescent Tablets DCP-GRAN Excipient, Oral PUREMAG (MAG Oxide USP) Oral, Tablets Calcium Sulfate (TERALBA) Excinient Oal Calcium Carbonate Excipient, Oral Calcium Citrate Excipient, Oral

Contact: R. Parvez

#### **EXIPIENTS, POLYMERS, LIPOSOMES, LIPIDS, COATINGS**



PURAC America, Inc 111 Barclay Boulevard Lincolnshire, IL 60069 Phone: (847) 634-6330 Fax: (847) 1992

email: pam@purac.com www.purac.com

Current Technologies/Platforms: | Application(s): Current Partner(s): PIIRAC Oral

PURASORB® (Biodegradable Polymers) Parenteral, Implants, Microspheres

Contact: Claudia Bratrude

# Excipients, Polymers, LIPIDS, COATINGS

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

SAFC

3050 Spruce Street St. Louis, MO 63103

Phone: (800) 244-1173 (314-534-4900) Fax: (800) 368-4661 (314-652-0000)

email: safcqlobal@sial.com www.safcglobal.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Polyamino Acids	Carrier/excipient	
Lipids	Liposomes	
Liposomes	Carrier/excipient	
Tween 20/80 GMP, Low Peroxide	Detergent/surfactant	
Synthetic Cholesterol	Emulsifier/liposomes	
Keyhole limpet hemocyanin (KLH)	Carrier/adjuvant	
Pipeline Technologies/Platforms:	Application(s):	Development Stage:
PEGylation	Stability, solubility	Prototype
Conjugation		

Contact: Tom Gelineau, (314) 301-2077, email: tgelineau@sial.com

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**



SPI Pharma 321 Cherry Lane New Castle, Delaware 19720 Phone: (302) 576-8500 x 8554 Fax: (302) 576-8567 www.spipharma.com

Current Technologies/Platforms:	Application(s):	Current Partner(s):
Mannogem™ EZ, 2080, Granular, Powder	Solid Oral Dose	Rx, OTC Nutraceutical
Advantose™ 100 Spray-dried Maltose	Solid Oral Dose	Rx, OTC
Sorbogem™ Sorbitol Special	Soft Gelatin Capsules	Rx, OTC Nutraceutical
Barcroft™ CS-90 Spray-dried Calcium	Solid Oral Dose	Rx, OTC Nutraceutical
Barcroft™ MS-90 Spray-dried Magnesium	Solid Oral Dose	Rx, OTC Nutraceutical
Contact: Ellen London		

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Stepan Company 100 West Hunter Avenue Maywood, NJ 07607

Phone: (201) 712-7642 Fax: (201) 712-7648 email: jbutterwick@stepan.com www.stepan.com

Current Technologies/Platforms: | Application(s):

NEOBEE® Medium Chain Solvent, carrier Trialvcerides WECOBEE® Triglycerides Suppository base

Contact: James M. Butterwick

#### **EXCIPIENTS, POLYMERS, LIPSOMES, LIPIDS, COATINGS**

Texmac Inc. 3001 Stafford Drive Charlotte, NC 28208

Current Partner(s):

Phone: (704) 393-6555 Fax: (704) 392-1621 email: yosaka@texmacusa.com

www.texmac.com

Current Technologies/Platforms: Application(s): Current Partner(s): Micro-/Nan particle surface coating, Drug delivery, cosmetics Nara Machinery

Contact: James M. Butterwick

### BIOLOGICAL DEVELOPMENT SERVICES

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

#### 3M Drug Delivery Systems

3M Drug Delivery Systems 3M Center, Bldq. 275-3E-10 St. Paul, Minnesota 55144-1000 Phone: (800) 643-8086 Fax: (651) 737-5265 www.3m.com/dds

#### Please check the categories in which your company provides the service.

□ Drug Discovery ☑ Clinical Trial MFG/Scale-up

✓ Analytical Development

☑ Technology/Transfer

□ Formulation Development 

Stability Testing

■ Packaging

Other:

Contact: www.3m.com/dds

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

AAI Development Services 2320 Scientific Park Drive Wilmington, NC 28405 Phone: (800) 575-4224 or (910) 254-7000 Fáx: (910) 815-2300 www.aaidevélopment.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery

☑ Analytical Development ☑ Clinical Trial MFG/Scale-up
☑ Technology/Transfer

■ Formulation Development

■ Stability Testing ■ Packaging

■ Other: Regulatory Affairs Services, Clinical Trials Services, Bioanalytical Services, Pharmaceutics Services

Contact: email: services@aaidevelopment.com

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

ABC Laboratories, Inc. 7200 East ABC Lane Columbia, MO 65202

Phone: (573) 443-9000 Fax: (573) 443-9033

email: abc@abclabs.com www.abclabs.com

#### Please check the categories in which your company provides the service.

■ Drug Discovery

□ Clinical Trial MFG/Scale-up □ Technology/Transfer

□ Formulation Development ■ Manufacturing

✓ Stability Testing □ Packaging

Contact: Nancy Berrey

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Advion BioSciences 15 Catherwood Road Ithaca, New York 14850 Phone: (607) 266-0665 Fax: (607) 266-0749 email: CROinfo@advion.com www.advion.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery

□ Analytical Development

☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer

□ Formulation Development Manufacturing

□ Stability Testing Packaging

✓ Analytical Testing & Analysis

 ■ Other: LC/MS Bioanalytical Services; Sample Management Services

Contact: Gaye Martin

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



AKINA, Inc. Business & Technology Center 1291 Cumberland Avenue, #E130 West Lafayette, IN 47906-1385 Phone: (765) 464-0390 www.akinainc.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery

Other:

☐ Analytical Development

☑ Technology/Transfer

□ Manufacturing

■ Stability Testing □ Packaging

□ Clinical Trial MFG/Scale-up

☐ Current Partnerships: Samyang Corporation, Immusol

Contact: Kinan Park, PhD, (765) 464-0390

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Alcoa Flexible Packaging 6603 West Broad Street Richmond, VA 23230

Phone: (804) 281-2603 Fax: (804) 281-2238 www.alcoa.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery ■ Analytical Development □ Clinical Trial MFG/Scale-up □ Technology/Transfer

□ Formulation Development ■ Manufacturing

□ Stability Testing Packaging

Contact: Victoria C. Welch, (804) 281-2262

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

American Peptide Company, Inc. 777 East Evelyn Avenue Sunnyvale, CA 94086 Phone: (408) 733-7604, x204 www.americanpeptide.com

#### Please check the categories in which your company provides the service.

□ Analytical Development Drug Discovery □ Clinical Trial MFG/Scale-up □ Technology/Transfer

☐ Formulation Development Manufacturing

☐ Stability Testing Packaging

☑ Other: Peptides, cGMP, Process Development

Contact: Gary Hu, (800) 926-8272, ext. 204

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



3B East Lake Road Danbury, CT 06811 Phone: (203) 312-0682 Fax: (203) 312-0722 email: assa.info@assainternational.com www.assainternational.com

assa international Inc

#### Please check the categories in which your company provides the service.

☐ Drug Discovery ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer

□ Analytical Development □ Formulation Development ■ Manufacturing

□ Stability Testing Packaging

☑ Other: Education & Training:

assainternational is a training and consulting company specialized on pharmaceutical applications of solidstate analytical techniques. Specifically, assa:

- organizes in-depth International Workshops and Conferences on Solid State Characterization in the
- offers specialized courses for pharmaceutical applications on Polymorph Screening, X-Ray Powder Diffraction, Near IR and Terahertz Spectroscopy, and Patent related issues
- · Also offers a wide range of Analytical Services for Pharmaceutical Solid State problems, including four Polymorph Screening programs. We are available for Expert Witness services

Contact: Dr. Angeline Zakrzewski, email: Angeline@assainternational.com 203-312-0682

### BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Azopharma, Contract Pharmaceutical Services 10320 USA Today Way Miramar, FL 33025

Phone: (954) 433-7480 Fax: (954) 432-9015 email: development@azopharma.com www.azopharma.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
  ☑ Technology/Transfer
- ✓ Formulation Development □ Manufacturing
- ✓ Stability Testing Packaging

- Other: Characterization Services Synthesis Preformulation Contact: David Greeley, VP Sales and Marketing

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



100 Campus Drive Florham Park, NJ 07932

Phone: (800) 443-0627, Fax: (973) 245-6763 email: pharmasolutions@basf.com www.basf.com/pharma

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- □ Analytical Development
- □ Technology/Transfer
- □ Formulation Development ■ Manufacturing
- ☐ Stability Testing ■ Packaging
- ☐ Clinical Trial MFG/Scale-up Other: Solid and semi-solid dosage form contract manufacturing
- Contact: BASF Pharma, (800) 443-0627

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Baxter Pharmaceutical Solutions LLC 927 South Curry Pike Bloomington, Indiana 47403 Phone: (800) 353-0887 Fax: (812) 332-3079

email: onebaxter@baxter.com www.baxterbiopharmasolutions.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☑ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ☑ Other: Pre-filled syringes, vials, lyophilization & cartridges

Contact: Ryan Akers, (812) 355-7136

- ▼ Formulation Development
- See Company
- Stability Testing

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Bespak, Inc.

2450 Laura Duncan Road Apex, North Carolina 27523

(919) 387-0112 Fax: (919) 387-1241 email: Bizdev@bespakinc.com www.bespak.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
  ☑ Technology/Transfer
- ☑ Analytical Development
- Stability Testing ✓ Packaging
- other: Device and Manufacturing Service: Design, Development, Molding and Assembly of Drug Delivery Devices (eg Respiratory, Diagnostic disposables, Needle free injection, Safety needle)
- Contact: Robert Swann

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

**Bioserv Corporation** 5340 Eastgate Mall San Diego, California 92121

(858) 450-34123 Fax: (858) 450-0785 email: info@bioservcorp.com

www.bioservcorp.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
- □ Analytical Development □ Technology/Transfer
- □ Stability Testing □ Formulation Development ☑ Packaging
- □ Analytical Testing & Analysis
  □ Process Development Other: Lyphilization

Contact: Lee Starr, (858) 450-4676

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Biovail Contract Research 460 Comstock Road Toronto, Ontario, Canada MIL4S4 Phone: (416) 752-3636 Fax: (416) 752-7610 email: clientserv@biovail.com www.biovail-cro.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☐ Analytical Development ☐ Clinical Trial MFG/Scale-up
- ☐ Formulation Development ☐ Technology/Transfer Manufacturing
- ✓ Stability Testing Packaging

- □ Laboratory Testing
- ☑ Other: Clinical Trials & Bioanalysis, Analytical Testing & Analysis

Contact: Tamar Aghamanoukian, Director, Marketing & Sales

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Calorimetry Sciences Corporation 890 West 410 North, Suite A Lindon, UT 84042

Phone: (801) 763-1500 Fax: (801) 763-1414 email: info@calscorp.com www.calorimetrysciences.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Clinical Trial MEG/Scale-up
- ☐ Analytical Development
  - ☐ Technology/Transfer
- □ Formulation Development
- ✓ Stability Testing

- Laboratory Testing

- □ Manufacturing
- □ Packaging

Contact: Peter Zumbrennen

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES Cardinal Health



14 Schoolhouse Road Somerset, New Jersey 08873 Phone: (732) 537-6200 Fax: (732) 537-5949 email: pts@cardinal.com www.cardinal.com/pts

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ✓ Clinical Trial MFG/Scale-up
- ☑ Analytical Development ✓ Technology/Transfer
- ✓ Formulation Development ■ Manufacturing
- ✓ Stability Testing ■ Packaging

- ✓ Analytical Testing & Analysis
  ✓ Process Development
- ☑ Other: Product Launch Services, Medical Education, Post-Launch Services

Contact: (866) 720-3148

## BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Capsugel

535 North Emerald Road Greenwood, SC 29646

Phone: (888) 783-6361 Fax: (888) 783-6360 email: Glenda.oliver-smith@pfizer.com www.capsugel.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery

Contact: Glenda Oliver-Smith

- □ Analytical Development
- ☐ Stability Testing Packaging

- ☑ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ☐ Analytical Testing & Analysis ☐ Laboratory Testing
- Manufacturing
- □ Analytical Development ▼ Formulation Development
- ☐ Stability Testing

☐ Drug Discovery

- ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer ■ Manufacturing **Other:** Supplies probiotics (capsules, tablets and powders), phytonutrients, colors, flavors and maskants
- □ Packaging

Contact: Margot Connor, VP of Sales, Human Health & Nutrition

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Celsion Corporation 10220-L Old Columbia Road Columbia, MD 21046

Phone: (410) 290-5390 Fax: (410) 290-5394

email: celsion@celsion.com www.celsion.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery □ Clinical Trial MFG/Scale-up
- ☐ Analytical Development ☐ Technology/Transfer
- ☐ Formulation Development □ Manufacturing
- Stability Testing
- □ Packaging

- ☐ Analytical Testing & Analysis ☐ Process Development
- Other: Cancer Drug Development

Contact: Anthony P. Deasey, EVP & COO, (410) 290-5390 x4899

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Center for Advanced Drug Development 100 Oakdale Campus Room 1 PRL Iowa City, Iowa 52242-5000

Phone: (319) 335-4096 Fax: (319) 335-4374 email: alta-botha@uiowa.edu

www.pharmacy.uiowa.edu/rxserve/index.htm

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
- ✓ Analytical Development ☑ Technology/Transfer
- ✓ Stability Testing □ Packaging

☑ Other: Method development and validation according to ICH guidelines, development of dissolution procedures and validation of the analytical method, pre-formulation, development of formulations, API, excipient and drug product testing according to official monographs.

