

Current Patents Gazette

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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 0624

A proposal for a European regulation on medicinal products for paediatric use moved closer to approval this week. The aim of this proposal is to "address the conditions required for the development of paediatric medicines notably by supporting innovation and research and by creating incentives for pharmaceutical companies – whilst at the same time obliging them to develop a paediatric version for each new medicine and to make these products available in all Member States." This incentive for new drugs takes the form of 6 months exclusivity added to the term of the patent or SPC, as in the USA. Further exclusivity incentives are proposed to encourage testing of existing marketed drugs.

The proposed regulation produced by the European Commission was approved with amendments on its first reading in the European Parliament in September 2005. Following transmission of the amended proposal to the Council in November, the Council further amended the proposal producing a "Common Position" in December. This returned to the Commission and Parliament for a second reading to discuss and approve the changes, thus starting a fixed timetable for final approval. If Parliament had approved the common position without changes, this would have ended the process and the proposal would have passed into law. On June 1, 2006 Parliament approved the common position with 15 amendments, which means the proposal now returns to the Council for their agreement.

In theory this could result in further amendments and the setting up of a Conciliation Committee. However, prior to the 2nd reading a number of "informal contacts" took place between the Council, Parliament and the Commission with a view to reaching an agreement at this second reading and therefore avoiding the need for a conciliation

procedure. On June 9th the proposal was returned to the Permanent Representatives Committee of the Council in a document explaining the outcome of Parliament's 2nd reading. Importantly, it notes: "At the vote which took place on 1 June 2006, the plenary adopted 15 amendments to the common position. The amendments adopted correspond to what was agreed between the three institutions. Once these amendments have been scrutinised by the legal linguists of the Council and the Parliament, the Council should be in a position to approve them." Consequently, it looks very likely that the proposal will be approved within the three month time frame allowed for this stage.

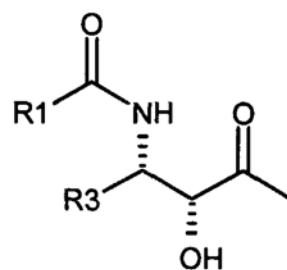
One important amendment concerns transitional arrangements. Previously, the proposal had stated that an application to extend a drug's patent on the basis of a paediatric indication should be submitted two or more years before the expiry of the patent. The amendment allows a 5 year transitional period in which the extension application could be submitted up until 6 months before patent (or SPC) expiry.

As part of the compromise agreement, the Commission also agreed to ask the EMA to investigate the usage of "carcinogens, mutagens and substances toxic to reproduction" as excipients, to communicate this opinion to Parliament and the Council and to inform the two bodies within 6 months of any follow-up actions.

This week's Patents and Designs Journal (No. 6108) reports the filing of an SPC by **Sankyo** for **olmesartan medoxomil** in combination with **hydrochlorothiazide (Benicar HCT)**, which was previously reported in Current Patents Gazette 0621. The SPC, based on EP503785, is estimated to extend protection until February 2017.

The combination has been developed and launched in select markets. Following approval in Germany (June 2005), approval throughout Europe, via the mutual recognition procedure, was completed in September 2005. Phase I trials for the drug were initiated in May 2005 in Japan.

EP503785 is also the basis of SPC applications relating to the single **olmesartan medoxomil** product, first launched in 2002. Worldwide sales of olmesartan reported by Sankyo for 2004 totalled \$666 billion. According to our Strategic Drugs database (SDdb), the market share of olmesartan is predicted to increase from under 4%, with respect to the angiotensin II antagonist franchise in 2004 to around 7.5% in 2008. **Novartis' valsartan** and **Merck's losartan** are expected to continue to dominate the field.



Modified taxanes with improved cytotoxic activity for use in conjugation with huC242Ab for targeted cancer therapy.

UK initial ("A0") applications filed May 2nd - 9th 2006

Chroma Therapeutics Limited has filed six initial applications this week, two covering each of DHFR enzyme inhibitors, P13K inhibitors and MAPK inhibitors. These appear to be the first applications from Chroma covering these specific enzymes/kinases, although previous applications include **WO2005124337** (protein arginine deiminase IV modulators), **WO2004113336** (histone deacetylase and histone deacetylase-1 inhibitors) and **WO2004101506** (glyoxalase I inhibitors). As of May 2006, **Chroma** had aurora kinase inhibitors in the lead optimization stage of development, and planned to take the inhibitors into preclinical development in early 2006.

