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R&D FOCUS part of IMS LifeCycle

drugnews

29 March 2004 Volume 13 No 13

See IMS LifeCycle, R&Dfocus for full product details

insulin detemir

Novo Nordisk marketed, Switzerland (diabetes)

Novo Nordisk's long-acting insulin analogue, insulin detemir (LEVEMIR), was launched in Switzerland, its first market worldwide, on 1 March 2004. The therapy is indicated as a treatment for type I and type II diabetes.

The EU's CPMP has recommended the approval of insulin detemir for the treatment of diabetes, and the product is also awaiting approval in the USA and Canada. The US FDA issued an approvable letter for the use of the agent in the treatment of diabetes.

Launches

fulvestrant

AstraZeneca marketed, Germany, Sweden (breast cancer)

On 16 March 2004, AstraZeneca launched fulvestrant (FASLODEX) in Germany and Sweden for the treatment of receptor-positive locally advanced or metastatic breast cancer in postmenopausal women, for disease relapse or progression on or after therapy with an anti-estrogen. The product, a downregulator of estrogen receptors, was approved for launch in the EU on 12 March 2004. Further launches are expected in the EU during 2004.

Fulvestrant is marketed for this indication in the USA, Puerto Rico and Brazil. AstraZeneca is planning filings post 2005 for the use of fulvestrant as a first-line therapy for advanced breast cancer in Europe and the USA.

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Published by IMSworld Publications Ltd.
R&D FOCUS ISSN 1350-1135

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Approvals

ezetimibe + simvastatin

Merck & Co, Schering Plough registered, Mexico (hypercholesterolemia)

Schering Plough and Merck & Co have received marketing approval in Mexico for a once-daily combination monotherapy (VYTORIN) for the treatment of hypercholesterolemia. The approval of the oral tablet formulation, comprising Schering Plough's cholesterol absorption inhibitor ezetimibe (ZETIA) and Merck & Co's HMG CoA reductase inhibitor simvastatin (ZOCOR), was announced on 19 March 2004. The product is scheduled for launch in April 2004.

An NDA for approval of the combination product for use as an adjunct to diet in the reduction of elevated cholesterol levels, submitted to the US FDA in September 2003, was accepted for review fourth quarter 2003.

ibandronic acid

Roche registered, EU (osteoporosis)

On 23 February 2004, the European Commission announced the approval of Roche's bisphosphonate, ibandronic acid (BONVIVA), for the treatment of osteoporosis in postmenopausal women, in order to reduce the risk of vertebral fractures (efficacy on femoral neck fractures has not been established), and for the prevention of osteoporosis in postmenopausal women who are at risk of developing osteoporosis.

The agent is marketed in the EU as a treatment for hypercalcemia due to malignancy, and for metastatic bone disease. The agent has also been approved by the US FDA as a treatment for osteoporosis.

Licensing

drug design technology, ESBATech

ESBATech, Viventia Biotech licensing agreement

It was announced by ESBATech and Viventia Biotech on 16 March 2004 that the companies have entered into a licensing agreement and research collaboration with the aim of developing anticancer agents. The ability of ESBATech's proprietary antibody stabilization and expression technology to enhance the stability, binding and yield of certain recombinant antibody fragments engineered by Viventia Biotech using its proprietary Hybridomics and ImmunoMine antibody discovery and screening platforms, is to be determined. Under the terms of the agreement, Viventia Biotech is to provide an upfront payment and research funding to ESBATech. At the end of the collaboration, Viventia Biotech has an option to license ESBATech's technology for use in clinical development for which ESBATech is eligible to milestone payments and royalties.

andarine

GTx, Ortho Biotech licensing agreement

GTx announced on 17 March 2004 that it has entered into a joint collaboration and licensing agreement with Ortho Biotech regarding the former's andarine, a selective androgen receptor modulator (SARM), and other specified back-up SARM compounds. Under the agreement, Ortho Biotech acquires exclusive rights to market andarine in the USA and markets outside the USA. GTx will receive an upfront licensing fee, additional licensing fees and milestone payments up to US$82 million on andarine and up to US$45 million for each additional licensed compound achieving specific clinical development decisions or obtaining regulatory approvals. Further clinical development and expenses will be the responsibility of Johnson & Johnson, and Ortho Biotech will be responsible for commercialization and expenses. GTx has the option to co-promote andarine and the other licensed SARM compounds to urologists in the USA for uses specifically related to men's health. GTx will receive double digit royalties on all sales, in addition to royalty payments in excess of 20% on all co-promoted sales to urologists in the USA.

Andarine is expected to have utility in the treatment of cachexia, improving sexual function and bone disorders. The compound has completed several phase I trials in the USA, and phase II trials are expected to commence in 2004.

lysosomal acid lipase

Large Scale Biology partnering opportunity, Worldwide

Daniel Tuse, Vice President of Business Development at Large Scale Biology, informed R & D focus on 18 March 2004, that Large Scale Biology is seeking a commercial partner to co-develop a lysosomal acid lipase (LAL). The enzyme, which was exclusively licensed by Large Scale Biology from the Cincinnati Childrens Hospital (USA) in November 2003, has potential in the treatment of atherosclerosis and cholesterol storage disorders.

In preclinical studies, ongoing in the USA, LAL decreased atherosclerotic plaque accumulation in mice chronically fed high-fat diets. Early-stage coronary and aortic plaques were eliminated, and advanced-stage plaques were quantitatively and qualitatively reduced.

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interleukin-20

Novo Nordisk, ZymoGenetics licensing agreement

On 16 March 2004, ZymoGenetics announced that it has signed a licensing agreement with Novo Nordisk regarding the former's interleukin-20 (IL-20), a potential target for the treatment of psoriasis. The agreement stipulates that Novo Nordisk acquires exclusive North American rights to ZymoGenetics' patents covering IL-20. Novo Nordisk will pay ZymoGenetics an initial US$4 million license fee plus milestone and royalty payments. Novo Nordisk will conduct all development activities. In September 2001, Novo Nordisk acquired the ex-North American rights to IL-20; Novo Nordisk now holds worldwide development rights for IL-20. The companies signed an option agreement in November 2000, under which Novo Nordisk has the right to license exclusive rights to a limited number of proteins outside North America until November 2004. ZymoGenetics retains rights and prospective rights to other members of the IL-10 family, including IL-22 and IL-22 receptors.

In vitro studies demonstrated that IL-20 activated human keratinocytes and induced the expression of other pro-inflammatory cytokines. In preclinical studies, over-expressing IL-20 caused skin abnormalities resembling human psoriasis.

PER.C6

Crucell, NeoTropiX licensing agreement

On 16 March 2004, Crucell and NeoTropiX reported the signing of an agreement, granting the latter a nonexclusive worldwide license to Crucell's PER.C6 technology for research and development of viral therapy products for cancer therapy. The agreement includes an option for a commercial license. Under the terms of the deal, Crucell is to receive upfront and annual payments; further financial details were not disclosed.

vaccine, tuberculosis, Intercell/Statens Serum Institut

Intercell, Statens Serum Institut licensing agreement

Intercell and the Statens Serum Institut (Denmark) announced on 17 March 2004 that the companies have signed an agreement to develop a vaccine for the prophylaxis of tuberculosis. The vaccine combines recombinant antigens from Mycobacterium tuberculosis, developed by the Statens Serum Institut, and Intercell's synthetic Immunizer IC 31 as adjuvant. Phase I trials of the vaccine are planned for 2005. Under the terms of the agreement, Statens Serum Institut will conduct clinical development of the vaccine, and Intercell is to receive upfront and milestone payments and will share sales profits.

T-oligos

CancerVax, SemaCo licensing agreement

CancerVax announced on 15 March 2004 that it has signed a licensing agreement with SemaCo regarding the development of a technology that utilizes telomere homologue oligonucleotides (T-oligos) for the potential treatment and prevention of cancer. Under terms of the deal, CancerVax is to acquire an exclusive

worldwide sublicense to the T-oligo technology for use against cancer, and will have first refusal on alternative applications for the technology and for other technology developed by SemaCo. In return, SemaCo is to receive an upfront license fee, patent reimbursement, research support, milestone payments and sales royalties from CancerVax.

In a hairless mouse model, topical application of T oligos reduced ultraviolet-induced mutations and photocarcinogenesis. The technology was originally developed at Boston University (USA), which subsequently licensed all the rights to SemaCo.

cell therapy, mannan-MUC1, CancerVac

Biomira, CancerVac licensing agreement

CancerVac, a subsidiary of Prima Biomed, and Biomira reported on 10 March 2004 that the companies have signed an agreement, granting CancerVac rights to the MUC1 protein in relation to CancerVac's mannan-MUC1 fusion protein cell therapy for the treatment of cancer. The immunotherapy utilizes the patient's own dendritic cells treated ex vivo to stimulate a cellular immune response following re-injection of cells into the patient. In consideration for the license rights from Biomira, Biomira has acquired a 10% equity stake in CancerVac, and a seat on the CancerVac board.

Under the terms of the agreement, Biomira is to have sole option to license the exclusive worldwide commercialization rights (excluding Australia and New Zealand) to the product following completion of a phase IIa ovarian cancer trial. Biomira may elect to acquire exclusive licensing rights (excluding New Zealand and Australia) to the CancerVac technology relating to this product or only for North America. If Biomira proceeds with worldwide rights, it is to meet 100% of the ongoing development costs of the technology, or 50% of the development costs if it elects to have rights only in North America. Specific terms of the agreement were not disclosed; however, the deal could include upfront and milestone payments to CancerVac potentially totalling AUS$20 million, plus royalties. If Biomira does not exercise its exclusive rights, the agreement allows CancerVac to develop and commercialize its vaccine with similar payments to Biomira.

CancerVac plans to initiate a phase IIa trial of the vaccine in patients with metastatic ovarian cancer in the second quarter 2004.

drug design technology, zebrafish models, DanioLabs

BioXell, DanioLabs, ProSkelia licensing agreement

On 15 March 2004, DanioLabs announced that it has signed an agreement with ProSkelia and BioXell. Under the terms of the agreement, DanioLabs will use its zebrafish models of osteoporosis and bone anabolism to screen compounds selected from the ProSkelia/BioXell research collaboration to identify vitamin D3 analogues for the treatment of osteoporosis. Further details and financial terms of the deal were not disclosed.

gene discovery, osteoporosis, Organon/University of Twente/Delft University of Technology

Delft University of Technology, Organon, University of Twente licensing agreement

It was announced on 22 March 2004 that Organon, the University of Twente (Netherlands), and Delft University of Technology (Netherlands), are jointly conducting a three-year program for the development of bone regeneration therapies for conditions such as osteoporosis. The partners intend to functionally characterize genes and apply this information to bone biology; Organon will apply its pharmacology and genomics technology, the University of Twente will use its expertise in materials science and tissue biology, and Delft University of Technology will apply its bioinformatics expertise. The Dutch Ministry of Economical Affairs, SENTER, has awarded a grant to the program covering approximately half the program costs. The overall joint investment in the program totals EUR3.4 million. This discovery program is under way in the Netherlands.