Contact: Dr. Alta Botha

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Cerilliant Corporation 811 Paloma Drive Round Rock, Texas 78664 Phone: (800) 848-7837 Fax: (800) 654-1458 email: custserv@cerilliant.com www.cerilliant.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ✓ Clinical Trial MFG/Scale-up
- ☑ Analytical Development ■ Technology/Transfer
- ☐ Formulation Development ■ Manufacturing
- ✓ Packaging

☑ Analytical Testing & Analysis ☑ Process Development

Contact: Debbie Palmon, Account Manager/Tradeshow Coordinator

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

**CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES** 

Chr. Hansen

9015 W. Maple Street

Milwaukee, WI 53214

Phone: (800) 558-0802 Fax: (414) 607-5959

email: Innovations@chr-hansen-us.com

www.chr-hansen.com

Ciba® Expert Services 540 White Plains Road Tarrytown, NY 10591

Phone: (914) 785-2533 Fax: (914) 785-4241 email: cxs\_nafta@cibasc.com www.cibasc.com/cxs

#### Please check the categories in which your company provides the service.

Please check the categories in which your company provides the service.

- ✓ Analytical Development ☐ Formulation Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
  - □ Manufacturing
- Stability Testing □ Packaging
- **☑ Other:** Leachables and Extractables Analysis, Quality Management, Life Cycle Consultation, EH&S testing and Consulting

#### Contact: Miles Hutchings and Dean Hamel

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Cirrus Pharmaceuticals, Inc. P.O. Box 14748

Research Triangle Park, NC 27709-4748 Phone: (919) 884-2064 Fax: (919)884-2075 email: info@cirruspharm.com www.cirruspharm.com

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery ✓ Stability Testing ☑ Analytical Development ✓ Formulation Development Clinical Trial MEG/Scale-up ■ Manufacturing □ Packaging
- ✓ Laboratory Testing

Development & Validation Contact: Jean-Marc Bovet

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Coating Place, Inc. 200 Paoli Street, PO Box 930310 Verona, WI 53593 Phone: (608) 845-9521 www.encap.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☑ Analytical Development ✓ Clinical Trial MFG/Scale-up

  ✓ Technology/Transfer
- ✓ Formulation Development Manufacturing
  - ✓ Stability Testing □ Packaging

W Other:

Contact: Fred Schulze, (817) 477-2766

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Corium International, Inc. Corium Manufacturing Group 4558 50th Street Grand Rapids, MI 49512 Phone: (616) 656-4563 www.coriumgroup.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☑ Analytical Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ✓ Formulation Development Manufacturing
- ■ Packaging
- Other: (Co-Development, Contract Development, Prdt Dev Partnerships, Product Re-engineering)

☑ Current Partnerships: Pharmaceutical Co., Wound Care Co., Generic Rx Co., Cosmetic Co., Oral Care Co., Device Co.

Contact: Deb Fox, VP Business Development, (616) 656-4563

### BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

3301 Kinsman Blvd.

Covance Laboratories Otley Road

Madison, WI 53704 Harrogate, North Yorkshire, UK

HG3 1PY

Phone: (888) COVANCE Fax: (608) 241-7227 email: info@covance.com www.covance.com

#### Please check the categories in which your company provides the service.

- ☑ Drug Discovery
  - Manufacturing
- Stability Testing □ Packaging

Other:

☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer □ Analytical Testing & Analysis
□ Process Development

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

CP Kelco

8355 Aero Drive San Diego, CA 92123

Phone: (858) 292-4900 Fax: (858) 292-4901 email: solutions@cpkelco.com www.cpkelco.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☐ Analytical Development
- □ Formulation Development □ Manufacturing
- Stability Testing □ Packaging

- Other: Fermentation Capability □ Current Partnerships:
- □ Clinical Trial MFG/Scale-up □ Technology/Transfer
- Contact: Anne Sinha, (858) 467-6615

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



CyDex, Inc. 10513 West 84th Terrace Lenexa, KS 66214

Phone: (913) 685-8850 Fax: (913) 685-8856 email: cd\_info@cydexinc.com www.cydexinc.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- Analytical Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ☑ Formulation Development □ Manufacturing
- Stability Testing Packaging

☐ Other:

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

DeDietrich Process Systems, Inc. P.O. Box 345 / 2333 US Highway 22, W Union, NJ 07083

Phone: (908) 686-4900 Fax: (908) 686-8340 email: sales@ddpsinc.com www.ddpsinc.com

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery
- □ Analytical Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ☐ Formulation Development
- ☐ Stability Testing □ Packaging

Other:

Contact: Jennifer Kubiak

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

### deaussa.

creating essentials

Other:

Degussa Rohm America, LLC. 2 Turner Place Piscataway, NJ 08855-0365 Phone: (732) 981-5383 www.rohmamerica.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery □ Analytical Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- □ Manufacturing See Company

Profile

☐ Stability Testing □ Packaging

Contact: Dr. Ketan Mehta, (732) 981-5366



#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

DelSite Biotechnologies, Inc. 1505 Walnut Hill Lane Irving, TX 75038

Phone: (972) 717-5009 Fax: (972) 831-1132 email: info@delsite www.delsite.com

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery ✓ Analytical Development ☐ Clinical Trial MFG/Scale-up
  - Technology/Transfer ■ Manufacturing
- ✓ Formulation Development Stability Testing □ Packaging

Contact: Jean Anne Mire, (972) 650-7320, email: jamire@delsite.com

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Depomed, Inc. 1360 O'Brien Drive Menlo Park, CA 94025 Phone: (650) 462-5900 www.depomedinc.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery □ Analytical Development ■ Formulation Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
  - Manufacturing
- Stability Testing □ Packaging

□ Other

Contact: Thadd Vargas, (650) 462-5900

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Dowpharma 574 Building Midland, MI 48667

Phone: NA (866) 332-5805; EU 44-1223-728048 Fax: (989) 636-0986

email: dowpharma@dow.com www.dowpharm.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery ☑ Clinical Trial MFG/Scale-up
☑ Technology/Transfer

□ Manufacturing

Stability Testing □ Packaging

Contact: dowpharma@dow.com

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



**Dow Pharmaceutical Sciences** The D in Topicals R&D

Dow Pharmaceutical Sciences 1330 Redwood Way Petaluma, CA 94954 Phone: (707) 793-2600 Fax: (707) 793-0145 www.dowpharmsci.com

#### Please check the categories in which your company provides the service.

**■** Formulation Development Stability Testing □ Drug Discovery ✓ Analytical Development ☑ Clinical Trial MFG/Scale-up
☑ Technology/Transfer Packaging ■ Manufacturing ■ Other: Topical Product Development Dermatology for dermatologicals, ophthalmics, vaginals, otics, nasals, and orals;

Skin Permeation: and Dermatology Clinical Trial Sites

Contact: Steve Smith, VP Marketing & Business Development (707) 793-2600

## BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



DPT 318 McCullough San Antonio, Texas 78215

Phone: (210) 476-8159 Fax: (210) 829-8733 email: confidence@dptlabs.com www.dptlabs.com

#### Please check the categories in which your company provides the service.

- ☑ Drug Discovery ☑ Clinical Trial MFG/Scale-up
- ✓ Analytical Development ✓ Technology/Transfer
- ☑ Formulation Development ✓ Manufacturing
- Stability Testing ☑ Packaging

- ✓ Analytical Testing & Analysis
  ✓ Process Development Contact: Paul Josephs

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Elan Drug Technologies Monksland Athlone, Co Westmeath, Ireland Phone: +353 90 64 95000 Fax: +353 90 64 95807 www.elan.com/EDT

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
- ✓ Technology/Transfer
- ✓ Formulation Development Manufacturing
- ✓ Stability Testing Packaging

- □ Laboratory Testing
- Contact: Sarah Carty, Associate Director, European Business Development, +353 1 7094046

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



The miracles of science

E.I. DuPont de Nemours Company DuPont Fluorochemicals, Chestnut Run Plaza Wilmington, DE 19880-0711

Phone: +1-302-224-0426 Fax: +1-302-224-0427 www.dupont.com/dymel

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Clinical Trial MFG/Scale-up
- □ Analytical Development ☑ Technology/Transfer
- ☐ Formulation Development
- Stability Testing ☑ Packaging

- Contact: Mr. Joseph Creazzo, Technical Service Manager, email: Joseph.A.Creazzo@usa.dupont.com

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



**EMERSON** 

600 Markley Street Norristown, PA 19401 Phone: (610) 279-7450 Fax: (610) 292-9722

email: info@emersonresources.com www.emersonresources.com

Emerson Resources, Inc.

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☑ Technology/Transfer
- ■ Manufacturing
- Packaging

Contact: Walter Strathy

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Eurand, Inc. 845 Center Drive Vandalia, OH 45377

Phone: (937) 898-9669 Fax: (937) 898-1093

email: bizdev@eurand.com

www.eurand.com Profile

#### Please check the categories in which your company provides the service.

- □ Drug Discovery Clinical Trial MFG/Scale-up
- ☑ Technology/Transfer
- ✓ Formulation Development Stability Testing ✓ Manufacturing Packaging

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Facet Technologies 1850 Parkway Place, Suite 900 Marietta, GA 30067

Phone: (770) 767-8344 Fax: (770) 767-7320 email: info@facettechnologies.com www.facettechnologies.com

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery ☐ Analytical Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- □ Formulation Development ■ Manufacturing
- □ Stability Testing Packaging

- ☐ Analytical Testing & Analysis ☐ Process Development
- ☑ Other: Dosage Device Development and Mfg.

Contact: Michael Flater

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Ferris Pharmaceuticals Inc. 16W300 83rd Street Burr Ridge, IL 60527-5848 Phone: (630) 734-7810 Fax: (630) 887-1008 email: info@ferrispolymem.com

www.FerrisCares.com Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Analytical Development
  - ✓ Formulation Development
- □ Stability Testing
- ☑ Clinical Trial MFG/Scale-up ☐ Technology/Transfer ■ Manufacturing ■ Packaging **W Other: Transdermal** and mucosal patches/pads/inserts, with/without adhesive. Materials added to foam or gel formulas without heat/shear degradation. Quality system accredited to international requirements.

Contact: Paul Kay

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Filtertek Inc. 11411 Price Road Hebron, IL 60034

Phone: (800) 648-0791 Fax: (815) 648-2929 www.filtertek.com

Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Analytical Development ☐ Clinical Trial MFG/Scale-up
  - □ Technology/Transfer
- □ Formulation Development ■ Manufacturing
- Stability Testing Packaging

- Other:
- Contact: Bruce Daniels, VP Medical Marketing

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Flamel Technologies S.A. Parc Club Du Moulin á Vent 33, Avenue du Docteur Georges Lévy 69693 Vénissieux Cedex - France

Phone: (+33) 472-783-434 Fax: (+33) 472-783-435 email: simonin@flamel.com / website: www.flamel.com

Please check the categories in which your company provides the service.