K U Leuven R&D is seeking protection for 'novel viral replication inhibitors'. KU Leuven has a strong background in viral research having created spin-off companies around this subject area such as **Rega**, who is investigating various nucleoside analogs as inhibitors of reverse transcriptase (RT), for the treatment of HIV infection. The research institute has been co-assigned on applications on imidazo[4,5-c]pyridine antivirals (**WO2005063744**) with **Gilead Sciences Inc**; a later application from Gilead on imidazo[4,5-d]pyrimidines (**WO2006033703**) would appear to continue this theme and although it appears as the sole assignee, inventors indicate a link to the previous research in collaboration with KU Leuven. Research links between this research institution and other companies can also be identified including **Tibotec Pharma (aka J&J, WO2004098644)**, **Czech Academy of Sci (WO2004111064)** and **Massachusetts General Hospt (WO09802170)**; most recently KU Leuven has been investigating the gene transfer of **telencephalin** for neurological disorders in collaboration with **Univ of Flanders, Institute for Biotech**.

Lipopeptide AB has submitted two initial applications on a 'novel agent' and a 'combination product'. This dual filing substantially adds to the company's patent portfolio, with only three published applications naming this Swedish company to date. Lipopeptide was founded in 2003 based on research from the **Karolinska Institutet**, undertaken by **Professor Mona Ståhle** and **Dr Johan Heilborn**. The two were involved in determining the role of **antimicrobial peptides** for **wound healing**, which is the company's core area of technology.

NIPRI Ltd has filed an application, simply entitled 'compounds'. NIPRI has recently been named as assignee on **WO2006046071**, which is their only published patent application. The application claims novel bicyclic lactone derivatives for the treatment of neoplasia. This Belfast-based organisation was also named in the March 2006 edition of the Patents and Designs Journal, disclosing labelled compounds.

Nordic Bioscience A/S has lodged a UK initial application pertaining 'detection or quantification of **aggrecan** and its fragments' a biomarker of cartilage degradation. **DOLPHIN** reports eleven PCT applications from this company, all of which relate to bone disease, especially osteoarthritis and rheumatoid arthritis: the company's specialty research subject. Most recently the company has published applications co-assigned to **Novartis** on the use of **calcitonin** (particularly derived from salmon) in the treatment of these conditions, see **WO2006040114** and **WO2005014031**. The company has also published on other detection methods for nitrated markers of cartilage degradation see **WO03076946**. In addition the company has developed The **CrossLaps® assay** is specific for an epitope localized in the C-terminal telopeptide of the collagen type I a1 chain (CrossLaps® marker) for assessing bone reabsorption; it has also developed a specific marker of cartilage derived collagen type II C-telopeptide fragments called **CartiLaps®**, reflecting cartilage degradation associated with arthritic disease.

The Open University has engaged in transatlantic co-operations resulting in an application filed jointly with the **University of Toronto**, concerned with aptamers directed to MUC1. There seems to be no previous joint patenting from these two universities, but The OU does have an earlier case, **WO2004081574**, in which aptamer ligands to MUC1 are claimed. **Cancer Research Technologies** has a joint venture with The OU to exploit this mucin technology, and there is evidence that the Medical School at the **University of Nottingham** also has some involvement.

The pharmaceutical compounds being claimed by **Plarmed Limited** are probably from the company's anti-tumor signal transduction inhibitor (STI) program, which draws on expertise from such organizations as **Cancer Research UK**, **The Ludwig Institute** and **The Institute of Cancer Research, London**. In November 2005 Plarmed entered into an agreement with **Genentech** to collaborate on the development of a new class of cancer drugs targeting PI 3-kinase. Plarmed already has two published international application covering such candidates, and has licensed certain other patents from the above institutions and from **Astellas**.

Dr Patrick T Prendergast is named as inventor on some two-dozen patent applications filed over the past twenty years, mostly on the subject of antiviral therapy, which is the subject of a new application in the context of viral influenza. Like the present application, many of the earlier cases name no corporate assignee, but the earliest filing is in the name of **Colthurst Limited** and several of the later ones are assigned to **Hollis-Eden Pharmaceuticals Inc**; there is one PCT application, originating in 1998, naming both companies as joint applicants. Ownership of this intellectual property was the subject of a dispute, settled amicably in January 2000, between Dr Prendergast and the two companies, involving also **Edenland Inc** and **Richard Hollis**; the portfolio protects candidates such as the phase II AIDS/HIV candidate **HE-2000**.

Unibioscreen SA filed on naphthalimide derivatives on May 5th using precisely the same title as that on **WO2005105753**, first filed exactly two years earlier in the US and Europe. Assuming that the subject matter is closely related, the new case probably relates to compounds suitable for treating cell proliferation disorders. The company is a 1999 spinout from **Université Libre de Bruxelles**.

Due for publication in November 2007