BRAF-targeted therapy, Astex Technology/Cancer Research Technology/ Institute of Cancer Research/Wellcome Trust

Astex Technology, Cancer Research Technology, Institute of Cancer Research, Wellcome Trust licensing agreement

Astex Technology is collaborating with Cancer Research Technology, the Institute of Cancer Research (UK) and the Wellcome Trust (UK) to develop inhibitors of BRAF, a protein that is activated in up to 70% of cancers, as potential anticancer agents. The four partners have established a joint research team under this agreement and Astex Technology will contribute its expertise in fragment-based drug discovery. This discovery program is ongoing in the UK.

Cancer Research Technology, the Institute of Cancer Research and the Wellcome Trust signed an agreement in 2003 to develop BRAF inhibitors.

PAN 811

Panacea, Walter Reed Army Institute sign CRADA

On 17 March 2004, Panacea announced that it has entered into a Collaborative Research and Development Agreement (CRADA) with the Walter Reed Army Institute of Research (USA). Under the CRADA, Panacea and the Walter Reed Army Institute of Research will evaluate the efficacy, toxicity and mechanism of action of PAN 811 and its derivatives as neuroprotectants for global and focal ischemia. The work will include testing the compounds in animal models of transient focal brain ischemia to assess in vivo efficacy and toxicity.

PAN 811 is a small molecule neuroprotectant undergoing preclinical testing in the USA as a potential therapy for neurodegenerative disorders, including stroke.

AD 923

Arakis acquires opioid product

On 16 March 2004, Arakis announced that it has acquired AD 923 (SRSS 001) through an all share acquisition of Sirus. Further terms and financial details were not disclosed. The product comprises an opiate administered using Sirus' sublingual delivery technology, and has potential for the treatment of breakthrough pain in patients with intermediate and late stage cancer. Phase I trials are under way in the UK, and Arakis expects to initiate phase III trials of the product early 2005.

lexipafant

DevCo partnering opportunity, Worldwide (reperfusion injury, pancreatitis, neurological)

Kevin Wilkinson, CEO of DevCo, informed R&D focus on 17 March 2004 that partners are sought for the development and marketing of British Biotech's lexipafant (ZACUTEX). Licensee DevCo holds worldwide rights for use of this platelet activating factor (PAF) antagonist in all indications excluding oncology and ophthalmology. DevCo is developing an intravenous formulation of lexipafant for protection against organ dysfunction associated with coronary bypass graft (CABG) and as a treatment for acute pancreatitis. The company is also developing an oral formulation of the agent for the treatment of HIV-associated cognitive/ motor dysfunction. Protocols and clinical trial material for the initiation of phase III trials have been prepared by DevCo.

DevCo has announced results from a UK double-blind, placebo-controlled, safety, tolerability, pharmacokinetic and pharmacodynamic study involving 24 volunteers. In the study, infusion of lexipafant (400 or 800 mg per 24 h for 72 h) was well tolerated, pharmacokinetics were dose proportional and a 70% inhibition of the PAF activated neutrophil function was observed during the infusion period.

For further information on the partnering opportunities available, contact:

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LB 80380

Anadys, LG Life Sciences sign option agreement

On 17 February 2004, Anadys and LG Life Sciences entered into an exclusive option agreement regarding LG Life

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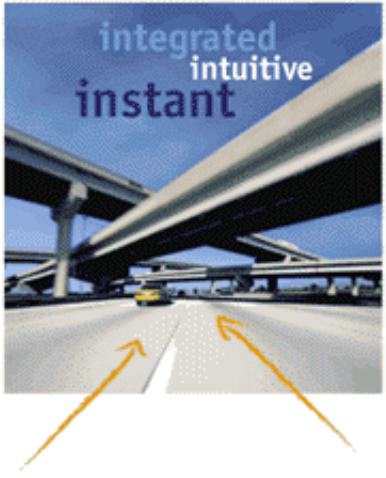

IMS Knowledge Link Version 2 launched.

The eagerly awaited second version has major enhancements to deliver comprehensive new benefits, including:

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Sciences' LB 80380. Under terms of the agreement, Anadys has paid LG Life Sciences a US$500 000 option fee and has initiated an interim joint development program during the four-month option period. If Anadys exercises the agreement, it will be jointly responsible for development and solely responsible for commercialization of the compound worldwide, including North America, Europe, Japan and excluding China, Korea, India and South East Asia. Further financial details and other terms of the agreement were not disclosed.

LB 80380 is a prodrug of the phosphonate nucleoside LB 80317. Phase II trials of the compound as a treatment for hepatitis B virus (HBV) infections are under way in South Korea.

Offers from Purely Proteins

TargetBASE

Purely Proteins licensing offer, Worldwide

David Bailey, CEO of Purely Proteins, informed R&D focus on 18 March 2004 that Purely Proteins' drug discovery database platform (TargetBASE) is available for licensing, worldwide. The platform is divided into modules, each relating to a particular gene, and provides information regarding members of specific protein families as targets for drug design. Purely Proteins has granted nonexclusive licenses to Janssen Cilag in Belgium and BioFocus in the UK. The company also signed a licensing agreement with Cytomyx, in December 2002, regarding an updated version of the database platform, TargetBASEPlus.

In February 2004, Purely Proteins signed a collaboration agreement with Abcam, under which Purely Proteins will utilize TargetBASE to provide information about antibodies designed and developed by Abcam against undisclosed therapeutic targets.

For further information on the licensing opportunities available, see next story.

target based screening, Purely Proteins

Purely Proteins licensing offer, Worldwide

David Bailey, CEO of Purely Proteins, informed R&D focus on 18 March 2004 that Purely Proteins' protein purification platform is available for licensing, worldwide. The first products from the platform, designed to accelerate and enhance the drug discovery and development process, are related to the Protein Tyrosine Phosphatase (PTP) protein family. Proteins generated from the platform will be evaluated using Purely Proteins' drug discovery target database, TargetBASE, which provides information regarding members of specific protein families as targets for drug design.

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Offers from ML Laboratories

icodextrin

ML Laboratories licensing offer, Worldwide excluding Europe (postsurgical adhesion)

Andrew Barrett, Marketing Manager of ML Laboratories, informed R&D focus on 18 March 2004 that the company is seeking licensing partners worldwide, excluding EU markets, for its 4% icodextrin solution (ADEPT) for the treatment of postsurgical adhesion. ADEPT is marketed in Europe by licensee Shire for this indication. A 410-patient, double-blind, placebo-controlled phase III trial, designated PAMELA, is under way in the USA to determine the efficacy and safety of ADEPT at reducing postsurgical adhesion following laparoscopic surgery. Patient recruitment is almost complete and ML Laboratories anticipates a US launch of ADEPT to take place during 2007.

Icodextrin solution is available worldwide under the trade name EXTRANEAL for use in peritoneal dialysis.

For further information on the licensing opportunities available, see following article.

devazepide

ML Laboratories licensing offer, Europe

ML Laboratories clinical data (phase II) (pain)

On 18 March 2004, R&D focus was informed by Andrew Barrett, Marketing Manager of ML Laboratories, that the company is seeking licensing partners to take over the development and marketing of devazepide (DEVACADE) in Europe. Phase II studies evaluating this cholecystokinin (CCK) 1 antagonist for use in the enhancement of pain relief provided by opioid drugs, have completed. A phase III program has been designed to provide further efficacy and safety data required by regulatory authorities.

In a double-blind, cross-over phase II study in subjects receiving maximum doses of opioid analgesics due to long term pain, devazepide was found to reduce pain levels. The agent also reduced sleep disturbance, and reduced interference to activities owing to pain.

For further information on the licensing opportunities available, contact:

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Products & Biotechnology

tezacitabine

Chiron discontinued, USA

Chiron announced on 19 March 2004 that it has discontinued further development of its anticancer agent, tezacitabine. This decision was based on results from a US phase II trial in patients with gastroesophageal cancer, which showed that the nucleoside analogue lacked sufficient antitumor activity to satisfy Chiron's predetermined criteria to advance the program. Tezacitabine had previously been evaluated in a phase II trial in patients with colorectal cancer. Treatment with the agent did not result in any safety issues.

EcoNail

MacroChem phase change I, USA (onychomycosis)

MacroChem reported on 18 March 2004 that it has initiated a phase I trial of its EcoNail lacquer, comprising the imidazole antifungal econazole with MacroChem's proprietary skin absorption enhancer, SEPA. The multicenter trial will be conducted in the USA and will enroll patients with onychomycosis; it is expected to complete by end 2004. In laboratory studies, EcoNail increased antifungal concentrations in deep nail layers several fold when compared with an identical lacquer without MacroChem's SEPA technology.

tgAAC94

Targeted Genetics phase change I, USA, Canada (rheumatoid arthritis)

Targeted Genetics has initiated a randomized, double-blind, placebo-controlled, dose-escalation phase I trial of tgAAC94 in the USA and Canada. tgAAC94 is an adeno-associated viral (AAV) mediated gene therapy that utilizes the company's recombinant AAV technology platform to deliver the tumor necrosis factor (TNF) inhibitor, TNFR:Fc, to cells within arthritic joints. This study will involve the administration of a single intra-articular injection of tgAAC94 or placebo to 32 patients with rheumatoid arthritis in order to assess safety. Secondary endpoints will include the product's ability to reduce pain and swelling in the injected joint and overall disease activity. Local and circulating TNFR:Fc levels will also be measured, and patients are to be followed for 24 weeks after injection.

AS 1405

Antisoma phase change I, UK (glioma)

Antisoma announced on 22 March 2004 that it has initiated a phase I trial of AS 1405 (AngioMab) in the UK in patients with glioma. The study will evaluate safety, dosing and drug distribution, and initial signs of antitumor activity. Patients who have had a relapse of glioma, and tumor regrowth following initial treatment, are to be enrolled on the trial; AS 1405 will be injected into the cavity remaining following surgery to remove the majority of the tumor.

AS 1405 is a radiolabelled antibody that targets fibronectin, a protein produced by many tumor cells and newly formed blood vessels.