- ☐ Drug Discovery ☐ Clinical Trial MFG/Scale-up
- Analytical Development
  - ☐ Technology/Transfer
- Formulation Development ■ Manufacturing
- Stability Testing □ Packaging

✓ Process Development ■ Other: Drug Delivery

Current Partnerships: Biovail (Genvir), Bristol-Myers Squibb (Basulin), GlaxoSmithKline (2 Products), Merck & Co. (1 Product), Servier (Ace Inhibitor)

Contact: Frederick Simonin. (+33) 472-783-434

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Fluid Air, Inc. 2550 White Oak Circle SAurora, Illinois 60504 Phone: (630) 851-1200 Fax: (630) 851-1244 E-mail: sales@fluidair.com Website: pharmproservices.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ✓ Clinical Trial MFG/Scale-up
- ☐ Analytical Development ☑ Technology/Transfer ☐ Analytical Testing & Analysis ☐ Process Development
- ☑ Formulation Development Manufacturing
- Stability Testing □ Packaging

## BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Generex Biotechnology Corporation 33 Harbour Square, Suite 202 Toronto, ON, Canada M5J 2G2 Phone: (416) 364-2251 Fax: (416) 364-9363 email: info@generex.com www.generex.com

#### Please check the categories in which your company provides the service.

- Analytical Development Drug Discovery ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ■ Manufacturing
- Stability Testing Packaging

Contact: Fabio Chianelli, Business Development, (416) 364-2551 x 240, email: fchianelli@generex.com

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Glatt Pharmaceutical Services 20 Spear Road Ramsey, NJ 07446 Phone: (201) 825-8700 www.qlattpharmaceuticals.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
  ☑ Technology/Transfer
  - ☑ Analytical Development
- Stability Testing Packaging

Contact: Thomas M. Salus. (201) 818-3778

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Hauser Contract Research Organization 6880 N. Broadway, Suite H Denver, CO 80221 Phone: (720) 406-4700 www.hausercro.com

#### Please check the categories in which your company provides the service.

☑ Drug Discovery ☑ Clinical Trial MFG/Scale-up
☑ Technology/Transfer

Other:

- ☑ Analytical Development
- □ Formulation Development Manufacturing
- ✓ Stability Testing ■ Packaging

**✓ Other:** Compliance Consulting Contact: Rod McKeever (720) 406-4700

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Hill Top Research P.O. Box 429501 Cincinnati, OH 45242 Phone: (800) 785-2693 Fax: (513) 831-1217 email: info@hill-top.com

www.hill-top.com Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Clinical Trial MFG/Scale-up
- □ Analytical Development □ Technology/Transfer
- □ Formulation Development Manufacturing
- Stability Testing Packaging

- **☑ Other:** Clinical Research Contact: Bryan Reynolds
  - CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Honeywell Speciality Films 101 Columbia Road Phone: (973) 455-3588 Fax: (973) 455-2487 www.honeywell.com

#### Please check the categories in which your company provides the service.

- ☑ Analytical Development ☑ Clinical Trial MFG/Scale-up
  ☐ Technology/Transfer
  - □ Formulation Development ■ Manufacturing
- Other: Technical Support, Package Design, Package Development, Material/Structure Development, Scale-up Support, Probe Stability Trials. Chemical/Mechanical Testing, Packaging Proof-of-Concept Fabrication

Contact: David J. Gibboni, david, i. qibboni@honeywell.com, (610) 446-7468

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Hovione Sete Casas 2674-506 Loures Portugal

Phone: + 351 219 829 000 Fax: + 351 219 829 388

email: comsales@hovione.com www.hovione.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery Clinical Trial MEG/Scale-up
  - ☐ Analytical Development ☑ Technology/Transfer
- ☐ Formulation Development Manufacturing
- ✓ Stability Testing □ Packaging

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Hospira, Inc. One 2 One

D988, H1 275 North Field Drive Lake Forest, IL 60045

Phone: (224) 212-2267 Fax: (224) 212-3210 email: one2one@hospira.com www.hospira.com

#### Please check the categories in which your company provides the service.

- ☐ Analytical Development □ Drug Discovery ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- □ Formulation Development
- Stability Testing ☑ Packaging
- ☐ Analytical Testing & Analysis ☐ Process Development
- ■ Other: Parenteral manufacturing: vials, cartridges, syringes, I.V. containers and ampoules

Contact: Mary Lou Glotzbach

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

INEOS Fluor The Heath, Runcorn Cheshire, UK WA7 40X Phone: +44 (0) 1928 51 5525 Fax: +44 (0) 1928 51 1418

émail: info@ineosfluor.com

www.ineosfluor.com

www.zephex.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
  - ☐ Analytical Development
- ☐ Formulation Development ■ Manufacturing
- Stability Testing □ Packaging

- ☑ Laboratory Testing
- Other: Specliazed medical propellant testing

Contact: Tim Noakes

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



INTERNATIONAL SPECIALTY PRODUCTS

International Specialty Products (ISP) 1361 Alps Road Wayne, NJ 07470

Phone: (973) 628-4000 Fax: (973) 628-4117 email: info@ispcorp.com www.ispcorp.com

#### Please check the categories in which your company provides the service.

- □ Analytical Development □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
  - □ Technology/Transfer
- - Stability Testing □ Packaging

□ Laboratory Testing Contact: Ann Druffner

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Intranasal Therapeutics, Inc. (formerly Intranasal Technology, Inc.)
1513 Bull Lea Boulevard
Lexington, KY 40511-1200
Phone: (859) 252-5080 Fax: (859) 252-7280

email: bizdev@intranasal.com www.intranasal.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
  - ☐ Analytical Development ☐ Technology/Transfer
- ✓ Formulation Development
- ✓ Stability Testing

□ Analytical Testing & Analysis
□ Process Development

Contact: Ralph Johnston, Vice President Business Development

### BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



JRS Pharma LP 2981 Route 22. Suite 1 Patterson, NY 12563

Phone: (800) 431-2457 Fax: (845) 878-3484 email: info@jrspharma.com

www.jrspharma.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery □ Analytical Development ☐ Stability Testing ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer ☐ Manufacturing Packaging
- ✓ Laboratory Testing
- Other: Excipients, Binders, Disintegrants, Lubricant, High Functionality Excipient

Contact: Renee Mill

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Lancaster Laboratories, Inc. 2425 New Holland Pike Lancaster, PA 17601

Phone: (717) 656-2300 Fax: (717) 656-3772 email: pha@lancasterlabs.com www.lancasterlabs.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Analytical Development □ Formulation Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer □ Manufacturing Packaging
- ☑ Laboratory Testing

Contact: Doug Hostetler

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Laureate Pharma, Inc. 201 College Road East Princeton, New Jersey 08540 Phone: (609) 919-3400 Fax: (609) 452-7211 email: info@laureatepharma.com www.laureatepharma.com

#### Please check the categories in which your company provides the service.

- - ■ Manufacturing
- □ Packaging
- **■ Other:** Biopharmaceutical Manufacturing

Current Partnerships: Southern Research Institute Contact: Stan Zeichner, (609) 919-3325

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Lipocine Inc. 675 Arapeen Drive, Suite 202 Salt Lake City, UT 84103 Phone: (801) 994-87383 Fax: (801) 994-7388 email: GTS@lipocine.com www.lipocine.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
  ☑ Technology/Transfer
  - □ Manufacturing
- Stability Testing

□ Packaging

Contact: Jerry Simmons

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Lipoxen Technologies Ltd. Suite 303, Hamilton House, Mabledon Place London, England WC1H 9BB

Phone: ++44(0)20 7753 5822 Fax: +44(0)20 7753 5820 www.lipoxen.com

#### Please check the categories in which your company provides the service.

- ■ Stability Testing □ Drug Discovery □ Analytical Development ☐ Clinical Trial MFG/Scale-up ☑ Technology/Transfer ■ Manufacturing □ Packaging
- ☑ Other: Drug Delivery Systems (polymers, liposomes)

Contact: Dr. Peter Laing

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Lyophilization Technology, Inc. 30 Indian Drive

Ivyland, PA 18974 Phone: (215) 396-8373 Fax: (215) 396-8375 email: frzdry@lyo-t.com www.lyotechnology.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery ☐ Analytical Development ☐ Formulation Development Stability Testing ☑ Clinical Trial MFG/Scale-up
☑ Technology/Transfer Manufacturing Packaging **"Other:** Lyophilization, Thermal Analysis Services, Validation-Manufacturing, Development Services, Process Engineering, Process Optimization, Clinical Material Preparation, Finished Product Testing, Consulting, Troubleshooting, Quality and Regulatory Services, On-site Training

Contact: Christine Adams

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

MacroMed, Inc. 9520 South State Street Sandy, Utah 84070 Phone: (801) 565-8561 Fax: (801) 565-8562 email: macromed@macromed.com www.macromed.com

#### Please check the categories in which your company provides the service.

- ☐ Analytical Development ✓ Formulation Development □ Drug Discovery ■ Stability Testing □ Clinical Trial MFG/Scale-up ☑ Technology/Transfer ■ Manufacturing □ Packaging
- **☑ Other:** Drug Delivery

Contact: Alex S. Kim, Executive Vice President, (801) 565-8561

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



MedPharm Ltd Business Centre, Sheep Street Charlbury 0X7 3RR 0xfordshire

Phone: +44 (0) 16 0881 9267 Fax: +44 (0) 16 0881 9268

email: info@medpharm.co.uk www.medpharm.co.uk

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Clinical Trial MFG/Scale-up
   ☑ Technology/Transfer □ Manufacturing □ Packaging
- □ Other: Mathematical modeling of drug absorption, predictive models for formulation optimization and screening, in vitro efficacy and performance

Contact: Carole Delauney Business Develonment Manager

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Merrion Pharmaceuticals, Inc. 219 Racine Drive, Suite D Wilmington, NC 28403-8702 Phone: (910) 799-1847 Fax: (910) 395-1843 email: info@merrionpharma.com www.merrionpharma.com

#### Please check the categories in which your company provides the service.

✓ Drug Discovery Analytical Development ✓ Formulation Development □ Stability Testing Clinical Trial MFG/Scale-up ☑ Technology/Transfer Manufacturing Packaging

Contact: Michael J. McKenna, PhD

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Metrics, Inc. 1240 Sugg Parkway Greenville, North Carolina Phone: (252) 752-3800 Fax: (252) 758-8522 email: marketing@metricsinc.com www.metricsinc.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery ☑ Analytical Development ✓ Stability Testing ☑ Clinical Trial MFG/Scale-up
☐ Technology/Transfer ■ Manufacturing Packaging 

Contact: Jeffrey Basham, jeff@metricsinc.com

### BIOLOGICAL DEVELOPMENT SERVICES

☑ Other: Pharmaceutical development in ophthalmology

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



MGlas AG Otto-Liebmann-Strasse 2 Münnerstadt, Germany 97702 Phone: +49(0)9733 808-0 Fax: +49(0)9733 808-160 email: info@mglas.de www.mglas.de

#### Please check the categories in which your company provides the service.

□ Drug Discovery	☐ Analytical Development	☐ Formulation Development	Stability Testing
☐ Clinical Trial MFG/Scale-up	☐ Technology/Transfer	Manufacturing	✓ Packaging
Contact: Mr. Wolfgang Heidl, 4	-49(0)9733 808-125		

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Micron Technologies Inc. 435 Creamery Way Exton, PA 19341

Phone: (610) 425-5100 Fax: (610) 425-5104 www.microntech.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery	Analytical Development	☐ Formulation Development	Stability Testin
☐ Clinical Trial MFG/Scale-up	☐ Technology/Transfer		Packaging
Other: Analytical Testing & A	nalysis		

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Mylan Technologies, Inc. 110 Lake Street St. Albans, Vermont 05478

Phone: (800) 532-5226 (U.S.) International: 1-802-527-7792

Fax: (802) 527-8151 email: mtiinfo@mylantech.com www.mylantech.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery	☐ Analytical Development	☐ Formulation Development	■ Stability Testing
☐ Clinical Trial MFG/Scale-up	☐ Technology/Transfer	✓ Manufacturing	Packaging
☐ Analytical Testing & Analysis	☐ Process Development		

Contact: Tom Campbell

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Next Breath LLC 1450 South Rolling Road Baltimore, MD 21227 Phone: (410) 455-5904 www.nextbreath.net

#### Please check the categories in which your company provides the service.

□ Drug Discovery	☐ Analytical Development	✓ Formulation Development	
☐ Clinical Trial MFG/Scale-up	□ Technology/Transfer	■ Manufacturing	Packaging
M Other Nasal Pulmonary De	velonment & Analytical Testing		

Contact: Julie Suman, PhD, (410) 455-5904

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Northwest Kinetics 1401 North 5th Street Tacoma, WA 98403

Phone: (253) 593-5304 Fax: (253) 682-4351 email: BusinessDevelopment@nwkinetics.com www nwkinetics com

***************************************						
Please check the categori	Please check the categories in which your company provides the service.					
□ Drug Discovery	☐ Analytical Development	☐ Formulation Development	☐ Stability Testing			
<ul><li>□ Clinical Trial MFG/Scale-up</li><li>□ Analytical Testing &amp; Analysis</li></ul>	<ul><li>☐ Technology/Transfer</li><li>☐ Process Development</li></ul>	Manufacturing	☐ Packaging			
<b>☑' Other:</b> Phase I & II Clinical Trials						
Contact: Colleen Hoke						

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

NOVAGALI PHARMA 1 rue Pierre Fontaine / Genavenir IV Evry, France 91058

Phone: 00 33 1 69 87 40 20 Fax: 00 33 1 69 87 40 20 email: jean-sebastien.garrigue@novagali.com www.novagali.com

#### Please check the categories in which your company provides the service.

Drug Discovery	☐ Analytical Development	Formulation Development	Stability Testing
Clinical Trial MFG/Scale-up	☐ Technology/Transfer	Manufacturing	Packaging
☐ Analytical Testing & Analysis	☐ Process Develonment		

