

# Current Patents Gazette

ISSUE 0626

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## DOLPHIN



The records appearing in this Gazette will be added to DOLPHIN, the database Of all pharmaceutical inventions in the next week. Based on the INPADOC database produced by the European Patent Office, it covers all national and international patents with relevance to pharmaceutical research and development published from 1968 onwards and selected patents from earlier years. DOLPHIN contains information on bibliographic data, contents, associated products, legal status, licensees and context of patents, which is presented in a format to convey all aspects of a patent at a glance.

## News & Highlights from Week 0626

The **Patents and Designs Journal** this week (No. 6110) reports that **Schering Biotech's** SPC for **molgramostim (Leukomax®)** lapsed on the 17<sup>th</sup> November 2005 because the annual fees were not paid. Based on **EP0202300**, which claims cDNA clones coding for polypeptides exhibiting human granulocyte macrophage and eosinophil cellular growth factor activity, the SPC would have extended the protection of molgramostim until October 2007. Molgramostim is also the subject of a granted SPC, filed by Novartis, which is based on **EP188479** and is due to expire in October 2007. **Sandoz** (now Novartis) and **Schering-Plough** shared worldwide marketing rights to the drug, which has been launched for the treatment of leukopenia in several major markets, except the US. However, in October 2002, Novartis signed an agreement to sell its international marketing and distribution rights for molgramostim to Schering-Plough.

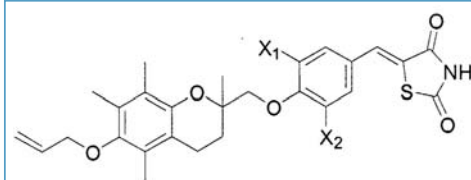
An SPC granted to **E I DuPont de Nemours & Co** for the herbicide, **triflusalufuron methyl** entered into force on 6<sup>th</sup> June 2006. The SPC, which is based on **EP164269**, is due to expire on 3<sup>rd</sup> February 2008.

This week has seen the long anticipated launch of **rimonabant** (June 28<sup>th</sup>), better known to dieters across the nation as **Acomplia**. **Sanofi-Aventis'** anti-obesity drug was claimed in **EP00656354**; interestingly the CB<sub>1</sub> selective antagonist bares little resemblance to classic cannabinoids such as THC, but is based on the selective CB<sub>2</sub> antagonist, **SR-144528**, an SA research tool, as does rimonabant's back-up, **SR-147778**. The National Institute for health and Clinical Excellence (NICE) are still deliberating the approval of this revolutionary weight-loss drug, not yet approved for sale in the US, although EU marketing approval was received last week. Britain's Primary Care Trusts are unlikely to make Acomplia widely available

until NICE approval, which may take some time while NICE contemplates cost-effective issues with the announced U.K. price of £55.20 for a four-week supply, which an SA representative declared was reasonable in light of the £7 billion per year that the NHS currently forks-out in tackling obesity-related disease. Patent applications, published early 2006, indicate that other Pharma companies are already jumping on the bandwagon with applications from **Allergan (WO2006007227)** claiming a new use for Acomplia in the treatment of intra ocular pressure, **Merck & Co (WO2006036770)** who claims a peptide-CB<sub>1</sub> antagonist combination including rimonabant and **Regeneron Pharma (WO2006032042)** who has claimed CNTF or a CNTF-related polypeptide in combination with eg rimonabant; all reported in **DOLPHIN**. SA has also initiated research into new uses for this candidate and in September 2005 published on the new use of Acomplia in the treatment of hepatic disease in **WO2005084652**, co-assigned to **INSERM**.

An ever increasing trend has been emerging in "reviving" or "re-profiling" old drugs that have failed in late stage trials or have been successfully marketed for a different indication, indicating that it is not only yesterdays tin-cans and newspapers that are proving popular targets of recycling nowadays. **Arakis Limited** is seeking protection for three applications, entitled racemisation and recycling process, the treatment of inflammatory disorders and pain, and the treatment of multiple sclerosis. The latter two may relate, respectively, to **WO2005085170** (claiming new dihydroxyanthraquinone derivatives) and **WO2006027579** (the use of β-amino alcohols, in particular β-blockers (S)-clenbuterol, atenolol, bucumolol and procaterol). Both these applications are filed as **Sosei R&D Ltd**, who acquired **Arakis** in July 2005. Sosei's sole development focus is now

directed towards their Drug Reprofiling Platform and in-licensing compounds already marketed or at the late stages of development. **Cancer Research Technology (CRT)** is seeking protection for an application titled materials and methods relating to the diagnosis and treatment of cancer, adding to its extensive patent portfolio. In May 2006, **Clinical Development Partnerships (CDP)**, a joint initiative between **CRT** and **Cancer Research UK** announced its intention to revive shelved anticancer drugs, taking promising but 'deprioritised' anticancer drugs into early stage clinical trials at no cost to the company. Should the results be promising, the company will retain the option to develop and market the drug, with the charity receiving a share of any revenues.