AIR Epinephrine

Alkermes clinical data (phase I)

Alkermes is developing AIR Epinephrine, an inhaled dry powder formulation of epinephrine that utilizes the company's AIR technology for the potential treatment of anaphylaxis. In a US placebo- and active-comparator controlled dose-escalation phase I trial, the product was compared to intramuscular and subcutaneous injection of epinephrine and placebo. The dry powder inhaled epinephrine demonstrated rapid systemic delivery associated with clinically meaningful pharmacodynamic responses. The product was well tolerated and there were no serious adverse events.

PA 457

Panacos phase change I, USA

On 16 March 2004, Panacos announced that it has initiated a US phase I trial to investigate the safety and pharmacokinetics of orally administered PA 457 in healthy HIV-negative volunteers. Depending on successful completion of this trial, Panacos plans to begin trials with this small molecule in HIV-infected subjects later in 2004. PA 457 is a betulinic acid derivative with potential as a treatment for HIV infection.

AVI 4557

AVI BioPharma clinical data

AVI BioPharma has reported results from a clinical trial of AVI 4557, which showed that oral administration of the product resulted in inhibition of the liver enzyme cytochrome P450 3A4. The study evaluated a 10 mg midazolam dose, followed by five daily oral doses of AVI 4557, then another dose of midazolam on the sixth day. Results demonstrated a decrease in midazolam clearance of 877 mL/min at baseline to 700 mL/min after AVI 4557 administration (p=0.0251). The C_{max} increased from 51 ng/mL pre-dose to 81 ng/mL post-dose (p=0.0251). AVI 4557 is an antisense oligonucleotide against cytochrome P450 3A4, and was developed using AVI BioPharma's proprietary NEUGENE technology. AVI BioPharma plans to combine the agent with existing drugs that would be benefit from reduced dose levels, thus reducing toxicity while retaining efficacy.

WinRho SDF

Cangene clinical data (dengue fever)

Cangene announced that it plans to initiate a six-month clinical trial of its polyclonal antibody, WinRho SDF, in patients with dengue hemorrhagic fever. The study will be conducted at two hospitals in the Philippines. This decision follows findings from a pilot study conducted at the Children's Medical Center, and three other hospitals in the Philippines, that administration of the product resulted in rapid improvement of symptoms.

WinRho SDF, a polyclonal antibody targeting rhesus positive erythrocytes, is marketed in several countries for the prevention of hemolytic disease of newborns and to treat immune thrombocytopenic purpura.

AVP 26452

AVANIR preclinical data

AVANIR has selected AVP 26452, a reverse cholesterol transport promoting agent, as a lead molecule for the treatment of atherosclerosis. The agent was discovered through the company's research program targeting apolipoprotein A1, a mediator of reverse cholesterol transport. Preclinical data showed that the agent facilitated the hepatic clearance of LDL cholesterol by increasing LDL-mediated cholesterol uptake in cultured human liver cells. In cultured human vascular smooth muscle cells, AVP 26452 protected the cells from accumulation of excess cholesterol by decreasing oxidized LDL-mediated cholesterol and cholesteryl ester accumulation. The agent decreased acetylated LDL-mediated cholesterol and cholesteryl ester accumulation in cultured human macrophages, and appeared to promote cholesterol efflux from acetylated LDL-loaded human macrophages. AVP 26452 inhibited foam cell formation in vivo. AVP 26452 lowered plasma cholesterol associated with LDL in atherosclerosis-prone Apo-E-deficient mice. Furthermore, the aortas of mice treated with AVP 26452 po for ten weeks showed dose-dependent reduction in fatty atherosclerotic plaques compared to placebo-treated mice.

12-O-tetradecanoyl phorbol-13-acetate

Cancer Institute of New Jersey, Rutgers University preclinical data

Researchers from Rutgers University (USA) and the Cancer Institute of New Jersey (USA) are assessing 12-O-tetradecanoylphorbol-13-acetate (TPA), the active ingredient found in the oil of seeds from the croton plant, as a potential prostate cancer therapy. Preclinical data demonstrated that TPA simultaneously inhibited the growth of new prostate cancer cells, killed existing cancer cells and shrunk prostate tumors. TPA administered with all-trans retinoic acid (ATRA) resulted in a synergistic effect in inhibiting the growth of cultured prostate cancer cells. Preclinical studies are ongoing in the USA, and a phase I trial is planned.

A collaborative Chinese study between Rutgers University and the Henan Tumor Research Institute (China) in 1995, showed that TPA administered to terminally ill myeloid leukemia patients resulted in a decrease in the number of leukemia cells in the blood and bone marrow. Furthermore, remissions of the disease were also observed.

HER-2 Protein AutoVac

Pharmexa clinical data (phase I) (breast cancer)

Pharmexa has reported results from a phase I trial of HER-2 Protein AutoVac, its therapeutic protein vaccine that targets the HER-2 antigen, conducted in 10 women with breast cancer at cancer centers in Cleveland and Pittsburgh, USA. Patients received four injections of the vaccine formulated in standard adjuvant over 10 weeks, and were monitored for a further six weeks. Results showed that six of the 10 patients had HER-2 specific antibody responses; the first two responses were detected after only two injections and were significantly boosted after subsequent injections. Additional responders were detected after the third and fourth injections. Peak antibody concentration in sera was 2 mcg/mL and the mean antibody concentration was 0.8 mcg/mL, with a decline to around half the peak value within four weeks of stopping treatment. The vaccine was well tolerated.

The HER-2 Protein AutoVac vaccine was developed using the company's proprietary AutoVac technology, which is designed to break immunologic tolerance to specific self antigens such as HER-2, by inserting a foreign T cell epitope into a selected self protein. Pharmexa plans to begin a phase II trial of the breast cancer vaccine in the second half 2004, with preliminary results expected by mid 2006.

daclizumab

Protein Design clinical data (phase II) (asthma)

Protein Design announced results from a randomized, double-blind, placebo-controlled phase II US trial of daclizumab (ZENAPAX) in patients with chronic persistent asthma whose disease is not well controlled with high doses of inhaled corticosteroid therapy. The primary endpoint of percent change in FEV1 from baseline to 12 weeks was met, and secondary endpoints also supported these findings. During this study, 114 patients with chronic asthma received daclizumab iv or placebo. Daclizumab was administered at two week intervals for a total of ten doses. Assessment of the primary endpoint showed that daclizumab-treated patients experienced a mean increase in FEV1 of 4.4% of baseline compared to 1.5% in placebo-treated patients (p value of 0.05). Daclizumab-treated patients also had a statistically significant increase in the time to asthma exacerbation requiring oral corticosteroid rescue (p value of 0.024), and peripheral eosinophil counts were significantly reduced in daclizumab-treated patients compared to the placebo group (p value of 0.04). Other statistically significant within-group changes in the daclizumab group revealed improvements in diary symptom scores and morning and night-time peak expiratory flow rates. No significant within-group changes were observed in the placebo group. Treatment was well tolerated, and the overall frequency and severity of adverse events did not differ between daclizumab and placebo groups.

Protein Design plans to conduct a phase II trial of subcutaneously administered daclizumab in asthma patients.

Daclizumab is a humanized anti-Tac monoclonal antibody that inhibits interleukin-2-dependent activation of T cells. The product is marketed by Roche in several countries including the USA and Europe for the prevention of transplant rejection. Protein Design is conducting a phase II trial of daclizumab in the treatment of

patients with moderate-to-severe ulcerative colitis, and results are expected by June 2004. The company also plans to conduct a clinical trial of the agent in multiple sclerosis.

cervical cancer therapy, Transgene

Transgene clinical data (phase II)

Transgene reported results from a phase II study, conducted in France, of MVA-HPV-IL2, a vaccine for the treatment of human papillomavirus-related disease. The trial involved 28 patients with high-grade cervical intraepithelial neoplasia (CIN2/3) who received the vaccine subcutaneously at two different doses. Results showed that partial clinical and/or histological responses (associated in some cases with viral clearance) were observed in five out of 15 patients treated with the high dose. CIN regression was not observed in the 12 patients receiving the low dose. The dose-related effect observed in the CIN2/3 trial suggests that these results were probably due to the low dose used and the advanced stage of the disease in these patients.

The vaccine was also tested in 20 patients with vulvar intraepithelial neoplasia (VIN3); no significant difference was observed between vaccine-treated patients compared with the placebo group.

The MVA-HPV-IL2 vaccine comprises treatment with a second generation recombinant vaccinia virus expressing interleukin-2 and human papilloma virus (HPV 16) antigens E6 and E7. The vector is injected into muscle, where the proteins are expressed and elicit an immune response against the tumor.

efalizumab

Genentech, XOMA clinical data (phase II) (psoriatic arthritis)

Genentech and XOMA announced preliminary results from a randomized, placebo-controlled phase II trial of efalizumab (RAPTIVA) in 107 patients with psoriatic arthritis. Results showed that the study did not reach statistical significance at 12 weeks for the primary endpoint of ACR 20 response. After 12 weeks of therapy, 28% of patients achieved an ACR 20 response compared to 19% of patients in the placebo group. No worsening in the signs and symptoms of psoriatic arthritis were observed with efalizumab treatment and the agent was well tolerated. In a subgroup of patients with moderate-to-severe plaque psoriasis, PASI scores were similar to the statistically significant results demonstrated in phase III trials in psoriasis patients.

The agent is a monoclonal antibody targeting CD11a, and was first launched in the USA by Genentech and XOMA for the treatment of moderate-to-severe plaque psoriasis in adults in November 2003. The monoclonal has been approved in Switzerland for this indication. An MAA was filed for this indication with the EMEA in February 2003 by Serono, which licensed worldwide rights to the product, excluding the USA and Japan, in 2002.

fontolizumab

Protein Design clinical data (phase II) (Crohn's disease)

Protein Design has announced results from two phase II trials of fontolizumab (HuZAF), a humanized monoclonal antibody against human gamma interferon, for the treatment of Crohn's disease. The primary endpoint of both studies was a clinical response defined as a 100-point drop in Crohn's Disease Activity Index (CDAI). In a randomized, double-blind phase II trial (HARMONY I), conducted in North America and Europe, 196 patients with Crohn's disease received an initial iv loading dose of 1 mg/kg, 4 mg/kg fontolizumab, or placebo, plus an additional lower subcutaneous dose on day 28 of the study. Following the single dose, there was no significant difference between groups, with 39, 33 and 38% of patients demonstrating a clinical response in the respective groups. The antibody treatment was well tolerated.