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Noveon, Inc. 9911 Brecksville Road Cleveland, OH 44141 Phone: (216) 447-5000 www.pharma.noveon.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery	☐ Analytical Development		Stability Testing
☐ Clinical Trial MFG/Scale-up	☐ Technology/Transfer	■ Manufacturing	Packaging
Other: Excipients			

Contact: website: www.pharma.noveon.com

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Oakwood Laboratories, L.L.C. 7670 First Place, Suite A Oakwood Village, OH 44146 Phone: (440) 359-0000 Fax: (440) 359-0001 email: info@oakwoodlabs.com www.0akwoodlabs.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery	▲ Analytical Development	Stability Testing
	✓ Technology/Transfer	Packaging

#### Contact: Michael G. Lanzilotti, EVP & COO

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Octoplus Zernikedreef 12 2333 CL Leiden Netherlands Phone: +31 71 5244044 Fax: +31 71 5244043

email: info@octoplus.nl www.octoplus.nl

#### Please check the categories in which your company provides the service.

Drug Discovery		■ Formulation Development	Stability Testin		
☑ Clinical Trial MFG/Scale-up	□ Technology/Transfer	■ Manufacturing	Packaging		
<b>Other:</b> Special expertise in pharmaceutical development and cGMP clinical trial manufacturing of biopharmaceuticals					
and low-soluble compounds					

Contact: Dr. Henrik Luessen, Director Business Development, +31 71 5244044

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

OSG Norwich Pharmaceuticals, Inc. 6826 State Highway 12 Norwich, NY 13815 Phone: (607) 335-3000 Fax: (607) 335-3100

email: Bob.Calabro@norwichpharma.com www.norwichpharma.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery		■ Stability Testing
☑ Clinical Trial MFG/Scale-up	☑ Technology/Transfer	Packaging

Contact: Bob Calabro

BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Oxford Lasers Inc. 29 King Street Littleton, MA 01460-1528 Phone: (978) 742-9000 Fax: (978) 742-9100 email: EnVision@Oxfordlasers.com www.oxfordlasers.com

#### Please check the categories in which your company provides the service.

<ul><li>□ Drug Discovery</li><li>□ Clinical Trial MFG/Scale-up</li></ul>	☐ Analytical Development☐ Technology/Transfer	<ul><li>□ Formulation Development</li><li>□ Manufacturing</li></ul>	<ul><li>□ Stability Testing</li><li>□ Packaging</li></ul>		
<b>'U' Other:</b> Imaging, Micromachining, Photonics					
Contact: Dr. Seamus D. Murphy, (978) 742-9000, email: seamus.Murphy@oxfordlasers.com					

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Particle and Coating Technologies, Inc. 5445 Highland Park Drive St. Louis, MO 63110 Phone: (314) 535-1516 Fax: (314) 535-1514 email: rsparks@pctincusa.com www.pctincusa.com

Please check the categorie	es in which your compan	y provides the service.	
<ul><li>□ Drug Discovery</li><li>□ Clinical Trial MFG/Scale-up</li><li>☑ Laboratory Testing</li></ul>	☐ Analytical Development ☐ Technology/Transfer		<ul><li>Stability Testing</li><li>Packaging</li></ul>
Contact: Robert Sparks			

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Patheon Inc. 7070 Mississauga Road, Suite 350 Mississauga, ON, Canada L5N 7J8 Phone: (905) 821-4001 Fax: (905) 812-6709 email: patheon@patheon.com www.patheon.com

#### Please check the categories in which your company provides the service.

В	Drug Discovery					
¥	Clinical Trial MFG/Scale-up	☑ Technology/Transfer	☑ Manufacturing			
■ Other: High-potency manufacturing, Controlled Release products, Controlled substances, Over-encapsulation,						
Lyophilization, Sterile injectables, Nasal Spray delivery						

Contact: Pam Shirto

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



105 Melrich road Cranbury, NJ 08512 Phone: (609) 395-8844 Fax: (609) 395-8850

email: amartello@paulaur.com www.paulaur.com

Paulaur Corporation

#### Please check the categories in which your company provides the service.

□ Drug Discovery	□ Analytical Development	■ Formulation Development	Stability Testing
☐ Clinical Trial MFG/Scale-up	□ Technology/Transfer	■ Manufacturing	Packaging
□ Laboratory Testing			

Contact: Larry Toscano

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

## **Pfeiffer**

Pfeiffer of America 12 Roszel Road, Suite C-104 Princeton, NJ 08540 Phone: (609) 987-0223 Fax: (609) 987-1511 email: Richard\_sica@pfeifferusa.com www.Pfeiffer.de

#### Please check the categories in which your company provides the service.

☐ Drug Discovery ☐ Clinical Trial MFG/Scale-up	☐ Analytical Development☐ Technology/Transfer	☐ Formulation Development	☐ Stability Testing
		ions & suspensions (Nasal, Bucal, Top	
Contact: Richard Sica			

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Pharmaceutical Profiles Mere Way, Ruddington Fields, Ruddington Nottingham, NG11 6JS, United Kingdom Phone: +44 115 974 9000 www.pharmprofiles.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery	☐ Analytical Development	Formulation Development	☐ Stability Testing
☑ Clinical Trial MFG/Scale-up	☐ Technology/Transfer		Packaging
□ Other:			
☑ Current Partnerships: Pha	eton Research, Biovu Limited		

Contact: Dr. Paul J. Clewlow, Business Development Director, +44 (0) 115 974 9000

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Pharmatek Laboratories Inc. 5626 Oberlin Drive, Suite 100 San Diego, CA 92116 Phone: (858) 587-8783 Fax: (858) 587-8771 èmail: info@pharmatèk.com www.pharmatek.com

#### Please check the categories in which your company provides the service.

Drug Discovery	☑ Analytical Development	Stability Testing
☐ Clinical Trial MFG/Scale-up	☐ Technology/Transfer	Packaging
Laboratory Testing		

Contact: Elizabeth Hickman, ehickman@pharmatek.com, (858) 587-8783

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

PharmPro® (Division of Fluid air) 2550 White Oak Circle Aurora, IL 60504 Phone: (630) 851-1200 www.pharmpro.com

#### Please check the categories in which your company provides the service.

□ Drug Discovery	Analytical Development		Stability Testing
☐ Clinical Trial MFG/Scale-up	☑ Technology/Transfer	☑ Manufacturing	Packaging

Other:

Contact: Tom Tappen, (630) 851-1200

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



PolyPeptide Laboratories 365 Maple Avenue Torrance, California 90503 Phone: (800) 770-0557 or (310) 782-3569

Fax: (310) 782-3645 www.polypeptide.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery	☐ Analytical Development	☐ Formulation Development	Stability Testing
☐ Clinical Trial MFG/Scale-up	☐ Technology/Transfer		Packaging
☐ Analytical Testing & Analysis		✓ Other: Peptide API Manufacturing	

Contact: Jane Salik. (310) 782-3569

BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

PRACS Institute, Ltd. 4801 Amber Valley Parkway Fargo, North Dakota 58104

Phone: (701) 239-4750 Fax: (701) 239-4955 Email: pracsbd@pracs.com

Website: www.pracs.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ■ Analytical Development ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- ☑ Analytical Testing & Analysis ☐ Process Development
- Other: Clinical Research Services
- Contact: John Pottier, Director, Business Development

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



Remmele Engineering, Inc. - Automation Division 677 Transfer Road St. Paul, MN 55114

Phone: (651) 643-3700 Fax: (651) 642-5665 email: automation@remmele.com www.remmeleautomation.com

✓ Formulation Development

■ Manufacturing

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery
- ☐ Analytical Development
- ☐ Technology/Transfer
- ☐ Clinical Trial MEG/Scale-un ■ Laboratory Testing
- Contact: Brian Raehsler
- - □ Formulation Development ■ Stability Testing



# CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

#### REXAM PHARMA

287 Bowman Avenue, Suite 302 Purchase, NY 10577 Phone: (914) 251-8420 Fax: (914) 251-1450 email: mailboxpharma@rexam.com www.rexam.com/pharma

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery □ Clinical Trial MFG/Scale-up
- Analytical Development ☐ Technology/Transfer
- □ Formulation Development ■ Manufacturing
- □ Stability Testing ■ Packaging

■ Stability Testing

□ Packaging

□ Laboratory Testing

Contact: Philippe DEPOIS

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

3050 Spruce Street St. Louis, MO 63103

Phone: (800) 244-1173 (314-534-4900) Fax: (800) 368-4661 (314-652-0000)

email: safcglobal@sial.com www.safcglobal.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Analytical Development Clinical Trial MFG/Scale-up
- □ Formulation Development ☑ Manufacturing
- Stability Testing ■ Packaging

- □ Laboratory Testing
- Contact: Tom Gelineau, (314) 301-2077, email: tgelineau@sial.com

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Sciarra Laboratories, Inc. 485-09 S. Broadway Hicksville, NY 11801

Phone: (516) 933-7853 Fax: (516) 933-7807 email: sciarralabs@att.net www.sciarralabs.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery Clinical Trial MFG/Scale-up
- □ Analytical Development
- ☑ Technology/Transfer
- Formulation Development
- Stability Testing □ Packaging

Contact: John J. Sciarra

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

#### SCOLR Pharma, Inc.

SCOLR Pharma, Inc. 3625 132nd Avenue SE, Suite 300 Bellevue, WA 98006

Phone: (425) 373-0171 Fax: (424-373-0181

email: info@scolr.com www.scolr.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery □ Clinical Trial MFG/Scale-up
  - ☑ Technology/Transfer
- ☐ Analytical Development
- ✓ Formulation Development ■ Stability Testing □ Manufacturing Packaging

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Shire Laboratories, Inc. 1550 East Gude Drive Rockville, MD 20850

Phone: (301) 838-2681 Fax: (301) 424-1364

email: wbryan@shirelabs.com

www.shirelabs.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery Clinical Trial MFG/Scale-up
- ☑ Analytical Development ☑ Technology/Transfer
- ✓ Formulation Development
- □ Manufacturing
- ☐ Stability Testing □ Packaging

Contact: Woody Bryan, PhD

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



SPI Pharma 321 Cherry Lane New Castle, Delaware 19720 Phone: (302) 576-8500 x 8554 Fax: (302) 576-8567 www.spipharma.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery
- ☑ Analytical Development ☐ Clinical Trial MFG/Scale-up
  - ☑ Technology/Transfer
- Formulation Development Manufacturing
- ✓ Stability Testing ☐ Packaging

Contact: Sarath Chanda

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES



SRI International 333 Ravenswood Avenue Menlo Park, CA 94025 Phone: (866-451-5998) Fax: (650) 859-3041

email: biosciences@sri.com www.sri.com/biosciences

#### Please check the categories in which your company provides the service.

- ☑ Drug Discovery ✓ Clinical Trial MFG/Scale-up
- ■ Manufacturing
- □ Packaging

Contact: Client Services

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Stepan Company 100 West Hunter Avenue Maywood, NJ 07607 Phone: (201) 712-7642 Fax: (201) 712-7648

email: jbutterwick@stepan.com www.stepan.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer
- Analytical Development
- □ Formulation Development ✓ Manufacturing
- Stability Testing □ Packaging

☐ Analytical Testing & Analysis ☐ Process Development

Contact: James M. Butterwick

### BIOLOGICAL DEVELOPMENT SERVICES

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

SYMPATEC INC 9 Princess Rd # A Lawrenceville, NJ Phone: (609)844-1020 email: USA@sympatec.com www.sympatec.com

#### Please check the categories in which your company provides the service.

- Stability Testing ☑ Analytical Development ☐ Formulation Development □ Drug Discovery ☐ Clinical Trial MFG/Scale-up ☐ Technology/Transfer Manufacturing Packaging
- Other: Particle Size Analysis Contact: Peter Faraday

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

### TEXMAC

Texmac Inc. 3001 Stafford Drive Charlotte, NC 28208

Phone: (704) 393-6555 Fax: (704) 392-1621

email: yosaka@texmacusa.com www.texmac.com

#### Please check the categories in which your company provides the service.

- ☐ Formulation Development Stability Testing □ Drug Discovery ☐ Analytical Development ☐ Clinical Trial MFG/Scale-up ☑ Technology/Transfer Manufacturing Packaging
- □ Other: Machinery distribution Transdermal patch film coating Hirano Coating machine distribtion

Contact: Yashi Osaka

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

University of Iowa/College of Pharmacy/ Center for Advanced Drug Development 100 Oakdale Campus, Room 1 PRL Iowa City, IA 52242-5000 Phone: (319) 335-4096 Fax: (319) 335-4374 email: alta-botha@uiowa.edu

www.pharmacy.uiowa.edu/service/index.htm

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery ☑ Analytical Development
  - ☑ Formulation Development ☑ Technology/Transfer ✓ Packaging

₫ Other: Method development and validation according to ICH guidelines, development of dissolution procedures and validation of the analytical method, pre-formulation, development of formulations, API, excipient and drug product testing according to official monographs.