**First TZD-based NCEs to emerge from the Ohio State Research Foundation's Bcl-xL/Bcl-2 inhibitor program, filed just two months prior to research publication in Cancer Research, Feb 2005.**

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## UK initial ("A0") applications filed May 16<sup>th</sup> - 23<sup>rd</sup> 2006

**Arpi Matossian-Rogers** has filed two applications relating to peptides. The only other application by this inventor appears to be **WO9905175**, claiming antibodies and peptides specific for T-cell receptor V $\beta$ , for use in the diagnosis and treatment of autoimmune disorders.

**Biotica Technology Limited** has filed three applications this week, all claiming novel compounds. These are likely to continue the long series of applications covering polyketides previously filed by **Biotica**, with **Pfizer Inc**, **Cambridge University** and **Universidad de Oviedo** all named as co-applicants on more than one previous application. As of June 2006, Biotica had **mTOR inhibitors** at the preclinical stage, as well as **Hsp90** and **angiogenesis** inhibitors in lead optimisation stage.

**DanioLabs Limited** has filed an application claiming a model of neurodegenerative disorders for use in screening methods. This is likely to continue DanioLab's previous applications for zebrafish screening models (see **WO2005103694**, **WO2005080974** and **WO2005067708**, for treating a variety of bone, joint, ophthalmological, CNS and autoimmune disorders).

**Insense Ltd** has filed two initial applications on vaccine formulations and protein stability. This biotechnology company is developing a range of products for improved treatment of wounds and skin conditions and is a spin out from **Unilever**. It was founded by **Prof. Paul Davis**, a leader in the field of manipulating enzymes and other proteins for therapeutic and other applications. Their proprietary technology, **Oxzyyme**, is in clinical trials for the advanced treatment of chronic wounds.

**Isis Innovations** has filed an application for the treatment of neurodegenerative diseases. In 1998 Isis spun-out **Synaptica Ltd**; based on academic research generated within and owned by the **University of Oxford**. Synaptica is a neuroscience-based biotechnology company developing novel drugs and diagnostic tests for the treatment of neurodegenerative and other CNS disorders and is currently collaborating with **ReMyND**, **Sanochemia** and **Maybridge**, around *in vivo* models of neurodegeneration and **galantamine** analogs.

**James Black Foundation** has filed two applications covering benzotriazepinone derivatives. JBF operating from laboratories in Dulwich, South London is currently fully-funded by **Johnson & Johnson**. These applications continue JBFs work benzotriazepines compounds as **gastrin and cholecystokinin (CCK) modulators** for the treatment of eg gastrointestinal disorder and cancer. Led by Iain McDonald, the team has claimed extensive inventions in this field; see **WO03041714**, **WO2004101533**, **WO2004098610** and **WO2004098609** for examples.

**Norbrook Laboratories**, a company manufacturing a range of veterinary and medical pharmaceuticals and active ingredients, has filed an application for a stable aqueous suspension. Norbrook's products include injectable formulations of ampicillin, amoxicillin and benzylpenicillin and Noroclav tablets for treating bacterial infections. **DOLPHIN**, the database of all pharmaceutical inventions, lists a number of patents claiming anti-infectives, including **WO2005007241** and **WO0004906**.

**Mark Hoser**, a name all too familiar to the PDJ and Current Patents Gazette, has submitted an application on the eradication of primer dimmers. This prolific inventor has a raft of applications in the pipeline, including the published **WO2004074503**. He shares a connection with the Canterbury based **GeneForm Technologies**.

**Robert Price** and **John N Staniforth** are named on a filing for particulate drug compositions and their uses. Dr Price is a senior lecturer at **Bath University**, investigating the physico-chemical properties governing inter-particulate interactions. Professor Staniforth is CSO and founder of Bath University spin-out **Vectura**, a particle engineering company developing a range of drug delivery technologies for diseases including cystic fibrosis and asthma. The inventors are named on **WO0174332** from Vectura claiming a method for making active particle composition.

**Syntaxin Limited**, incorporated in June 2005, is a spin-out from the **UK Health Protection Agency**, located at Porton Down and funded by Abingworth Management Ltd. The company has acquired a patent portfolio from the HPA relating to medical uses of modified bacterial proteins, including botulinum toxins, and begins by partnering **Allergan** in the search for novel pain treatments. Additionally, respiratory and metabolic diseases such as COPD, diabetes and obesity are being targeted. An early indication of patenting derived directly from the new venture comes in the form of an initial application filed on May 17<sup>th</sup> 2006 relating to treatment of inflammation, and possibly relevant to the Allergan project. The HPA-derived rights almost certainly include **WO2006059093**, describing fusion proteins used for treating pain, which names Allergan as joint applicant.

**Zysis Limited** has filed an initial application relating to pharmaceutical compositions. The Nottingham-based company, **incorporated as recently as November 2005**, has a mission that involves improving the delivery profiles of pharmaceutical agents. Services offered on the company's lone home page include intellectual property and lifecycle management, but beyond those indicators of relevance to our subject, nothing is known of the company's activities or products.

Due for publication at the end of November 2007