In a second phase II trial (HARMONY II), patients were randomized to receive two iv doses of fontolizumab at either 4 mg/kg or 10 mg/kg, or placebo, at a 28 day interval. Results from 133 evaluable patients showed that the antibody was well tolerated and all treatment-related adverse events were mild-to-moderate. The primary endpoint of clinical response was achieved in 33, 38 and 44% of patients in the placebo, 4 and 10 mg/kg dose groups, respectively. Following administration of the second iv dose to 91 evaluable patients, a clinical response was achieved in 35, 69 and 67% of patients in the respective groups at day 56; response in the treatment groups was significantly different to the placebo group.

periodontal disease therapy, Oragenics

Oragenics clinical trial protocol recommended for approval

Oragenics is developing Replacement Therapy for the prevention of dental caries, which uses a genetically modified patented strain of Streptococcus mutans that does not produce decay-producing acid. When applied to the teeth the genetically modified bacterium displaces the resident acid-producing bacterium, providing potential life-long protection against most dental decay. On 15 March 2004, Oragenics reported that the Recombinant DNA Advisory Committee of the National Institutes of Health (USA) has recommended that a phase I trial of the Replacement Therapy be conducted under the protocol proposed by Oragenics. The US FDA had placed the company's IND application on hold in May 2003 pending further review. Oragenics is to meet with the FDA to discuss the lifting of the clinical hold on the IND, and hopes to begin phase I evaluation during 2004.

MAb, cancer, Roche/Genmab

Genmab, Roche identify antibody candidates

Genmab reported on 19 March 2004 that Roche has selected two antibody candidates for development as potential cancer therapeutics. The antibodies were developed under a collaboration between Roche and Genmab, signed May 2001, to develop antibodies against disease targets identified by Roche and using Genmab's technology. Each antibody targets a different disease area within cancer. Under the terms of the agreement between Roche and Genmab, Genmab is to receive milestone and royalty payments based on successful products.

didemnin B

PharmaMar initiates phase I trials in pediatric patients

PharmaMar announced on 22 March 2004 that multicenter European phase I trials evaluating didemnin B (APLIDIN), a cyclodepsipeptide derived from the marine tunicate Aplidium albicans, have initiated in 35-41 pediatric patients with solid tumors and leukemias, including acute lymphoblastic leukemia. The agent is to be administered every two weeks as a 3-h infusion. The starting dose will be 4.0 mg/m^2, equivalent to 80% of the recommended dose for adult phase II evaluation. The primary endpoint of the study is identification of the recommended dose for phase II trials. Secondary endpoints include efficacy, pharmacokinetic parameters and safety at the recommended dose.

Phase II evaluation is ongoing in adults with colorectal, head and neck, pancreatic, small and nonsmall cell lung cancers, and also melanoma and non-Hodgkin's lymphoma. Further phase II trials in other solid and hematological tumors are anticipated to start during 2004.

erlotinib

OSI initiates phase II trial in first-line treatment of NSCLC

OSI reported on 19 March 2004 that it has initiated a multicenter, open-label, randomized phase II trial of erlotinib (TARCEVA) in 102 patients with previously untreated nonsmall cell lung cancer (NSCLC). The trial will evaluate the safety and efficacy of monotherapy with erlotinib (150 mg/day) in comparison with standard combination chemotherapy (paclitaxel and carboplatin). The primary endpoint is progression-free survival; secondary endpoints will include disease-related symptom benefit, tumor response and overall survival.

Erlotinib is an orally active, selective epidermal growth factor receptor (EGFr) kinase inhibitor, which is awaiting approval in the USA for the treatment of stage IIIB/IV NSCLC in patients who have failed standard therapy for advanced or metastatic disease.

gene therapy, lipoprotein lipase, Amsterdam Molecular Therapeutics

Amsterdam Molecular Therapeutics Orphan Drug, EU (enzyme deficiency)

Amsterdam Molecular Therapeutics announced on 17 March 2004 that its gene therapy incorporating a recombinant adeno-associated virus (AAV) serotype 1 vector expressing the lipoprotein lipase (LPL) gene, has been granted Orphan Medicinal Product

designation for the treatment of LPL deficiency by the European Commission. This decision follows a positive recommendation by the EMEA. Preclinical studies are ongoing in the Netherlands and the company anticipates starting clinical trials in early 2005.

Congresses

5th International Symposium on Ocular Pharmacology and Therapeutics, 11-14 March 2004, Monte Carlo, Monaco

UNIL 088

Debiopharm preclinical data

UNIL 088, a ciclosporin prodrug, is undergoing preclinical evaluation in Switzerland as a potential therapy for dry eye. Preclinical data were presented at the 5th International Symposium on Ocular Pharmacology and Therapeutics. The therapeutic efficacy of an aqueous eyedrop solution of UNIL 088 was evaluated by comparing it to the effect of ciclosporin 10 mg/kg im on the prevention of corneal graft rejection after heterologous keratoplasty in rats. Results showed that UNIL 088 was converted ex vivo into ciclosporin within minutes in tears, and showed a high in vivo conversion rate in rabbits. The topical administration of UNIL 088 achieved comparable prevention of graft rejection as intramuscular ciclosporin. UNIL 088 was well tolerated.

tazarotene

Allergan preclinical data

During a presentation at the 5th International Symposium on Ocular Pharmacology and Therapeutics, a spokesperson for Allergan announced that the company is evaluating tazarotene (TAZORAC) in preclinical studies as a potential agent for neuroprotection of the retina. Preclinical data showed that tazarotene resulted in retinal protection in an animal light damage model.

Tazarotene, a selective retinoid RAR agonist, is marketed in several countries, including the USA and Canada, as a treatment for psoriasis and acne.

genistein

University of Southern California preclinical data

Researchers from the University of Southern California's Doheny Retina Institute (USA) are evaluating genistein, an isoflavone present in soyabeans, as a potential agent for retinal protection. Preclinical data for this tyrosine kinase inhibitor were presented at the 5th International Symposium on Ocular Pharmacology and Therapeutics. Diabetic and non-diabetic male Zucker rats were administered genistein-enriched purina or regular purina for six months. Results showed that genistein reduced the retinal cell proliferation index and normalized retinal vascular leakage in diabetic rats. Genistein also showed protective effects in an experimental model of dry age-related macular degeneration, and was protective in a blue light damage model. The therapy was well tolerated and safe in all animals.

nimesulide

Farmigea preclinical data

Farmigea is developing an ophthalmic formulation of nimesulide, a nonsteroidal anti-inflammatory drug, as a potential therapy for ocular inflammatory conditions. Preclinical data, presented at the 5th International Symposium on Ocular Pharmacology and Therapeutics, showed that the drops were non-irritant in rabbit eyes. The ophthalmic formulation permeated across the cornea reaching pharmacologically active concentrations in the aqueous humor, with a C_{max} value of 2 mg/mL. Furthermore, when tested in acute ocular inflammation induced by paracentesis in rabbit eyes, nimesulide drops showed activity. Preclinical studies are ongoing in Italy.

Nimesulide, a selective COX 2 inhibitor, is marketed worldwide as an oral treatment of various inflammatory disorders, including osteoarthritis, contusions, and soft tissue inflammatory disorders.

POSURDEX

Allergan clinical data (phase II) (eye disease)

At the 5th International Symposium on Ocular Pharmacology and Therapeutics, a spokesperson for Allergan presented results from a randomized, dose- ranging, controlled phase II trial of POSURDEX, a proprietary biodegradable sustained-release implant that delivers

dexamethasone directly to the targeted disease site at the back of the eye. The study showed that POSURDEX 700 mcg significantly reduced persistent macular edema overall, as well as reducing diabetic macular edema. Patients with persistent macular edema were randomized to receive POSURDEX containing 700 or 350 mcg dexamethasone or observation. Results showed that 90 days after receiving POSURDEX 700 mcg, patients experienced a statistically significant improvement in visual acuity of 2 lines or more as measured on a standard (ETDRS) eye chart when compared to patients who did not receive the implant. Benefits continued up to 180 days. The same statistically significant results were also observed in a subset of patients with diabetic retinopathy. Adverse events were mild.

The implant is undergoing phase III evaluation in the USA.

calcium dobesilate

OM clinical data (phase III) (diabetic retinopathy)

Results from a multicenter European phase III trial of OM's calcium dobesilate (DOXIUM) were presented at the 5th International Symposium on Ocular Pharmacology and Therapeutics. During this double-blind study, 194 patients with type II diabetes and early diabetic retinopathy were randomized to receive calcium dobesilate 2g daily for 24 months, or placebo. Results showed that the primary endpoint of posterior- vitreous-penetration-ratio (PVPR) was significantly superior in calcium dobesilate-treated patients compared with placebo-treated patients (p equals 0.0378). In addition, the mean PVPR value was significantly lower at the end of the treatment period compared to baseline in the calcium dobesilate group.

Calcium dobesilate is available worldwide as a therapy for various peripheral vascular disorders, including prevaricose and varicose syndromes. The therapy has also been launched in South America and various European countries for the prevention and treatment of diabetic retinopathy.

BioSquare 2004, 10-12 March 2004, Basel, Switzerland

AVP 893

AVANIR developing cancer therapy

AVANIR's AVP 893 is undergoing preclinical evaluation in the USA for the treatment of cancer, the company reported at BioSquare 2004. The small molecule is part of a series of compounds identified as being effective in suppressing the synthesis of mediators of the allergic response, in particular IgE. The agent was being investigated in preclinical studies for the treatment of asthma symptoms and allergy in 2001.

LOR S01

Lorantis developing allergy therapy

At BioSquare 2004, Lorantis announced that it is conducting preclinical studies of a notch agonist, LOR S01, for the treatment of allergy. LOR S01 was developed using Lorantis' ASPECT (Antigen SPECific Therapy) platform.

News from Neuro3d

ocaperidone

Neuro3d phase change II, Europe (schizophrenia)

Neuro3d initiated two phase II European trials of ocaperidone, a potential treatment for schizophrenia, in December 2003, R&D focus was informed during an interview with Charles Woler, Chief Executive Officer of Neuro3d, at BioSquare 2004. The two trials have been designated OCA-5, which is a double-blind, placebo-controlled trial involving 120 patients, and OCA-6, which will enroll 90 patients to compare side effect profile and efficacy of ocaperidone versus a standard treatment. The aim of both studies is to demonstrate efficacy of low-dose ocaperidone in improving positive and negative symptoms of schizophrenia. Results of the phase II trials of ocaperidone are expected end 2004.