Contact: Alta Botha D.Sc.

☑ Clinical Trial MFG/Scale-up

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

UPM Pharmaceuticals, Inc. 6200 Seaforth Street Baltimore, Maryland 21224 Phone: (410) 843-3738 Fax: (410) 633-4438 email: info@upm-inc.com www.upm-inc.com

#### Please check the categories in which your company provides the service.

☐ Drug Discovery ☑ Analytical Development ☑ Formulation Development ☑ Clinical Trial MFG/Scale-up ☑ Technology/Transfer Packaging

Contact: Rich Ryzenga

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**



Valois 50 Avenue de l'Europe Marly-le-Roi, France 78164

Phone: +33 (0) 1 39 17 20 20 Fax: +33 (0) 1 39 58 12 98 www.valoispharma.com

#### Please check the categories in which your company provides the service.

- ☐ Drug Discovery ☑ Analytical Development ✓ Formulation Development ✓ Stability Testing ☑ Clinical Trial MFG/Scale-up
  ☑ Technology/Transfer □ Manufacturing ✓ Packaging
- ✓ Laboratory Testing

Contact: Guillaume Brouet - Lab Manager

#### **CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES**

Vectura Limited One Prospect West Chippenham Wiltshire, SN14 6FH United Kingdom Phone: (+)44 (0)1249 667667 www.vectura.co.uk

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Analytical Development ☑ Formulation Development ■ Stability Testing Clinical Trial MFG/Scale-up ☑ Technology/Transfer □ Packaging
- Other: Inhalers ☑ Current Partnerships: Various

Contact: Doug Smalley, Director of Business Development, (+) 44 (0) 1249 667667

#### CONTRACT PHARMACEUTICAL & BIOLOGICAL DEVELOPMENT SERVICES

Xemplar Pharmaceuticals, LLC 200 Riggenbach Road Fall River, MA 02720

Phone: (508) 676-6726 Fax: (508) 676-6546 email: charles.eck@xemplarpharm.com www.xemplarpharm.com

#### Please check the categories in which your company provides the service.

- □ Drug Discovery ☑ Analytical Development ☑ Formulation Development Stability Testing ☑ Clinical Trial MFG/Scale-up
  ☑ Technology/Transfer ■ Manufacturing □ Packaging
- ✓ Analytical Testing & Analysis
  ✓ Process Development ☑ Other: Aerosol Delivery Systems, Double Blind Masking Devices

Contact: Charles R. Eck



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WEST Warren DeGraff 415-721-0644

INTERNATIONAL Ralph Vitaro 973-299-1200 wjdegraff@specialtypharma.com rvitaro@specialtypharma.com

vgeis@specialtypharma.com cstratos@specialtypharma.com

### Laboratory Testing & Analysi INSTRUMENTS AND SOFTWARE SYSTEMS

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

The AEgis Technologies Group 13062 Highway 290 West Austin, TX 78737

Phone: (800) 647-2275 Fax: (512) 615-3574 email: sales@aeqisxcellon.com

www.aegisxcellon.com

Application(s):

### Type of Software & Brand Name:

acslXtreme

ascIXtreme

acsIXtreme is a modeling, execution and analysis environment for continuous dynamic systems and processes. Versatile and powerful enough to address the most challenging simulation problems.

acsIXtreme is a powerful application for fast, efficient simulation execution and analysis. It allows users to conduct sophisticated model analysis without having to be a model developer.

Contact: Mark Green

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**



Emerson Resources, Inc. 600 Markley Street Norristown, PA 19401

Phone: (610) 279-7450 Fax: (610) 292-9722 email: info@emersonresources.com www.emersonresources.com

### Type & Brand Name of Instrument/System:

HPLC TOC

GC IR HV

Dissolution Texture analyzer DSC

Contact: Walter Strathy

Formulation Development



### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Arizona Instrument 1912 West 4th Street Tempe, AZ 85281

Phone: (602) 470-1414 Fax: (480) 804-0656

email: azi@azic.com www.azic.com

### Type & Brand Name of Instrument/System:

Moisture/Solids/Ash Analyzer - Computrac MAX, Computrac

Vappor Pro

### Application:

Application(s):

variety of operating systems.

Used in R&D, quality control, and industrial process control Durable and easy to use, these anlayzers aer equally suitable for production floor or laboratory environments.

AssurX offers CATSWeb, a browser-based corrective-action

manage issues, customer complaints, supplier returns, and

other corrective actions. Customization and extensibility

which is accessible from remote systems running a

features have been designed into the core of the program,

tracking system that complies to FDA 21 CFR Part 11 regulations. The software helps manufacturers track and

Contact: Julie Driver or Terri Thomas

Inhaler Testers

DT Series Dissolution Testers

Powder and Granulate Tester

All Purnose Drive

Fluid Bed Tester

VDT Blister Tester

Analytical Methods Development & Testing



### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

email: sales.usa@erweka.com

### Type & Brand Name of Instrument/System:

ZT Series Disintegration Testers

TRH Series & MC Series Tablet Tester

Friability Testers

CWS Check Weigher

Suppository Testers

Erweka America Corp. 70 Church Street, Suite 102 Flemington, NJ 08822 Phone: (908) 788-4666 Fax: (908) 788-4667

www.erweka.com

configurations.

MDI and DPI models consisting of Anderson Type Cascade, Astra Draco Multi-Stage Liquid Impinger, as well as Single Stage Impinger's are available, in accordance with all testing procedures within the USP.

Complete range of apparatus in two versions, standard High Head and Low Head model designed to reduce evaporation loss. Complete on-line & or off-line systems, in addition to integration with external

From manually controlled units to fully automated systems, available with either single or multiple test baskets, either 6 cell and 3 cell test basket

Commencing with a hand-held unit designed for hardness measurement; up to fully automated units which can be integrated with an external computer, for compliance with CFR 21 Part 11.

Three different models, available with either a single or dual drum configuration. The TA operates with a fixed speed of 25 RPM, whereas the TAR and TDR is variable from 20-100 RPM.

Modular check weighing system permits up to 50 different test samples. Unit automatically individualizes the samples and transports them to a balance, then displays & transports samples to a container.

Three different models designed to offer measurement

of flow time according to specified amount (weight or volume) or amount (weight). Four different units designed to measure sample

hardness and disintegration. Single and multiple test cells are available.

The AR402 is the drive system which permits the use of twenty-one different attachments. Some modules include wet or dry granulator; planetary stirrer; sieve analysis; pelletizer; homogenizer & tablet press.

Lab unit designed to accommodate all aspects of fluidizing (i.e. powder, crystals, granules, extrudates, pellets, etc.). Two sizes are 50 - 300 grams; as well as 250 - 1000 grams.

Vacuum blister density checker permitting samples in an external pressurized container (-200 to -800 mbar) which is then filled with liquid: then tested within a range of up to 99 minutes and 50 seconds.

Contact: Leonard Minervini

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS AssurX Inc.

305 Vineyard Town Center, Suite 374 Morgan Hill, CA 95037

Phone: (408) 778-1376 Fax: (408) 776-1267

email: tamar@assurx.com www.assurx.com

### Type of Software & Brand Name:

### Enterprise Quality Tracking-CATSWeb

Contact: Tamar June

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

Capsugel

535 North Emerald Road Greenwood, SC 29646 Phone: (888) 783-6361 Fax: (888) 783-6360

email: Glenda.oliver-smith@pfizer.com www.capsugel.com

Type & Brand Name of Instrument/System: Xcelodose

Application:

Precision micro-filling system eliminates the need for formulation or excipients for first in man trials. Precise from 100 micrograms to 100 milligrams with an RSD of less

Liquid filling and sealing system for capsules for R&D

CFS 1000

Contact: Glenda Oliver-Smith

### Laboratory Testing & Analys

INSTRUMENTS AND SOFTWARE SYSTEMS

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Flexicon America Inc. 156 College Street Burlington, VT 05401

Phone: (802) 657-3232 Fax: (802) 657-3202

www.flexiconamerica.com

Type & Brand Name of Instrument/System: Application: BioPharma small to medium scale liquid fillings Peristaltic Liquid Filling Dispenser Liquid filling machinery: semi-automatic to fully automatic Liquid filling for labs, R&D pilot and production manufacturing

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

Horiba Instruments, Inc. 17671 Armstrong Avenue Irvine, CA 92614

Phone: (949) 250-4811 Fax: (949) 250-0924

email: labinfo@horiba.com www.horiba.com

Type & Brand Name of Instrument/System: Application:

Full range particle size analyzer, measuring dispersions or dry powders from 0.02-2000 microns, with complete Particle Size Analyzer - LA 930 accuracy and resolution, with a full range of accessories.

Particle Size Analyzer - LB 550 DLS particle size analyzer measuring 1nm - 6 microns over a wide range of concentrations. Accurate measurement of distribution shape and modes without operator input.

Contact: Duncan Griffiths

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

ImageTherm 142 North Road Sudbury, MA 01776

Phone: (978) 443-1989 Fax: (978) 443-8942

email: info@imagetherm.com www.imagetherm.com

Application:

Type & Brand Name of Instrument/System:

SprayVIEW® Measurement System

Automated measurement system for pharmaceutical drug nasal sprays, metered dose inhalers and oral spray for the testing of spray pattern and plume geometry.

SpravVIEW® Actuation System

Automated actuation system for pharmaceutical drug nasal sprays, metered dose inhalers and oral spray for automated device actuation.

Contact: Dino Farina

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

InnovaSystems, Inc. 840 Lenola Road, Unit 8 Moorestown, NJ 08057 Phone: (856) 722-0410 Fax: (856) 722-0042

email: fracassi@InnovaSystems.com www.innovasystems.com

Type & Brand Name of Instrument/System:	Application:				
Optical Spray Analysis Station - OSA Pump Actuation and Weigh Station - PAW Nasal Product Dose Weight and Sample Preparation Station Metered Dose Inhaler Actuator Metered Dose Inhaler Wasting Station Metered Dose Inhaler Dose Weight Station	Automated Testing for: Spray Pattern and Plume Geometry Priming and Repriming Dose Content through container life				
Type of Software & Brand Name:	Application(s):				
EZ Spray ™	Low-cost alternative to optical spray pattern analysis via easy-to-use, desktop scanner based technology. EZ Spray™ scans patterns on TLC plates and computes FDA-recommended Spray				

Pattern Test parameters.

Contact: John Fracassi (856) 722-0410

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

LCI Corporation PO Box 16348 Charlotte, NC 28297-8804

Phone: (704) 394-8341 Fax: (704) 392-8507 email: info@lcicorp.com

www.lcicorp.com

### Type & Brand Name of Instrument/System: Application:

Multi Granulator MG-55

Allows formulation/product developers to evaluate three low pressure granulation techniques-dome, radial, and axial extrusion-and determine which

one best suits their product.

Laboratory Marumerizer QJ-230T

Easily evaluates of the effectiveness of spheronization on extruded products; converts moist cylindrical extruded granules into smooth, uniform spheres in a variety of applications.

Contact: Sam Habash

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

Malvern Instruments 10 Southville Road Southborough, MA 01772

Phone: (508) 480-0200 Fax: (508) 460-9692

email: info@malvernusa.com www.malverninstruments.com

### Type & Brand Name of Instrument/System:

Laser Diffraction Systems, Mastersizer 2000, Spraytec.

Also on-line particle sizing with Insitec Pipeline Technologies/Platforms

Zeta Potential and sub-micron particle size, Zetasizer Nano

For particle size in solids, liquids, slurries and aerosols

For comprehensive analysis of suspensions and

Application(s):

Contact: Mansa Fraser, (508) 480-0200

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS



Natoli Engineering 28 Research Park Circle St. Charles, Missouri 63304 Phone: (636) 926-8900 Fax: (636) 926-8910 email: sales@natoli.com www.natoli.com

### Type & Brand Name of Instrument/System:

Manufacturing and Tablet Compression, Tablet Presses, and

Replacement Parts

Type of Software & Brand Name:

Tablet CAD

Tool Management II (TMII) New Version 4.1

Application:

Production & Quality Control

### Application(s):

Tablet design

Inspections & tool record keeping

Contact: Dale Natoli

### Laboratory Testing & Anal INSTRUMENTS AND SOFTWARE SYSTEMS

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

OSG Norwich Pharmaceuticals, Inc. 6826 State Highway 12 Norwich, NY 13815 Phone: (607) 335-3000 Fax: (607) 335-3100

email: Bob.Calabro@norwichpharma.com www.norwichpharma.com

Type of Software & Brand Name:	Application:
SAP	Full version of SAP to run the business
Type & Brand Name of Instrument/System:	Application(s):
Complete analytical, micro, and stability labs including but not limited to HPLC, GC, UV/Nis Spec, FTIR Spec, Dissolution (manual and automated), Auto-titration, Complete wet chemistry, Bacteria/Yeast/Fungal ID, Method development and transfer, Product screening using Steri-Screen, Sterile products testing, Autoturb, Biolog, Bioluminescence. Full ICH Chambers available: 30°C/65%RH, 25°C/60%RH, 30°C/60%RH, 40°C/75%RH 30°C/70%RH, (Zone IV), 30°C/ambient	Provide outsourcing services to our clients to support the manufacturer and packaging of products for them
Contact: Rob Calabro	1

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Oxford Lasers Inc. 29 King Street Littleton, MA 01460-1528 Phone: (978) 742-9000 Fax: (978) 742-9100 email: EnVision@Oxfordlasers.com www.oxfordlasers.com

Type & Brand Name of Instrument/System:	Application:			
Type & Dianu Name of mountaine by Stein.	Аррисацоп.			
EnVision				
Type of Software & Brand Name:	Application(s):			
EnVision Software (Plume and pattern)	Software used to determine, event duration, spray pattern data (shape, size and orientation of pattern), Plume geometry (Angle, width, orientation and length)			
VidPIV software (velocity analysis software)	Used to determine velocity vectors over defined region. When used in combination with EnVision system, will report velocity changes over event duration.			
VisiSizer Software	Particle size analysis software			
Contact: Dr Seamus D Murnhy (978) 742-9000 email: seamus Murnhy@oxfordlasers.com				

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Particle and Coating Technologies, Inc. 5445 Highland Park Drive St. Louis, MO 63110 Phone: (314) 535-1516 Fax: (314) 535-1514 email: rsparks@pctincusa.com www.pctincusa.com

Type & Brand Name of Instrument/System:	Application:
Micro-Capacity Spray Dryer	Can dry samples from 25 mg. to grams. Special handling for highly unstable molecules (peptides, hormones, etc.) On market early 2006.
Mini-Fluid-Bed	Successful in coating samples down to 5 grams. On market early 2006.
Contact: Robert Sparks, email: rsparks@pctincusa.com	

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Pharmatek Laboratories Inc. 5626 Oberlin Drive, Suite 100 San Diego, CA 92116

Phone: (858) 587-8783 Fax: (858) 587-8771 èmail: info@pharmatek.com www.pharmatek.com

Type & Brand Name of Instrument/System:	Application:
Hot Road Chemistry® (HRC) Formulation Screening Kit	Designed to solublize even the most difficult drug compounds for <i>in vivo</i> animal testing. The kit contains eight non-toxic, FDA-approved, orally available formulations.

Contact: Elizabeth Hickman, ehickman@pharmatek.com, (858) 587-8783

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

SOTAX

411 Caredean Drive, Suite A Horsham, PA 19044 Phone: (215) 442-1500 Fax: (215) 442-1514

email: sotaxusa@sotax.ch

www.sotax.com				
Type & Brand Name of Instrument/System:	Application:			
Dissolution Tester: SOTAX AT 7 smart	Ideal for USP 1/2/5/6 Methods and every dissolution laboratory. Designed with the Autocompliance concept, eliminating daily routine validation. Stand- alone unit or upgraded to automatic system.			
Dissolution Tester: SOTAX AT 70 smart	Fully automated serial release testing for up to 15 USP 2 tests. High sample throughput combined with efficient cleaning system. Easy to validate.			
Dissolution Tester: SOTAX AT 70 BS 60	Fully automated serial release testing for USP 1/2 tests with basket station. Maximum flexibility and sample throughput combined with efficient cleaning system. Easy to validate.			
Dissolution Tester: SOTAX CE 7smart	Automated system for flow-through method tests (USP 4). Suitable for all dosage forms with easy media/pH changes for simple in-vivo simulation. Available online, offline, on-/offline.			
Disintegration Tester: SOTAX DT 2	Detection of disintegration end point – the most efficient way of testing the disintegration time, either manually or automated.			
Hardness Tester: SOTAX HT 1	Testing of four essential physical parameters: hardness/thickness/diameter/weight of a tablet. Revolutionary Auto Alignment device rapidly aligns all common tablet forms for testing.			
Hardness Tester: SOTAX HT 10	Semi-automated testing of four essential physical parameters: hardness/thickness/diameter/weight of a batch (up to 20 tablets). With the revolutionary Auto Alignment device.			
Hardness Tester: SOTAX: HT 100	Fasted Automated tablet testing system with revolutionary Auto Alignment/Auto Separator devices ensures, consistent, trouble-free results for all shapes and sizes of tablets batch after batch.			
Flowability Tester: SOTAX FT 300	Performs a variety of test conditions including mixing and vibration settings. Produces precise and reproducible results on the flowability characteristics of powders and granulates.			
Friability Tester: SOTAX F 1 / F 2	The friability testers built with unique front loading and automatic discharge system.			
Tap Density Tester: SOTAX TD 2	Compact microcontroller-based tap density tester for simple measuring of the tapped density. Testing of powders, granulates, peelets, flakes and other bulk substances.			
Type of Software & Brand Name:	Application(s)			
	1			

21 CFR Part 11.

This advanced, menu-driven dissolution software was developed under the latest regulations (GAMP, GALP, ISO 9001) and completely complies with

Q-Doc physical testing software is a validated Windows (98/NT/2000/XP) software which fully

complies with 21 CFR Part 11. Q-Doc is also available with LIMS capabilities.

Dissolution software: WinSOTAX

Physical testing software: Q-Doc

Contact: Bates Stuart, Finn Marc, Maieski Ray

### Laboratory Testing & Analy

INSTRUMENTS AND SOFTWARE SYSTEMS

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Waters Corporation 34 Maple Street Milford, MA 01757

Phone: (508) 478-2000 Fax: (508) 872-1990 email: Brian\_J\_Murphy@waters.com www.waters.com

Type & Brand Name of Instrument/System:	Application:
ACQUITY Ultra Performance Liquid Chromatography™	First-of-its-kind LC system designed to take full advantage of the potential of proprietary, sub two-micron particles. Provides chromatographic run times up to 9X shorter than today's fastest HPLC systems, up to 2X better peak capacity or resolution and 3X better routine sensitivity.
The Waters® Protein Expression System	Industry's first multiplexed system to quantitatively assess changes in protein expression while performing enhanced qualitative protein identification - all within the same LC/MS run.
SunFire™ columns	State-of-the-art reversed-phase C18 bonded silica, which provides the best peak shape, low-pH stability and efficiency.
The Waters Micromass® Q-Tof Premier Mass Spectrometer	Hybrid quadrupole, orthogonal acceleration time-of- flight mass spectrometer that enables automated exact mass measurement of precursor and fragment ions to yield the highest confidence for metabolism studies, proteomics and structural analyses.
Type of Software & Brand Name:	Application(s):
MetaboLynx™ software	Features advanced tools for mining complex LC/MS data sets and accelerating the process of identifying drug metabolites.
eLab Notebook™ Software	Allows companies to digitally capture and store scientific information — graphical, mathematical, and textual information of all types — that, today, researchers enter manually into paper laboratory notebooks.

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS



Contact: Brian J. Murphy, (508) 482-2614

Weiler Engineering, Inc. 1395 Gateway Drive Elgin, IL 60123

Phone: (847) 697-4900 Fax: (847) 697-4915 email: solutions@weilerengineering.com www.weilerengineering.com

### Type & Brand Name of Instrument/System:

ASEP-TECH® Blow/Fill/Seal Systems

Model 640 Model 624 Model 603



Oral, parenteral (injectable), respiratory therapy,

### **LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS**

Wyatt Technology 6300 Hollister Avenue Santa Barbara, CA 93117

Phone: (805) 681-9009 Fax: (805) 681-0123 email: info@wyatt.com

www.wyatt.com

Type & Brand Name of Instrument/System:	Application:
DAWN light scattering detectors	Multi-angle light scattering instruments for determining absolute molar masses and sizes of polymers and biopolymers in solution
DynaPro Titan Light Scattering instrument	Dynamic light scattering instruments for determining solution properties of proteins and nanoparticles in solution
DynaPro Titan Plate Reader	Automates the dynamic light scattering to use standard 96 and 384-well plates. Reduces sample preparation and aanalysis time by a factor of 10.
Contact: Geofrey Wyatt	

### LABORATORY TESTING & ANALYSIS INSTRUMENTS & SOFTWARE SYSTEMS

Flexicon America Inc 156 College Street Burlington, VT 05401 Phone: (802) 657-3232 Fax: (802) 657-3202

email: flexicon@flexiconamerica.com www.flexiconamerica.com

Τv	pe &	Brand	Name	of	Instrument/S	vstem

PF6 Peristaltic Dispenser FP50 Tabletop Filling & Plugging Machine FF20 Tabletop Filler FF30 Tabletop Filler & Screw Capping FMB210 Fully Automatic Capper DF32 Cream Dispenser TL210 Double Tray Loader W500 Vial Washer BU12 Bottle Unscrambler

Liquid filling of small to medium batch sizes of biopharma products. Unique peristaltic dispenser provides fast start-up consistently accurate fills with no risk of contamination. Equipment designed for fast changeover.

Application:

Contact: Peter Lambert

### TRANSDERMAL DEVELOPMENT

### 3M Drug Delivery Systems

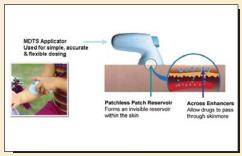
3M adhesives are known for world-class performance across many applications. The synergy achieved through combination with other 3M core technologies will be put to work for it customers in designing transdermal solutions. 3M leverages more than 30 technology platforms to meet customer needs, and has a proven track record of success and global presence in transdermal delivery systems, including a 15-year history of development and manufacturing of Minitran™ (nitroglycerin) and Climara® (estradiol transdermal system), development of an estradiol/levonorgestrel combination patch, and numerous partner programs. 3M has transdermal products registered in more than 60 countries. For more information, contact 3M Drug Delivery Systems at (800) 643-8086 or visit www.3M.com/DDS.

### **O**SMOTIC **T**ECHNOLOGY



OROS® technology employs osmosis to provide precise, controlled drug delivery for up to 24 hours and can be used with a range of compounds, including poorly soluble or highly soluble drugs. OROS can be used to deliver high drug doses meeting high-drug loading requirements. L-OROS™ technology, adapted for liquid formulations, can enhance the bioavailability of drugs with low solubility. Targeting specific areas of the GI tract, OROS technology may provide more efficient drug absorption and enhanced bioavailability. L-OROS can also enhance the bioavailability of drugs with low solubility. For many drugs, zero-order is not the optimal delivery profile. OROS can be tailored to meet patterned delivery profiles to optimize a drug's therapeutic efficacy. For more information, contact **ALZA Corp.** at (650) 564-5000 or v isit www.alza.com.

### TRANSDERMAL DELIVERY



The MDTS® is a small and easy-to-use drug delivery system containing an existing therapeutic drug and ACROSS® penetration enhancers, which are small, lipid-like compounds that allow drugs to pass through the skin. ACROSS penetration enhancers are GRAS due to their long-term and extensive use on humans. MDTS provides a simple way of applying a preset dose of a drug to the skin. It is placed gently against the skin and depressed releasing a light spray, which quickly dries on the skin. The ACROSS enhancers then allow drugs to pass through the top layers of the skin. A once-a-day application typically delivers consistent amounts through the skin to the blood stream. For more information visit **Acrux** at **www.acrux.com**.

### Needle-Free Injection



Aradigm's Intraject technology is a prefilled disposable needle-free delivery system. This pen-sized system enables patients to comfortably self-administer drugs to the subcutaneous region of the skin. Targeting this area allows the drug to enter the systemic circulation with an identical pharmacokinetic profile as seen with conventional needle-based subcutaneous injection. The liquid formulations delivered via Intraject are usually identical to those delivered via conventional subcutaneous injection, allowing for an abbreviated bioequivalence-based clinical and regulatory pathway. Since the drug-containing capsule is made of glass, existing stability in glass ampules can also be used to support Intraject filings. Intraject has been evaluated in clinical trials involving more than 700 subjects given more than 8000 injections and is currently being manufactured for registration lot testing. The most advanced program is Intraject Sumatriptan for the treatment of migraines which is in Phase 3 clinical testing. For more information, contact Aradigm at (510) 265-9000 or visit www.aradigm.com.