Ocaperidone is a dual 5HT2/dopamine D2 antagonist that was in-licensed by Neuro3d from Janssen Cilag in March 2002. Janssen Cilag has an option to license ocaperidone from Neuro3d following the completion of phase II trials.

drug discovery, schizophrenia, anxiety, depression, Neuro3d

Neuro3d conducting neurological discovery programs

Neuro3d is conducting programs for the identification of compounds with potential as therapeutics for

schizophrenia, depression and anxiety. Discovery is ongoing in France, Charles Woler, Chief Executive Officer of Neuro3d informed R&D focus during an interview at BioSquare 2004.

ND 7001

Neuro3d plans phase I trial for Q4 2004

Preclinical development of ND 7001, a lead compound from the ND 7000 series, has been completed, Charles Woler, Chief Executive Officer of Neuro3d, told R&D focus during an interview at BioSquare 2004. ND 7001 has demonstrated anxiolytic and antidepressant activity and is expected to enter phase I trials fourth quarter 2004.

ND1251

Neuro3d partnering opportunity, Worldwide

During an interview at BioSquare 2004, Charles Woler, Chief Executive Officer of Neuro3d, disclosed that partners are sought for the further development of Neuro3d's phosphodiesterase IV inhibitor program including ND1251. ND1251 is a phosphodiesterase IV inhibitor that has potential utility in the treatment of depression. The agent has received approval from the ethics committee and phase I European trials are scheduled to initiate during March 2004. Follow-up compounds from the series are expected to have potential for use in the treatment of cognitive defects and inflammation as well as depression.

For further information on the partnering opportunities available, contact:

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Opportunities with Peptor

SOMATOPRIM

Peptor partnering opportunity, Worldwide

During a presentation by Peptor at BioSquare 2004, it was disclosed that partners are being sought for the development of SOMATOPRIM, a cyclic eight amino acid peptide somatostatin analogue. Clinical studies with SOMATOPRIM for the treatment of diabetic nephropathy are planned for 2005; in 2006 clinical trials in diabetic retinopathy are planned. Preclinical data with SOMATOPRIM showed that treatment decreased the secretion of growth hormone and reduced kidney weight with no effect on insulin and glucagon secretion.

For further information on the partnering opportunities available, see next story.

PTR 262

Peptor partnering opportunity, Worldwide

Peptor is seeking partners for the development of PTR 262 as a potential treatment for myasthenia gravis. Preclinical studies with the agent have been conducted and formulation, stability and manufacturing processes are under way prior to the initiation of clinical studies, which are planned for end 2004. PTR 262 is comprised of peptide analogues of myasthenogenic epitopes that are tandemly arranged and have two single amino acids substituted. This information was disclosed in a presentation at BioSquare 2004.

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Opportunities with ProSkelia

PSK 3841

ProSkelia partnering opportunity, Worldwide

Partners are sought by ProSkelia for the development of PSK 3841, Neil Brown, Vice President of Licensing and Acquisitions at ProSkelia, announced during a presentation at BioSquare 2004. PSK 3841, a nonsteroidal antiandrogen, has completed phase IIa trials for the treatment of androgenetic alopecia and a clinical proof-of-concept study to reduce sebum flow and secretion in patients with acne. Six months of treatment with PSK 3481 demonstrated equivalent or better net hair growth compared with finasteride.

For further information on the partnering opportunities available, see next story.

PSK 3668

Proskelia partnering opportunity, Worldwide

ProSkelia is developing PSK 3668, a pure antiestrogen, as a potential treatment for estrogen receptor-positive (ER+) tumors and endometriosis. The agent is undergoing preclinical evaluation in France for the treatment of breast cancer and endometriosis. Partners are sought for the further development of PSK 3668, Neil Brown, Vice President of Licensing and Acquisitions at ProSkelia, disclosed during a presentation at BioSquare 2004.

For further information on the partnering opportunities available, see following article.

bone disease therapy, ProSkelia

Proskelia partnering opportunity, Worldwide

ProSkelia is seeking partners to collaborate on the development of anabolic agents for the treatment of bone disease, it was announced during a presentation at BioSquare 2004. ProSkelia has an ongoing discovery program and has signed an agreement with the German Cancer Research Center (DKFZ) in March 2004 for the development of anabolic products based on the signalling pathways of Kremen and DKK (Dickkopf).

For further information on the partnering opportunities available, see next article.

drug delivery system, transdermal patch, trimegestone + estradiol, ProSkelia

ProSkelia partnering opportunity, Worldwide

At BioSquare 2004, Neil Brown, VP of Licensing and Acquisitions at ProSkelia, discussed ProSkelia's transdermal patch containing a combination of trimegestone and estradiol. The product is under evaluation in phase II trials for the treatment of menopausal symptoms, and a phase II proof-of-concept trial to evaluate the patch in the inhibition of ovulation for contraception is planned. Partners are sought for the further development of the product.

For further information on the partnering opportunities available, see following story.

selective androgen receptor modulators, ProSkelia

ProSkelia partnering opportunity, Worldwide

ProSkelia is seeking partners for its discovery program for the development of selective androgen receptor modulators (SARMs). Lead optimization of compounds from the program is ongoing, it was disclosed by Neil Brown, VP Licensing and Acquisitions, during a presentation at BioSquare 2004.

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Focus on RESprotect

RP 101

RESprotect partnering opportunity, Worldwide

At BioSquare 2004, Rudolf Fahrig, CEO of RESprotect, discussed the company's anti-recombinogenic agent RP 101, during an interview with R&D focus. RP 101, which acts by preventing the overexpression or amplification of oncogenes (DDX1, STAT3, and JUN-D), DNA repair genes (UBE2N and APEX) and resistance genes (MDR and DHFR) and the down-regulation of DT-diaphorase, caspases and natural killer cell factor-4, has potential utility in inhibiting the induction of chemoresistance in cancer. A phase I/II European trial of RP 101 in patients with different tumor types has been completed and RESprotect anticipates initiating a controlled phase II trial of RP 101 in patients with pancreatic cancer second half 2004. Discussions with ethical committees regarding the phase II study are ongoing.

In vitro, treatment with RP 101 in combination with mitomycin C, mitoxantrone or doxorubicin maintained the efficacy of the chemotherapy against AH13R sarcoma cells; treatment with multiple cycles of chemotherapy alone had decreasing efficacy. RP 101 was

demonstrated to be efficacious in vitro in combination with doxorubicin, mitomycin C, mitoxantrone, methotrexate, etoposide, and gemcitabine. In vivo, RP 101 enhanced the efficacy of chemotherapy and tumor regression when administered in combination with doxorubicin in an AH13R sarcoma model.

In a phase I/II study, RP 101 was safe and well tolerated when administered at 5000 mg per treatment cycle to 31 patients with cancer. RP 101 also reduced certain side effects of chemotherapy. In a subset of 7 patients with metastatic pancreatic carcinoma who received RP 101 in combination with cisplatin and gemcitabine, 3 patients had disease remission and 4 patients had stable disease; RP 101 was also found to increase the median survival of these patients.

Partners are sought by RESprotect for the further development of the agent.

For further information on the partnering opportunities available, see next article.

cancer chemoresistance inhibitors, RESprotect

RESprotect partnering opportunity, Worldwide

RESprotect is developing second generation anti-recombinogenic agents to inhibit the development of cancer chemoresistance. The agents are expected to be efficacious for all tumor types and for use in combination with any chemotherapy. Lead compounds, RP 301, RP 302 and RP 402, have been identified and are entering preclinical development. Partners are sought by RESprotect to further the development of these compounds, R&D focus was informed during an interview with Rudolf Fahrig, CEO of RESprotect, at BioSquare 2004.

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News from ViroMed

VMDA 3601

ViroMed phase change II, South Korea (peripheral vascular disease)

During an interview at BioSquare 2004, R&D focus was informed that in January 2004 ViroMed initiated a multicenter phase II trial with VMDA 3601, which comprises ViroMed's proprietary pCK plasmid encoding vascular endothelial growth factor-165. The trial is being conducted in South Korea in patients with critical limb ischemia. ViroMed is in discussions with a partner in China and expects to initiate a clinical trial in China in patients with critical limb ischemia during 2004.

A phase I trial in patients with critical limb ischemia was completed July 2003. Results from the phase I trial in patients with critical limb ischemia demonstrated that treatment with VMDA 3601 increased ankle brachial index by 0.19. Improvements in resting pain were noted in seven out of eight (88%) patients and four out of six (67%) patient with ulcers. Amputation was not required in three out of seven (43%) patients and delayed in four out of seven (57%) patients. There were no incidences of severe adverse events observed.

VM 202

ViroMed partnering opportunity, Worldwide

ViroMed is developing VM 202, a gene therapy utilizing ViroMed's proprietary pCK vector to express the gene encoding a form of hepatocyte growth factor (HGF-X7), as a potential treatment for ischemic cardiovascular disease and ischemic limb disease. In preclinical studies, intramuscular injection of VM 202 significantly increased the number of angiographic vessels, the blood flow, and the capillary density compared to VEGF-165, in a rabbit femoral artery excision model. In a rat acute myocardial infarction model, myocardial injection of VM 202 was more effective than VEGF-165 in decreasing myocardial fibrosis and increasing capillary density. Phase I trials of VM 202 in patients with coronary artery disease are scheduled to start in South Korea in early 2005. Phase I trials of VM 202 in patients with peripheral artery disease are scheduled to start in China in early 2005. Partners are sought worldwide excluding South Korea and China to further the development of VM 202, R&D focus was informed during an interview with ViroMed at BioSquare 2004.

For further information on the partnering opportunities available, see next story.

VM 205

ViroMed partnering opportunity, Worldwide

Partners are sought worldwide by ViroMed for the development of VM 205, R&D focus was informed during an interview at BioSquare 2004. VM 205 is a cancer gene therapy comprising ViroMed's proprietary pCK vector expressing the gene for interferon- alpha subtype 1. Preclinical studies are ongoing in South Korea and clinical studies are expected to start late 2005/early 2006. Results from preclinical studies showed that VM 205 significantly reduced tumor- associated vascularization, tumor growth, and lung metastasis. In a canine mammary tumor, VM 205 reduced tumor volume by five-fold at seven days post-treatment. Over seven weeks, VM 205 reduced a canine spontaneous hemangiosarcoma-1 tumor volume by approximately 50%.

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Update on GLYCART

GA 101

GLYCART developing cancer therapy

GLYCART has used its proprietary GlycoMAb technology to develop GA 101 for the treatment of cancer. Preclinical studies are under way in Switzerland and results are expected first quarter 2004. GlycoMAb technology increases antibody dependent cellular cytotoxicity, which is important for the in vivo target-cell killing activity of antibodies. This information was reported at BioSquare 2004.

GA 201

GLYCART developing monoclonal antibody

GLYCART's GA 201 is undergoing preclinical evaluation in Switzerland the company reported at BioSquare 2004. GLYCART used its proprietary GlycoMAb technology to develop GA 201 for the treatment of cancer. The technology increases antibody dependent cellular cytotoxicity, which is important for the in vivo target-cell killing activity of antibodies. The company expects results from preclinical studies first quarter 2004.

Focus on Phares Drug Delivery

anti-inflammatory, topical, Phares Drug Delivery

Phares Drug Delivery phase change II, Germany (inflammation)

Phares Drug Delivery announced at BioSquare 2004, that it is developing a topical anti-inflammatory. Phase II trials are under way with an undisclosed partner in Germany.

anti-infective, oral, Phares Drug Delivery

Phares Drug Delivery phase change I, Belgium

At BioSquare 2004, Phares Drug Delivery reported that phase I trials are under way in Belgium of an oral anti-infective. The agent is being developed with an undisclosed partner.

drug delivery system, allergy, Phares Drug Delivery

Phares Drug Delivery phase change I, Germany

Phares Drug Delivery is conducting phase I trials of a topical anti-allergy agent in Germany with an undisclosed partner. This information was reported at BioSquare 2004.

cancer therapy (iv), Phares Drug Delivery

Phares Drug Delivery developing intravenous cancer therapy

Phares Drug Delivery reported at BioSquare 2004, that it is developing an intravenous agent for the treatment of cancer. The agent is undergoing preclinical evaluation in the USA with an undisclosed partner.

cancer therapy (oral), Phares Drug Delivery

Phares Drug Delivery developing oral cancer therapy

Phares Drug Delivery and an undisclosed partner are conducting preclinical studies in the UK of an oral agent with potential for the treatment of cancer. This information was presented at BioSquare 2004.

anti-infective (iv), Phares Drug Delivery

Phares Drug Delivery developing intravenous anti-infective

Phares Drug Delivery is conducting preclinical evaluation of an intravenous anti-infective in Belgium, with an undisclosed partner. This information was reported at BioSquare 2004.

8th Annual Drug Discovery Technology Europe Conference, 9-10 March 2004, London, UK

CRx 026

CombinatoRx preclinical data

At the 8th Annual Drug Discovery Technology Europe Conference, CombinatoRx presented preclinical data for CRx 026, a combination product comprising a sedative agent and an anti-infective agent, being developed for the treatment of cancer. In vitro, the agent demonstrated broad-spectrum antiproliferative activity against a range of tumor cell lines, through inhibition of mitosis. In addition, the agent showed a synergistic effect with a range of approved anticancer agents. Furthermore, in xenograft models, CRx 026 demonstrated effective antitumor activity.

The agent is undergoing phase I/II evaluation in the USA for the treatment of advanced, metastatic solid tumors.

Update on Aurigene

inflammatory disease therapy, Aurigene

Aurigene developing inflammatory disease therapies

At the 8th Annual Drug Discovery Technology Europe Conference, Larry Hardy, Global Head of Biology at Aurigene, informed R&D focus that the company is developing therapeutics directed at an undisclosed inflammatory disease target. Preclinical evaluation of agents as potential treatments of sepsis, amyotrophic lateral sclerosis (ALS), Alzheimer's disease and stroke is ongoing in India.

structure based drug design, Aurigene

Aurigene partnering opportunity, Worldwide

Aurigene's Structure-based Drug Design technology platform for the discovery of lead candidate disease therapeutics, is available for worldwide partnering, Larry Hardy, the company's Global Head of Biology, told R&D focus at the 8th Annual Drug Discovery Technology Europe Conference. The technology integrates techniques in molecular biology, protein engineering, medicinal chemistry and computational chemistry with macromolecular x-ray crystallography and nuclear magnetic resonance (NMR). The latter two techniques are employed to determine three-dimensional structures of therapeutically relevant molecular targets in isolation or in combinations with ligands. Multidimensional NMR is used with isotopic labelling to study the active site and the solution dynamics of host-guest interactions. The technology can provide a structure-guided generation of candidate therapeutic agents that are likely to show good activity and affinity to potential therapeutic targets. In-house discovery programs are ongoing in India and the USA.

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Opportunities with Cambridge Antibody Technology

phage display antibody technology, CAT

Cambridge Antibody Technology partnering opportunity, Worldwide

Cambridge Antibody Technology (CAT) is seeking partners for utilization of its

phage display antibody library, a spokesperson for the company informed R&D focus at the 8th Annual Drug Discovery Technology Europe Conference. The library may be used for antigen screening and subsequent rapid isolation and potency optimization studies of human antibodies.

Cambridge Antibody Technology has agreements with a number of companies, including Merck & Co and Xerion.

For further information on the partnering opportunities available, see next story.

drug design technology, ribosome display antibody library, CAT

Cambridge Antibody Technology partnering opportunity, Worldwide

Cambridge Antibody Technology (CAT) has developed a ribosome display library consisting of over one billion human antibodies. The library can be used for screening of antigens and subsequent rapid isolation and potency optimization studies of human antibodies. CAT is seeking partners to use the ribosome display library for discovery and optimization of therapeutic antibodies, a spokesperson for the company informed R&D focus at the 8th Annual Drug Discovery Technology Europe Conference.

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Opportunities with Galapagos Genomics

gene discovery, osteoporosis, Galapagos Genomics

Galapagos Genomics partnering opportunity, Worldwide

Galapagos Genomics is seeking partners to discover targets and develop therapies for osteoporosis, it was reported the 8th Annual Drug Discovery Technology Europe Conference. Galapagos Genomics' ongoing program involves screening the company's proprietary SilenceSelect (knock-down), FLeXSelect (knock-in) and PhenoSelect (placental cDNA) libraries to identify targets that are rate-limiting in osteoblast differentiation. Screening is carried out using a high-throughput assay for bone alkaline phosphatase, a marker for the differentiation of mesenchymal progenitor cells (MPCs) into osteoblasts. Several protein targets have been identified and they will be validated using in vitro mineralisation and ex vivo mouse calvarial skull models.

Galapagos Genomics expects to have selected targets for screening against potential drugs second quarter 2004. The company is also seeking to out-license osteoporosis targets for drug discovery.

For further information on the partnering opportunities available, see next article.

gene discovery, Alzheimer's disease, Galapagos Genomics

Galapagos Genomics partnering opportunity, Worldwide

It was reported at the 8th Annual Drug Discovery Technology Europe Conference, that Galapagos Genomics is seeking partners to discover targets for the development of Alzheimer's disease therapies. The program is aimed at identifying targets that regulate human wild type amyloid beta (Abeta1-42) secretion by screening the company's proprietary SilenceSelect (gene knock-down) and FLeXSelect (gene knock-in) libraries. Screening is performed using an ELISA-based assay of Abeta1-42 production in HEK293 cells expressing wild type amyloid precursor protein (APP). Several targets have been identified, including G-protein coupled receptors (GPCRs) and kinases. The targets will be validated in Abeta1-42 assays in rat primary hippocampal neurons and expression profiling in human brain. Discovery is ongoing in Belgium.

For further information on the partnering opportunities available, see following story.

gene discovery, type II diabetes, Galapagos Genomics

Galapagos Genomics partnering opportunity, Worldwide

Galapagos Genomics is seeking partners to discover targets that regulate adipocyte function, for the development of therapies for type II diabetes, it was reported at the 8th Annual Drug Discovery Technology Europe Conference. The company is screening its proprietary SilenceSelect (gene knock-down) and FLeXSelect (gene knock-in) libraries, using assays of peroxisome proliferation activator receptor (PPAR)-gamma pathway activation and adipocyte differentiation in human primary adipocytes. Discovery is ongoing in Belgium.

For further information on the partnering opportunities available, see next story.

gene discovery, asthma, Galapagos Genomics

Galapagos Genomics partnering opportunity, Worldwide

Galapagos Genomics is seeking an exclusive partner to discover and validate targets for asthma therapeutics. The company is screening for targets using its SilenceSelect (knock-down) and FLeXSelect (knock-in) libraries, which regulate the IgE-mediated mast cell activation pathway. In-house high-throughput assays of interleukin-13 (IL-13) release in human primary mast cells, have been developed for this purpose. Galapagos Genomics expects to have identified targets for screening against small molecule drugs second quarter 2004. This was presented at the 8th Annual Drug Discovery Technology Europe Conference,.

For further information on the partnering opportunities available, see following article.

gene discovery, rheumatoid arthritis, Galapagos Genomics

Galapagos Genomics partnering opportunity, Worldwide

Galapagos Genomics is seeking partners in a program to discover and validate targets for the development of therapies for rheumatoid arthritis, it was reported at the 8th Annual Drug Discovery Technology Europe Conference. Hitherto targets identified by Galapagos Genomics are available for outlicensing. The program involves screening the company's proprietary SilenceSelect (knock-down gene sequences) and FLeXSelect (knock-in gene sequences) libraries, which use an adenoviral vector to deliver and express the gene in the cell. The company will use three in-house assays of synoviocyte activation in human primary RA synovial fibroblasts (RASFs), which will measure collagen degradation, matrix metalloproteinase-1 activation and cathepsin K activation.

For further information on the partnering opportunities available, see next article.

gene discovery, osteoarthritis, Galapagos Genomics

Galapagos Genomics partnering opportunity, Worldwide

Partners are sought by Galapagos Genomics for a program to discover targets that regulate chondrocyte differentiation, for the development of a treatment for osteoarthritis. The program involves screening the company's proprietary SilenceSelect (knock-down) and FLeXSelect (knock-in) collections using an in-house de-differentiation/re-differentiation assay of primary human articular chondrocyte (HAC) assays. Candidate targets are further validated using secondary assays such as ex vivo cartilage explants. Targets identified to date are available for licensing. This information was reported at the 8th Annual Drug Discovery Technology Europe Conference.

For further information on the partnering opportunities available, contact:

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News from ImClone Systems

IMC A12

ImClone Systems preclinical data

ImClone Systems presented results from preclinical studies of IMC A12, a fully human monoclonal antibody directed against the insulin-like growth factor-1 receptor (IGF-1R), at the 8th Annual Drug Discovery Technology Europe Conference. The antibody, under development as a treatment for multiple tumor types,

blocked ligand binding to inhibit IGF-1R activation and downstream signalling in cultured cells. IMC A12 induced rapid internalization of IGF-1R, and suppressed IGF-induced human tumor growth in vitro. Proof of concept with the antibody has been established in a variety of animal tumor models including human breast (MCF-7) and colon (Colo 205) carcinoma xenografts. The antibody induced tumor cell apoptosis in the MCF-7 xenograft model. In a HT-29 human colon tumor xenograft model, combination therapy of IMC A12 with irinotecan (CAMPTOSAR) demonstrated a greater antitumor activity than monotherapy with either agent. ImClone Systems expects to file an IND for the antibody with the US FDA in 2004.