### SOLID STATE ANALYSIS



Advanced Solid State Analysis, Inc. (assainternational®) provides consulting and customized analytical training related to the characterization of pharmaceutical solids. The company also supports its customers with state-of-the art analytical services. To encourage knowledge transfer, assainternational® organizes international workshops and conferences on modern physical characterization to the pharmaceutical community. The company offers analytical services for pharmaceutical applications, including polymorph screening; assistance in choosing the right analytical laboratory equipment for your pharmaceutical laboratory; short training courses in pharmaceutical X-ray powder diffraction, pharmaceutical solid state NMR and infrared and Raman spectroscopy for pharmaceutical applications, and polymorph screening; and support for its clients in patent preparation or patent litigation cases. For more information, visit assainternational® at www.assainternational.com.

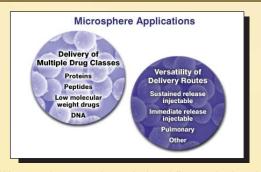
### **EXCIPIENT PORTFOLIO**



BASF puts the resources of the world's largest chemical company to work for its customers. One example of the company's powerful excipients portfolio is Kollidon® CL, which accelerates dissolution. BASF's comprehensive portfolio of excipients includes a full range of coatings, binders, disintegrants, and solubilizers, backed up by its experience, expertise, and technical service. BASF's skilled and experienced chemists and pharmacists respond to calls within one business day to answer questions about formulations, solid or liquid dosage, delivery systems, and manufacturing.

The company also offers high-quality active ingredients, pharmaceutical finishing, and exclusive custom synthesis. For more information, contact **BASF Pharma Solutions'** Technical Services Line at (800) 469-7541 or visit **www.basf.com/pharma**.

### PROTEIN-MATRIX DELIVERY



PROMAXX is a proprietary, protein-matrix drug delivery technology that produces bioerodible protein microspheres, in a totally water-based process. These microspheres are ideal for delivery of both small and macromolecular drugs and both microsphere size and drug-release characteristics can be tailored for the desired therapeutic application. The microspheres are applicable to immediate- and sustained-release delivery and can be administered via injectable and pulmonary routes. Other routes of administration are also being explored. The versatility of the PROMAXX platform technology, in terms of addressable drug classes, drug release profiles, and administration routes, provides multiple options for solving drug delivery problems and potentially developing safe, efficacious, and competitive therapeutic products. For more information, contact Baxter Healthcare Corporation at (800) 422-9837 or visit www.baxterdrugdelivery.com.

### **CONTRACT SERVICES**



Baxter is a parenteral market leader providing a range of proven contract services from process development of biopharmaceutical active ingredients to form/fill/finish of drug product into syringes, vials, and cartridges. Baxter offers the advantage of providing cytotoxic contract services from chemical synthesis (API) to scale-up for commercial production. Baxter provides contract development and manufacturing services for antibodies and protein therapeutics. Its licensed facilities in Hayward and Thousand Oaks, CA, have capacity for preclinical to commercial-scale production. Baxter's Bloomington facility has expanded capacities for syringe and vial filling/finishing; it has added new capability in cartridge filling/finishing, as well as a fully automated kitting line. Lyophilization capacity has increased along with the establishment of the Lyophilization Center of Excellence. For more information, visit Baxter BioPharma Solutions at www.baxterbiopharmasolutions.com.

### NEDDLELESS SYSTEM

# Open Connect Transfer and reconstitute disconnect

The BD Monovial™ Luer AXs is a needleless system designed for simpler, safer, and faster dry drug reconstitution. Featuring an innovative design, it is composed of a standard vial (13 or 20 mm), standard stopper (powder/liquid or lyo), and a transfer set supplied by BD. Transfer sets are delivered assembled, sterile, and ready to be crimped onto the vial. The system offers a simple quick-flow reconstitution process; a reduction in time, waste, and supplies for reconstitution; a reduced risk of medication errors; and automatic

activation for more simplicity and guarantee intuitiveness of use. The Monovial<sup>TM</sup> Luer AXs is compatible with all Luer and BD Luer-Lock<sup>TM</sup> syringes and works perfectly with diluents prefilled in BD Hypak<sup>TM</sup>. For more information, contact BD Pharmaceutical Systems at (201) 847-4017 or visit www.bdpharma.com.



FAST-DISSOLVE TECHNOLOGY

Cardinal Health's Zydis® fast-dissolve technology can help enhance a product's performance in several ways. The rapid dispersion and coating with the Zydis technology in the buccal cavity creates products that can decrease onset time, modify absorption, increase bioavailability, and augment therapeutic efficacy. Because the Zydis technology dissolves instantly on the tongue in less than 3 seconds, it can be swallowed without water. For more information, contact Cardinal Health at (866) 720-3148; pts@cardinal.com; or visit www.cardinal.com/zydis.

### LABORATORY TESTING SERVICES



BioScreen is a full-service laboratory in industrial microbiology and analytical chemistry. The company is US FDA registered, ISO 9001:2000 Certified, DEA registered, and California State Certified to test drinking water. It now offers analytical reports direct from the Internet with electronic signature, and a blend of science and business with a service-oriented approach. BioScreen is capable of executing USP methods when required as well as designing or researching specialized methods for a unique product or process. The company has also participated in numerous projects for IND, NDA, and ANDA submissions to the FDA. There are four corporate divisions: Pharmaceutical & Biotechnology Services; Medical Device; Cosmetic, Household & Industrial Products; and Midwest Clinical Trials (Human Clinical & Claim Substantiations). For more information, contact BioScreen Testing Services, Inc., at (800) 229-9057 or visit www.bioscreen.com.

### STRATEGIC PRODUCT DEVELOPMENT



Cirrus Pharmaceuticals is a contract product development company assisting biotechnology and pharmaceutical companies with dosage form development projects. Cirrus can assist or manage projects as needed by providing a broad array of R&D services, including physical and chemical characterization, formulation development, stability testing, container/closure selection, process development, scale-up, and technical transfer to manufacturing for inhaled, oral, topical, protein & peptide, and parenteral products. Services can include submission-ready regulatory documentation and assistance with regulatory submission questions. The company's mission is to provide excellent service and scientific expertise to progress your pharmaceutical development projects. Cirrus' combination of scientific competence, timely delivery of services, and attention to customer needs have generated strong customer loyalty. For more information, contact Cirrus Pharmaceuticals at (919) 884-2064 or visit www.cirruspharm.com.

### **DEVELOPMENT & MANUFACTURING**



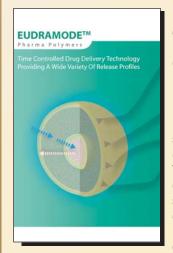
Coating Place, Inc. is a privately owned drug delivery systems development and manufacturing company specializing in Wurster fluid bed microencapsulation of powders, granules, crystals, and beads. Other coating capabilities include softgels, hard shell capsules, and tablets. Our services include contract formulation development, technology transfer, scale-up, and commercial manufacturing in a GMP environment with analytical support. Applications include controlled oral delivery, such as enteric, delayed, or sustained release, moisture or oxygen barrier and taste-masking applications for Rx, OTC, and controlled substance products. Our facilities process solvent, aqueous, and hot melt formulations. Our creative and innovative staff is ready to take on your toughest projects. For more information, contact **Coating Place, Inc.** at (608) 845 9521 or visit www.encap.com.

### SILICONE TECHNOLOGY



A global leader for healthcare solutions using silicone technology for more than 5 decades, Dow Corning draws upon the versatility and biocompatibility of silicones to help customers develop innovative delivery systems for pharmaceuticals, wound care, and personal care applications. Dow Corning provides a range of beneficial siliconbased materials, including soft filling elastomers, high-consistency rubbers and liquid silicone rubbers suitable for injection molding, transfer and compression molding, casting, and supported extrusion available in biomedical and Class VI grade, platinum-cure or peroxide-cure materials; bonding, pressure sensitive, and soft skin adhesives; medical grade tubing; polyurethane potting compounds; and fluids, emulsions, and dispersions. For more information visit Dow Corning at www.dowcorning.com/content/healthcare/.

### MODULATED DRUG RELEASE



EUDRAMODE™ is a modulated oral drug delivery technology platform capable of controlling drug release to meet specific physiological needs. This multiparticulate system enables modulation of drug release via the interaction of ions from dissolved salts with ionic structures embedded in polymer coatings. The pellet design starts with crystals of a salt from a weak or strong acid as the core, which are coated with a modulating, neutral polymer layer, followed by a layer of drug and finally coated with a

controlled release, ionic polymer layer. These multilayered pellets can then be compressed to obtain disintegrating tablets, or they can be filled into capsules as the final dosage form. The system can be manufactured using conventional excipients, including aqueous-based EUDRAGIT® polymers, and with standard manufacturing processes. For more information, please contact Dr. Gerhard Renner at +49 (0)6151 184810 or visit www.pharma-polymers.com.

### PEPTIDE & PEGYLATION EXPRESSION



Dowpharma's capabilities and services, combined with its disciplined and integrated approach to process development (from fermentation to purification to analytical development) advances customers' drug programs forward faster. Using cutting-edge expression technologies and bioinformatics and functional genomics capabilities, Dowpharma can diagnose problems and design robust solutions for the expression of target proteins or peptides. Process integration from protein expression through downstream purification ensures that an optimized process is developed the first time, at the lowest possible cost. By using advanced technology and offering customers multiple cGMP manufacturing options, Dowpharma helps you move through clinic to market fast and cost-effectively. For more information, contact **Dowpharma** at (866) 332-5805 or visit **www.dowpharma.com**.

### CONTRACT SERVICES

# Our People - The Solutions for Outcoursing with Caroliferia.

From development to manufacturing, packaging, and distribution of semisolid and liquid Rx, OTC, and biotech products, DPT provides confidence in outsourcing solutions. Experienced professionals share your commitment to deadlines, excellence, and attention to detail. Combined with DPT's excellent regulatory compliance history, they get you to market with a quality product every time. Advanced Development Solutions include unmatched level of technical expertise in semi-solids and oral liquids, formulation development and

analytical chemistry expertise, and distinctive platform technologies available for licensing. Specialized Production Solutions include manufacturing of semi-solids and liquids, ability to manage hard-to-handle ingredients, explosion-resistant manufacturing, and state-of-the-art compartmentalized manufacturing services. Innovative Packaging Solutions include thermo-form and cold-form blister packaging; tube, cup, bottle, and jar filling; pouch packaging; and specialty dosage delivery forms. For more information, visit **DPT** at **www.dptlabs.com**.

### FAST-DISSOLVE TECHNOLOGY



AdvaTab® is a new generation of fast-dissolve tablet technology that offers distinct advantages and unique applications – unparalleled taste, flexible dosing, modified release, and a robust tablet. AdvaTab can be combined with Eurand's leading Microcaps® taste-masking technology to provide a fast-dissolve tablet with superior taste and mouth-feel. AdvaTab tablets dissolve rapidly in the mouth within 15 to 30 seconds, and the smooth mixture of carrier excipients and taste-masked drug granules is suitable for delivering high drug doses. Modified-release drug granules can be incorporated into the AdvaTab dosage form to provide a fast-dissolve tablet with sustained-release properties. AdvaTab tablets can be packaged in either bottles or push-through blisters. For more information, contact **Eurand** at (937) 898-9669 or at **bizdev@eurand.com**.

### FORMULATION & TECHNICAL SOLUTIONS



Emerson Resources is an organization built on a strong foundation of expertise and know-how, committed to servicing the Pharmaceutical and Nutritional Supplement industries with incomparable customer service. Our companies work together to offer cutting-edge expertise and customer service in our three main areas of focus, including Delivery System Development and Technical Services, Technical Training, Value-Added Ingredient Supply. Emerson delivers unparalleled, value-added service, ingredients, and expertise to its customers with a dedication to honesty, innovation, creativity, hard work, and an unrelenting commitment to quality. For more information, contact Emerson Resources, Inc., at (610) 279-7450 or visit www.thinkoutsidethebeaker.com.

### **SPECIALTY SERVICES**



Facet Technologies, a division of Matria Healthcare, Inc., is an ISO-13485/EN-46001- certified, FDA-registered, engineering and manufacturing organization providing design, development, and commercialization services to its customers in the drug delivery and medical device industries. Facet Technologies has established its expertise as a leading designer and manufacturer of hand-held devices utilized by patients worldwide. The company has extensive experience designing and developing complex devices, which are intuitive and reliable in the hands of the end-user. Additionally, Facet's Project Managers are highly adept at driving new (or next-generation) device innovations from concept generation to high-volume manufacture and commercialization. For more information, contact Facet Technologies at (800) 526-2387 or visit www.facettechnologies.com.