IMC 1121b

ImClone Systems developing treatment for solid tumors

ImClone Systems is developing IMC 1121b, a fully human monoclonal antibody directed against vascular endothelial growth factor receptor-2 (VEGFR-2), for the potential treatment of solid tumors. Preclinical studies with the monoclonal are ongoing. The company expects to file an IND for the agent with the US FDA in 2004. This was reported in a presentation by ImClone Systems at the 8th Annual Drug Discovery Technology Europe Conference.

IMC 11F8

ImClone Systems developing therapy for multiple tumor types

ImClone Systems is developing IMC 11F8, a second generation fully human monoclonal antibody directed against the epidermal growth factor receptor (EGFR), as a treatment for multiple tumor types. This was reported at the 8th Annual Drug Discovery Technology Europe Conference. Having established proof of concept for EGFR as an antitumor target during the development of cetuximab (ERBITUX), the company expects to file a clinical trials exemption (CTX) application for IMC 11F8 in Europe in 2004.

Opportunities with RecomGenex

RefoldAll

RecomGenex partnering opportunity, Worldwide

RecomGenex is seeking partners to use its proprietary technology platform, RefoldAll, to assist with recombinant protein production, Geza Ambrus-Aikelin, CEO of RecomGenex, informed R&D focus at the 8th Annual Drug Discovery Technology Europe Conference. The technology can be used to improve protein solubility and increase protein yield as well as reduce aggregation characteristics. The platform incorporates subcloning of a target sequence into bacterial expression vectors, production of inclusion bodies, renaturation screening and optimization as well as protein purification and development.

In January 2004, RecomGenex entered into a research collaboration with AstraZeneca for the production of functional nuclear receptors. Under the terms of the collaboration, RecomGenex will apply its RefoldAll technology to inclusion bodies provided by AstraZeneca, to determine the optimal conditions needed to appropriately fold the proteins for optimum protein function. AstraZeneca will exclusively own the resulting proteins. Further terms of the deal were not disclosed.

For further information on the partnering opportunities available, see next story.

XpressXpert

RecomGenex partnering opportunity, Worldwide

RecomGenex has developed XpressXpert, a proprietary technology platform for recombinant protein expression. The technology involves cloning of a target sequence and subsequent protein expression in either Escherichia coli, insect or mammalian cells, as well as protein purification. RecomGenex is seeking partners to utilize XpressXpert for recombinant protein production, Geza Ambrus-Aikelin, CEO of the company, informed R&D focus at the 8th Annual Drug Discovery Technology Europe Conference.

For further information on the partnering opportunities available, see following article.

ImprovEnz

RecomGenex partnering opportunity, Worldwide

Geza Ambrus-Aikelin, CEO of RecomGenex, informed R&D focus at the 8th Annual Drug Discovery Technology Europe Conference, that the company is seeking partners to use its proprietary technology platform, ImprovEnz, for the production of custom-made enzyme mutants. The technology is used to design and construct enzymes with increased

thermostability and modified substrate specificity based on homology modelling or 3D protein structure.

For further information on the partnering opportunities available, contact:

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Update on Xerion

MAb, MCAM, Xerion

Xerion preclinical data

At the 8th Annual Drug Discovery Technology Europe Conference, Xerion presented data from preclinical studies of lead candidate fully human monoclonal antibodies directed against melanoma cell adhesion molecule (MCAM), which are under evaluation as potential cancer therapeutics. Lead antibodies significantly inhibited angiogenesis in a range of tumor cell lines, and blocked tumor invasion of HT1080 fibrosarcoma cells in culture. In a mouse model of human metastatic melanoma, the antibodies mediated a 50% inhibition of tumor growth, compared with controls. MCAM, a membrane glycoprotein associated with endothelial cell adhesion and tumor angiogenesis is expressed in lung, prostate, colon, ovarian and pancreatic cancers as well as melanoma and sarcoma.

Xerion expects to initiate phase I trials with a selected antibody first quarter 2005.

MAb, neuropilin-1, Xerion

Xerion developing NP-1 targeted cancer therapy

Xerion is developing monoclonal antibodies directed against the neuropilin-1 (NP-1) receptor, for the potential treatment of breast cancer, lung cancer and melanoma, a spokesperson for the company informed R&D focus at the 8th Annual Drug Discovery Technology Europe Conference. The NP-1 target and lead antibodies were identified using Xerion's proprietary Xstream technology platform. The company plans to complete in vivo efficacy studies in human tumor xenografts first quarter 2004, and initiate phase I trials second quarter 2005.

MAb, ADAM9, Xerion

Xerion developing ADAM9-targeted cancer therapy

Xerion is developing a series of monoclonal antibodies directed against ADAM9 (a disintegrin and metalloproteinase), for the treatment of allergy and asthma. The ADAM9 target was identified and candidate antibodies generated using Xerion's proprietary Xstream technology. Preclinical testing to select antibody leads is ongoing in Germany. This information was presented by the company at the 8th Annual Drug Discovery Technology Europe Conference.

MAb, EphA2, Xerion

Xerion developing EphA2 targeted cancer therapy

Xerion is developing human monoclonal antibodies against EphA2, a tyrosine kinase receptor, for the potential treatment of cancer. The target was identified and candidate antibodies generated using the company's proprietary Xstream technology platform. Preclinical evaluation of the antibodies to generate leads is ongoing in Germany. This was reported in a presentation by Xerion at the 8th Annual Drug Discovery Technology Europe Conference.

MAb, alpha2 integrin, Xerion

Xerion developing integrin2 targeted cancer therapy

Xerion is developing human monoclonal antibodies directed against the integrin receptor alpha2 sub-unit, for the potential treatment of cancer, the company reported at the 8th Annual Drug Discovery Technology Europe Conference. Xerion used its proprietary Xstream technology to identify and validate the alpha2 integrin target. Preclinical testing of antibody leads is ongoing in Germany.

MAb, alpha3 integrin, Xerion

Xerion developing alpha3 integrin targeted cancer therapy

Xerion is developing human monoclonal antibodies directed against the integrin receptor alpha3 sub-unit, for the potential treatment of cancer. The company used its proprietary Xstream technology to identify and validate the alpha3 integrin target. Preclinical testing of antibody leads is ongoing in Germany. Xerion reported this program at the 8th Annual Drug Discovery Technology Europe Conference.

Xstream

Xerion partnering opportunity, Worldwide

Xerion's technology platform, Xstream, for the discovery and development of disease therapeutics, is available for partnering worldwide, Dr Vic Ilag, the company's Chief Technology Officer, announced in a presentation at the 8th Annual Drug Discovery Technology Europe Conference. Xstream integrates various technologies including CALI (chromophore-assisted laser inactivation) for functional target validation, and human antibody phage display technologies for the generation of target-specific monoclonal antibodies. Xerion has used the technology to generate lead antibodies to selected targets, in areas such as cancer, allergy and cardiovascular disease.

For further information on the partnering opportunities available, see next article.

MAb, cancer, Xerion

Xerion partnering opportunity, Worldwide

Xerion is seeking partners to develop cancer therapeutics directed against target molecules that have been identified and validated using the company's proprietary Xstream technology, Dr Vic Ilag, the company's Chief Technology Officer, announced in a presentation at the 8th Annual Drug Discovery Technology Europe Conference. Collaborations are sought to develop Xerion's lead candidate monoclonal antibodies, or with companies with the technology to develop small molecule therapies to these targets. Discovery and validation of cancer targets and development of therapeutic antibodies, is ongoing in Germany.

For further information on the partnering opportunities available, see following story.

XER T10

Xerion partnering opportunity, Worldwide

Xerion is seeking partners for a program to develop fully human monoclonal antibodies, designated XER T10, for the treatment of acute cardiovascular diseases. The company is using its proprietary technology platform, Xstream, to discover and validate targets and to generate therapeutic antibodies. Dr Vic Ilag, Chief Technology Officer of Xerion, reported this information in a presentation at the 8th Annual Drug Discovery Technology Europe Conference. Preclinical testing of antibody leads raised to an undisclosed target is ongoing in Germany.

For further information on the partnering opportunities available, contact:

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Company Focus

Focus on Maas BiolAB

intrathecal ciclosporin

Maas BiolAB partnering opportunity, North America, Asia, Europe

Maas BiolAB is developing an intrathecal formulation of ciclosporin for the potential treatment of neurodegenerative diseases such as Alzheimer's disease and amyotrophic lateral sclerosis. The agent also has potential in the treatment of Parkinson's and Huntington's diseases. The company plans to utilize a pump delivery system, which will be implanted subcutaneously to deliver ciclosporin via the cerebrospinal fluid into the intrathecal space. Preclinical studies are ongoing in Sweden and the USA. Maas BiolAB is seeking partners in North America, Europe and Asia for further development of the agent.

For further information on the partnering opportunities available, see next article.

ciclosporin analogues, Maas BiolAB

Maas BiolAB partnering opportunity, North America, Asia, Europe

Maas BiolAB is developing oral formulation ciclosporin analogues for the potential treatment of neurodegenerative diseases and is seeking partners in North America, Europe and Asia for further development of the compounds. The agents may also have potential for the treatment of acute symptoms of traumatic brain injury, spinal cord injury and stroke. Preclinical evaluation is ongoing in Sweden.

For further information on the partnering opportunities available, contact:

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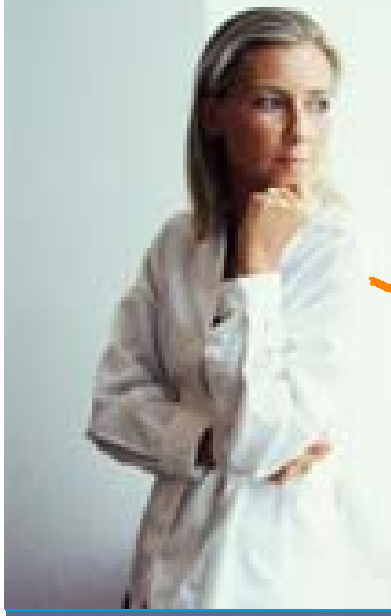
Day after day, countless decisions are made



How can you make those decisions

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OUR EXPERTISE AND OUR VALUES are helping customers turn information into answers and actions.

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Promotional effectiveness evaluation
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IMS is the one global source for business intelligence about the pharmaceutical retail, hospital and health and beauty markets, providing critical information, analysis and solutions that drive decisions and shape strategies.

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IMS Self Medication provides the insights and intelligence in the health and beauty markets to make smart decisions. We offer analytical capability along with our pharmacy, supermarkets, convenience stores and mass market data to help our clients optimise their performance.

IMS Hospital Group is responsible for the global portfolio of hospital information services available through IMS Health. We are undertaking an exciting phase in the further development of these services with some significant product enhancements, with new product launches due in 2003 and beyond.

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ims

NEWLY REPORTED DRUGS IN DRUG NEWS				
Company	**Product**	**Therapeutic Class**	**Indication**	**Phase**
Alkermes	AIR Epinephrine	V7A; R7X	allergy; anaphylactic shock	Phase I
Astex Technology	BRAF-targeted therapy, Astex Technology/Cancer Research Technology/Institute of Cancer Research	L1X9	cancer	Discovery
Aurigene	inflammatory disease therapy, Aurigene	M1A1; N7D9; N7X	inflammation; amyotrophic lateral sclerosis; sepsis; Alzheimer disease; stroke	Preclinical
Aurigene	structure based drug design, Aurigene	V7A	drug design technology	Technology
BioFocus	TargetBASE	V7A	drug design technology	Technology
Biomira	cell therapy, mannan-MUC1, CancerVac	L1X9	cancer; ovarian cancer; genitourinary cancer; solid tumor	Phase I
Cambridge Antibody Technology	drug design technology, ribosome display antibody library, CAT	V7A	drug design technology	Technology
Cancer Institute of New Jersey	12-O-tetradecanoylphorbol-13-acetate	L1X9	prostate cancer; leukemia	Clinicals
Cancer Research Technology	BRAF-targeted therapy, Astex Technology/Cancer Research Technology/Institute of Cancer Research	L1X9	cancer	Discovery
CancerVac	cell therapy, mannan-MUC1, CancerVac	L1X9	cancer; ovarian cancer; genitourinary cancer; solid tumor	Phase I
CancerVax	T-oligos	V7A; L1X9	cancer	Preclinical
Cincinnati Childrens Hospital	lysosomal acid lipase	C6A	atherosclerosis	Preclinical
Crucell	cancer therapy, NeoTropiX	L1X9	cancer	Discovery

NEWLY REPORTED DRUGS IN DRUG NEWS				
Company	**Product**	**Therapeutic Class**	**Indication**	**Phase**
Delft University of Technology	gene discovery, osteoporosis, Organon/University of Twente/Delft University of Technology	M5X	osteoporosis; musculoskeletal disorder	Discovery
ESBATech	drug design technology, ESBATech	V7A	drug design technology	Technology
Galapagos Genomics	gene discovery, asthma, Galapagos Genomics	R7X	asthma	Discovery
Galapagos Genomics	gene discovery, osteoarthritis, Galapagos Genomics	M5X	osteoarthritis	Discovery
Galapagos Genomics	gene discovery, rheumatoid arthritis, Galapagos Genomics	M1A1	rheumatoid arthritis	Discovery
Galapagos Genomics	gene discovery, type II diabetes, Galapagos Genomics	A10X	diabetes	Discovery
Genmab	MAb, cancer, Roche/Genmab	L1X3	cancer	Preclinical
GLYCART	GA 101	L1X3	cancer	Preclinical
GLYCART	GA 201	L1X3	cancer	Preclinical
ImClone Systems	IMC 11F8	L1X3	cancer	Preclinical
ImClone Systems	IMC A12	L1X3	cancer	Preclinical
ImClone Systems	IMC 1121b	L1X3	cancer; solid tumor	Preclinical
Institute of Cancer Research	BRAF-targeted therapy, Astex Technology/Cancer Research Technology/Institute of Cancer Research	L1X9	cancer	Discovery
Janssen Cilag	TargetBASE	V7A	drug design technology	Technology
Large Scale Biology	lysosomal acid lipase	C6A	atherosclerosis	Preclinical
Lorantis	LOR S01	L4A	allergy	Preclinical
Maas BiolAB	ciclosporin analogues, Maas BiolAB	N7X	neurodegeneration	Preclinical
NeoTropiX	cancer therapy, NeoTropiX	L1X9	cancer	Discovery

NEWLY REPORTED DRUGS IN DRUG NEWS

Company	Product	Therapeutic Class	Indication	Phase
Neuro3d	drug discovery, anxiety, Neuro3d	N5C	anxiety	Discovery
Neuro3d	drug discovery, schizophrenia, Neuro3d	N5A	schizophrenia	Discovery
Novo Nordisk	interleukin-20	D5A	psoriasis	Preclinical
Oragenics	periodontal disease therapy, Oragenics	A1A	periodontal disease	Preclinical
Organon	gene discovery, osteoporosis, Organon/University of Twente/Delft University of Technology	M5X	osteoporosis; musculoskeletal disorder	Discovery
Phares Drug Delivery	anti-infective (iv), Phares Drug Delivery	J8X	infectious disease	Preclinical
Phares Drug Delivery	anti-infective, oral, Phares Drug Delivery	J8X	infectious disease	Phase I
Phares Drug Delivery	anti-inflammatory, topical, Phares Drug Delivery	M1A1	inflammation	Phase II
Phares Drug Delivery	cancer therapy (iv), Phares Drug Delivery	L1X9	cancer	Preclinical
Phares Drug Delivery	cancer therapy (oral), Phares Drug Delivery	L1X9	cancer	Preclinical
Phares Drug Delivery	drug delivery system, allergy, Phares Drug Delivery	V7A; D11A	allergy	Phase I
ProSkelia	drug delivery system, transdermal patch, trimegestone + estradiol, ProSkelia	G3F	hormone deficiency; contraception	Phase II
ProSkelia	selective androgen receptor modulators, ProSkelia	V3A	drug discovery	Discovery
Purely Proteins	TargetBASE	V7A	drug design technology	Technology
Purely Proteins	target based screening, Purely Proteins	V7A	drug design technology	Technology
RecomGenex	ImprovEnz	V7A	drug design technology	Technology
RecomGenex	XpressXpert	V7A	drug design technology	Technology
RecomGenex	RefoldAll	V7A	drug design technology	Technology

NEWLY REPORTED DRUGS IN DRUG NEWS				
Company	**Product**	**Therapeutic Class**	**Indication**	**Phase**
RESprotect	cancer chemoresistance inhibitors, RESprotect	V3A	cancer	Preclinical
RESprotect	RP 101	V3A	cancer	Phase II
Roche	MAb, cancer, Roche/Genmab	L1X3	cancer	Preclinical
Rutgers University	12-O-tetradecanoylphorbol-13-acetate	L1X9	prostate cancer; leukemia	Clinicals
SemaCo	T-oligos	V7A; L1X9	cancer	Preclinical
University of Southern California	genistein	S1X	eye disease; retinopathy	Preclinical
University of Twente	gene discovery, osteoporosis, Organon/University of Twente/Delft University of Technology	M5X	osteoporosis; musculoskeletal disorder	Discovery
ViroMed	VM 202	C1D; C6A	peripheral vascular disease; coronary artery disease; ischemia; heart ischemia	Preclinical
ViroMed	VM 205	L1X9	cancer; solid tumor	Preclinical
Viventia Biotech	drug design technology, ESBATech	V7A	drug design technology	Technology
Wellcome Trust	BRAF-targeted therapy, Astex Technology/Cancer Research Technology/Institute of Cancer Research	L1X9	cancer	Discovery
Xerion	MAb, ADAM9, Xerion	R3C	allergy; asthma	Preclinical
Xerion	MAb, alpha2 integrin, Xerion	L1X3	cancer	Preclinical
Xerion	MAb, alpha3 integrin, Xerion	L1X3	cancer	Preclinical
Xerion	MAb, EphA2, Xerion	L1X3	cancer	Preclinical

NEWLY REPORTED DRUGS IN DRUG NEWS				
Company	**Product**	**Therapeutic Class**	**Indication**	**Phase**
Xerion	MAb, MCAM, Xerion	L1X3	cancer; solid tumor; prostate cancer; ovarian cancer; melanoma; skin cancer; genitourinary cancer	Preclinical
Xerion	MAb, neuropilin-1, Xerion	L1X3	cancer; solid tumor; breast cancer; lung cancer; melanoma; skin cancer	Preclinical
ZymoGenetics	interleukin-20	D5A	psoriasis	Preclinical

PRODUCT PHASE CHANGES REPORTED IN DRUG NEWS						
Company	Product	Therapeutic Class*	Indication	New Phase	Region of Phase Change	Highest Phase
Alkermes	AIR Epinephrine	V7A; R7X	allergy; anaphylactic shock	Phase I	USA	Phase I
Antisoma	AS 1405	L1X3	glioma	Phase I	UK	Phase I
AstraZeneca	fulvestrant	L2B1	breast cancer	Marketed	Germany; Sweden	Marketed
MacroChem	EcoNail	V7A; D1A	onychomycosis	Phase I	USA	Phase I
Merck & Co	ezetimibe + simvastatin	C10A9; C10A1	hypercholesterolemia	Registered	Mexico	Registered
ML Laboratories	icodextrin	V3A	postsurgical adhesion	Phase III	USA	Marketed
Neuro3d	ocaperidone	N5A	schizophrenia	Phase II	Europe	Phase II
Novo Nordisk	insulin detemir	A10C	diabetes	Marketed	Switzerland	Marketed
Panacos	PA 457	J5C9	HIV infection	Phase I	USA	Phase I
Phares Drug Delivery	anti-infective, oral, Phares Drug Delivery	J8X	infectious disease	Phase I	Belgium	Phase I
Phares Drug Delivery	anti-inflammatory, topical, Phares Drug Delivery	M1A1	inflammation	Phase II	Germany	Phase II
Phares Drug Delivery	drug delivery system, allergy, Phares Drug Delivery	V7A; D11A	allergy	Phase I	Germany	Phase I
Roche	ibandronic acid	M5B	osteoporosis	Registered	EU	Marketed
Schering Plough	ezetimibe + simvastatin	C10A9; C10A1	hypercholesterolemia	Registered	Mexico	Registered
Targeted Genetics	tgAAC94	M1A1	rheumatoid arthritis	Phase I	USA; Canada	Phase I
ViroMed	VMDA 3601	D3A	peripheral vascular disease	Phase II	South Korea	Phase II
* A change in phase may not apply to all therapeutic classes and indications						