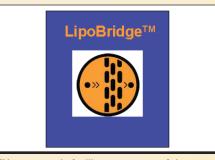
### FILTRATION & FLUID CONTROL

## TO STAY AHEAD OF YOUR COMPETITION, IT PAYS TO HAVE THE RIGHT CONNECTIONS.

Filtertek understands how filtration and fluid control ultimately affect a medical product's success. More importantly, the company knows how these devices affect safety for the end user. With medical technology rapidly evolving, Filtertek realizes the knowledge behind the manufacture of these devices has to keep pace with new medical applications and scientific discoveries. With so much riding on performance, designing and developing components for critical medical applications takes design ingenuity, technical knowledge, and

manufacturing precision. By choosing Filtertek to produce medical filtration and fluid control devices, customers are assured of partnering with a source that puts as much into the development of their products as they do. For more information, contact **Filtertek** at (800) 648-0791 or visit **www.filtertek.com**.

### **BBB** Transporter



Lipobridge<sup>TM</sup> compounds facilitate transport of drugs across the blood-brain-barrier (BBB) and into the CNS. Short chain oligoglycerolipids have been shown to facilitate the delivery, distribution, and uptake of pharmaceutical actives into the CNS and thereby permeate the BBB. Data shows that some of these molecules can increase drug concentration reaching the CNS by a factor up to 100 without toxic side effects. Demonstrated in several laboratories, intracarotic injections of a simple mixture of Lipobridge and model compounds or pharmaceutical actives can be delivered into one or both hemispheres of the brain allowing for increased concentration in a selected hemisphere. This permeability has been shown to be reversible and has been demonstrated that the carrier itself is excreted unmetabolized. For more information, contact **Genzyme Pharmaceuticals** at (800) 868-8208 or visit

### MANUFACTURER & API SPECIALIST



Hovione is a fine chemicals company that specializes in the process development and manufacture of active pharmaceutical ingredients and regulated intermediates. Dedicated to solving the problems associated with the industrial production of complex chemical entities, the company's expertise in process chemistry and regulatory compliance to cGMP standards is based on more than 40 years of experience. Over that time, its ability to provide customers with timely solutions that are dependable and economical has given them a worldwide reputation for superior customer service. Hovione's business is 50% custom synthesis for large pharma and biotech companies and 50% generic products. More than half of today's sales consists of products launched less than 5 years ago. For more information, visit **Hovione** at **www.hovione.com**.

### SPECIALITY INGREDIENTS



When used in oral dosage tablets, RxCIPIENTS FM1000 calcium silicate speed the break down of primary particles so patients who have difficulty swallowing tablets will experience faster therapeutic action. "Our pedigree in the surface science of silica, silicates, and calcium carbonate is paving the way," said Bob Wedinger, PhD, who is the VP and General Manager of Huber's specialty ingredients for consumer applications. It is hoped that oral dosage tablets with RxCIPIENTS FM1000 will provide a fast-dissolve alternative for people who have difficulty in swallowing tablets and may boost compliance in taking medication. Huber also maintains a cGMP granulation company that offers specialty calcium carbonate, a product widely used as a pharmaceutical and nutraceutical tableting operations. For more information, visit **Huber Engineered Materials** at **www.rxcipients.com**.

### COMBINATION CAPSULE TECHNOLOGY

InnerCap offers an advanced patentpending multi-phased, multicompartmentalized capsular-based delivery system. The system can be used to enhance the value and benefits of pharmaceutical and biopharmaceutical products. Utilizing two-piece hard shell capsules, the technology offers the industry solutions to problems affecting pharmaceutical companies, patients, and healthcare providers. The delivery system will be licensed to enhance pharmaceutical and biopharmaceutical products. It is a very effective way to deliver multiple

active chemical compounds in different physical phases with controlled-release profiles. The delivery system provides the pharmaceutical and biopharmaceutical industries with beneficial solutions to the industry's highly publicized need to repackage and reformulate existing patented blockbuster drugs with expiring patents over the next 5 years. For more information, contact **InnerCap Technologies, Inc.**, at (813) 837-0796 or visit **www.innercap.com**.

### NASAL DELIVERY DEVICE



The ViaNase ID™ electronic atomizer is the first nasal drug delivery device that incorporates drug pedigree confirmation, lock-out technology, and an electronic display – features that curb counterfeit drug use and abuse while improving patient compliance. By combining Controlled Particle Dispersion™ and intelligent nasal drug delivery technologies, ViaNase ID intranasally delivers topical, systemic, and nose-to-brain medical therapies with greater efficacy and efficiency than traditional nasal delivery devices. For more information, contact **Kurve Technology** at (425) 640-9249;info@kurvetech.com or visit **www.kurvetech.com**.

### MICROFILM (TOPICAL DELIVERY)



MedPharm has developed a novel self-assembling "patchless patch" (MedSpray™), which improves the local and transdermal delivery of therapeutic compounds. Unlike current marketed patches, this patented drug delivery technology is manufactured as a solution but, during dose actuation, it assembles into a microfine occlusive film. The "patch" is made from a mixture of drug-impregnated biocompatible polymers, and it is propelled onto the skin using a blend of highly volatile, environmentally friendly, non-combustible solvents.

MedSpray™ is unique in that it only produces a polymer/drug film on the surface of the skin during the formation of a cosmetically acceptable dosage form. Modified and/or sustained delivery over prolonged periods can also be achieved. For more information, contact MedPharm Ltd by e-mail at busdev@medpharm.co.uk or visit www.medpharm.co.uk.

### INTRAOCULAR IMPLANT



ECT Technology consists of implantable devices containing cells encapsulated within a semi-permeable membrane, isolating them from the local environment and minimizing immune rejection, but allowing therapeutic agents produced by the cells to diffuse through the membrane. ECT is also a product-based concept, supplied as a ready-to-use device with the added advantage that the product can be withdrawn if required. The feasibility of ECT implantable devices has already been demonstrated in human clinical trials to treat chronic pain and amylotropic lateral sclerosis, and is now being applied in the eye. Because cells can be modified genetically to secrete almost any protein, ECT is an extremely powerful technology platform, strongly and broadly patented, with the potential of generating a broad product pipeline in multiple therapeutic areas. For more information, visit **Neurotech at www.neurotech.fr**.

### **PEG D**ERIVATIVES

### Highly Purified Polyethylene glycol (PEG) derivatives < SUNBRIGHT Series > For PEGylation For Liposome For Liposome

NOF Corporation has developed excellent quality activated PEG derivatives (SUNBRIGHT Series), which are ideal for preparing pharmaceuticals and biomedical products. NOF not only manufactures various molecular weights of Methoxy-PEG with low polymer distribution, but also produces high-purity Methoxy-PEG-OH in which diol contents as impurities are claimed to be lower than any other supplier's PEGs in the world. The SUNBRIGHT Series includes polyalkylene glycols with various functional groups, which make them the most appropriate material to produce PEGylated drugs, PEGylated-Liposomes, and polymer micelles. For more information, contact NOF Corporation at (914) 681-9790 or visit www.nof.co.jp/dds.

### PHARMACEUTICAL PRODUCT DEVELOPMENT



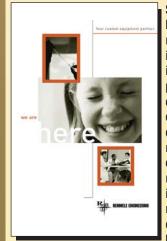
Licensing opportunities for PharmaForm's patented transdermal and transmucosal delivery systems are available. PharmaForm's proprietary delivery platform is a versatile polymeric delivery system that can be applied to many drug candidates and product applications. The company's Drug Delivery Technology team is integrated with formulation development, analytical, materials, and manufacturing groups to develop and optimize transdermal systems. The Formulation and Product Development and Analytical groups work closely to plan and execute the numerous facets of system development activities. After formulation development, clinical assessment, and final formulation selection is complete, PharmaForm can scale-up your product for commercial manufacture. PharmaForm will combine its pharmaceutical expertise, formulation chemistry, and long history of knowhow to develop a high-quality transdermal drug delivery system for your market application. For more information, contact **PharmaForm** at (512) 834-0449 or visit **www.pharmaform.com**.

### SILICONE TECHNOLOGY



NuSil is the world's leading formulator of silicone compounds for aerospace, healthcare, electronics, and other applications requiring precise, predictable, cost-effective materials performance. ISO-9001 certified since 1994, NuSil operates state-of-the-art laboratories and processing facilities in North America and Europe and provides on-site, in-person application engineering support worldwide. NuSil returned to employee ownership in 1992 to focus exclusively on silicone technology and related process development. Today, Nusil Technology comprises hundreds of research, manufacturing, and engineering professionals perfecting silicones as materials of choice based on the vast, unique array of properties they provide. NuSil offers 200+ healthcare silicones, all supported by FDA Master Access Files and tested to ISO 10993 and USP Class VI standards to expedite product approval by regulatory bodies. For more information, contact NuSil at (805) 684-8780 or visit www.nusil.com/dds.

### MANUFACTURING SOLUTIONS



Since 1949, Remmele Engineering has designed and built custom manufacturing equipment for installation worldwide. The company is an innovative, strategic thought partner for leading suppliers in the drug delivery industry. Remmele operates under an ISO 9001:2000certified quality system and provides manufacturing solutions from proofof-concept through commercial manufacturing. Its world-class facility is equipped to streamline critical manufacturing while reducing risk in even the most complex applications. Utilizing leading-edge applied

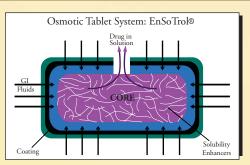
technologies for web processing, discrete assembly, and packaging & filling, the company focuses all of its energy and experience on the singular task of meeting customer needs. Its ability to identify unique customer needs, provide custom solutions on time and superior results every time is unrivaled. For more information, visit **Remmele**Engineering at www.remmeleautomation.com.

### ANTI-NEEDLESTICK DEVICES

### UtraSafe UtraSafe.

Proven safe and effective with more than 100 million used worldwide, the UltraSafe® family of products combines the features of FDA, NIOSH, and GERES while offering the ultimate in compliance and protection. Plus they are easily integrated into production lines, enabling the fastest possible time to market. And as our product line evolves, it will continue to provide a compelling competitive advantage that can make a difference on your bottom line. The company is actively marketing its UltraSafe® Delivery Systems for prefilled pharmaceutical glass syringes that are commonly used for vaccines, low molecular weight heparins, and other medicines, including many of the newer biotechnology drugs. Now is the right time to make UltraSafe Passive® your preferred choice. For more information, contact **Safety Syringes, Inc.** at (760) 918-9908 or visit **www.safetysyringes.com**.

### **OSMOTIC DELIVERY**



EnSoTrol® is a patented osmotic drug delivery system designed to solubilize drugs and provide extended drug-release properties. It consists of a semipermeable membrane surrounding a homogeneous core that contains the drug, a non-swelling solubilizing agent, a non-swelling osmotic agent, and a non-swelling wicking agent. The wicking agent enhances the surface area contact of the drug with the fluid found in the gastrointestinal tract. The drug is solubilized by incoming fluids and is delivered, through a laser-drilled hole(s), by osmosis. Six patents have been issued for the system with numerous other applications having been filed. The system's design and the excipients used combine to solve several delivery challenges, providing sustained delivery, enhanced solubility, and less inter- and intra-patient variability. For more information, contact **Shire**Laboratories at (301) 838-2681 or visit www.shirelabs.com.

### CONTROLLED DELIVERY PLATFORM



SCOLR Pharma applies its patented CDT® Controlled Delivery Technologies to develop formulations for companies with pharmaceutical, OTC, and nutraceutical products. These elegantly simple technologies can be used for controlled-release periods for up to 24 hours and can be manufactured using readily available standard materials and conventional production equipment. SCOLR Pharma partners with companies under contractual arrangements that include licensing fees, royalties, manufacturing contracts, or other mutually agreed upon financial arrangements. SCOLR Pharma's CDT® has the many distinct advantages, including highly programmable (capable of a wide range of release profiles), easy to manufacture (employs conventional manufacturing equipment), cost effective (utilizes standard tableting excipients), higher payload (when compared to other technologies), and strong patent protection (full patent life and easy enforcement). For more information, visit **SCOLR Pharma** at **www.scolr.com**.

### ISOLATION-INSERTION SYSTEM



Weiler Engineering, Inc. is currently building the latest generation of ASEP-TECH® Blow/Fill/Seal Systems, incorporating the three-step process of blow molding, aseptic filling, and hermetic sealing of liquid products in one sequential operation on a compact machine frame. The ASEP-TECH® Model 624 BFS Isolation-Insertion system features an isolation chamber and special track mechanism for production of a sterile BFS combination package. The incorporation of a sterile tip and cap, a rubber stopper, or other multi-entry insert into the blow/fill/seal package offers added flexibility in container design and drug delivery methods, ensures product integrity, and eliminates the need for human interventions in the process. Isolation-insertion systems are offered in sizes ranging from 3 mL to 1000 Ml. For more information, contact Weiler Engineering, Inc., at (847) 697-4900 or e-mail at solutions@weilerengineering.com; or visit www.weilerengineering.com.

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assa International	4	203-312-0682	201-312-0722	www.assainternational.com
BASF Corp.	19	800-469-7541		www.pharma-solutions.basf.com
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