

Current Patents Gazette

Patenting in Context

News & Highlights from week 0811

The UK Patents and Designs Journal (PDJ No. 6199) this week reports four events relating to EC regulations 1768/92 and 1610/96, i.e. Supplementary Protection Certificates (SPCs). These include two SPC applications, which were reported by TS analysts three weeks ago in the Current Patents Gazette (CPG 0808), filed by **Amgen Fremont Inc** (formerly **Abgenix**) for **panitumumab (Vectibix)** and **GSK Biologicals** for **Priorix-Tetra** MMRV vaccine.

Also reported is the entry into force on February 16, 2008 of the SPC granted to **Sanofi-Aventis** for **clopidogrel hydrogen sulphate (Plavix)** on **EP0281459**, which claims the d-stereoisomer of clopidogrel and its bisulphate. This is due to expire in five years time and marks the begins the countdown to generic competition for S-A's blockbuster which is licensed to **BMS** and achieved sales over \$6 billion for the two companies in 2006. Sales in the US were hit in 2006 by **Apotex** which launched a generic competitor "at risk" and reportedly supplied large quantities to distributors before being halted by an injunction. Sales recovered in 2007 to over \$7.5 billion and although protection for the **Plavix** molecule is now in its last phase, the product is still protected for many years by a number of process, use and formulation patents. Indeed, some analysts predict that sales will rise to around \$10 billion by

2011, when the US equivalent to **EP0281459** is currently due to expire.

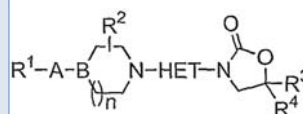
The final event reported is a declaration of invalidity of the SPC granted to **Ancare Distributors** for **ivermectin + praziquantel (Equimax)** veterinary combination on **GB2252730**. This follows the revocation of the base patent announced on July 2, 2004, which took effect July 13, 2004. At the time we commented that the SPC already granted on this patent should not enter into force due to the revocation of the base patent. This notice formally records the invalidity of the granted Certificate as of the patent revocation date. Irish equivalent **IE69667** lapsed in November 2005 due to non-payment of renewal fees, with the consequence that the SPC application was deemed to be withdrawn.

Although not yet reported in the PDJ, more SPC applications have been filed at the UKIPO and can be seen through the UKIPO's SPC database. The first, SPC/GB08/011, has been filed by the **Wisconsin Alumni Research Foundation (WARF)** for an "influenza virus H5N1 surface antigen" on **EP1185615**. This application has been filed using the EU authorization for **Novartis' Focetria** H5N1 vaccine and if granted will expire 15 years after the approval date on May 1, 2022 giving just over two years additional protection. The patent is reported to part of a

portfolio exclusively licensed to **MedImmune Inc** (now part of **AstraZeneca**) by **WARF** following the April 2004 agreements which dissolved the collaboration with **Wyeth** for **FluMist, CAIV-T** and related technology. As a result of the dissolution, MedImmune reacquired the influenza vaccines franchise and assumed full responsibility for the manufacturing, marketing and sale of FluMist and subsequent related products. MedImmune has also sub-licensed reverse genetics technology acquired from the **Mount Sinai School of Medicine**, to a number of companies engaged in vaccine development. **Novartis** and **GSK**, which have competing H5N1 vaccines **Focetria** and **Daronrix**, are two of these companies. It appears likely, since **WARF** has used the **Focetria** authorization as the basis of this SPC application that the technology licensed from WARF is also part of these sub-licenses.

Pharma Mar (a subsidiary of **Zeltia**), has filed what is

believed to be its first UK SPC application on February 28. Under license from the **University of Illinois**, Pharma Mar has developed and launched **trabectedin (ET-743, Yondelis)**, an alkaloid isolated from the Caribbean tunicate *Ecteinascidia turbinata*, for the iv treatment of soft tissue sarcoma (STS). In September 2007, the drug was approved by the EU for advanced STS and later that month the drug was launched in the UK and Germany. Following on from this approval, Pharma Mar filed its SPC application for trabectedin on **EP1702618**, which will expire October 16, 2022 if granted EP1702618 claims the use of trabectedin in combination with **dexamethasone**, whilst parent **EP1176964** claims the use of the drug itself and formulations. The drug is also being developed in collaboration with **Johnson & Johnson Pharmaceutical Research & Development** for the potential treatment of a number of additional solid tumors.



Glenmark begins to look at novel stearyl CoA desaturase (SCD) inhibitors.

UK Initial Applications

Current Patents Gazette

A0 applications filed February 4th – February 10th 2008 – expected to see publication in early August 2009

- **Argenta Discovery** and **AstraZeneca** have filed five new joint applications disclosing **compounds and their use** (GB0802191, GB0802192, GB0802193, GB0802194, GB0802195). A similar cluster of six applications was filed in February 2007 followed by two more in July; together with the current applications they seem to indicate a growing interest in muscarinic antagonists by the pair. This collaboration was first announced in July 2006, while in January 2007 the two companies signed a major collaboration and licensing agreement to identify and develop long acting muscarinic (M3) antagonists and dual acting muscarinic antagonist- β 2 agonist candidates for potential in COPD. The first publications from this program appear to be **WO2007123465** and **WO2008023157** from late 2007 and early 2008, respectively. The first candidate from this series is anticipated to enter clinical trials some time in 2008.

- **Chroma Therapeutics** has filed a new UK initial application (GB0802009) covering **biomarkers of aminopeptidase inhibition**. Chroma is developing an oral small-molecule inhibitor of puromycin-sensitive aminopeptidase and leukotriene A4 hydrolase, **tosedostat (CHR-2797)** for potential in solid tumors, acute myeloid

leukemia and non-small cell lung cancer. A phase III trial in NSCLC commenced in August 2007, while a phase II trial in elderly patients with refractory AML was initiated in March 2007 with results expected in the first quarter of 2008.

- **Hammersmith IMANET** and **GE Healthcare** have filed two new applications covering an ***in vivo* imaging method** (GB0801973) and a **GMP dispenser for non-controlled environments** (GB0802216). Hammersmith IMANET, a joint venture between GE Healthcare and the **Medical Research Council** is part of an international network of leading imaging research centres. The company specializes in providing imaging solutions to accelerate and facilitate development of novel therapeutics, primarily based on Positron Emission Tomography (PET), and has recently claimed tricyclic oxazepines as *in vivo* imaging agents of the peripheral benzodiazepine receptor (**WO2007141491**) useful in Parkinson's disease, MS, Alzheimer's disease, arthritis, asthma, and cancer.

- **KU Leuven** and **Pepscan Therapeutics** have claims to **peptide based lentiviral replication inhibitors** in two new UK initial applications (GB0801939 and GB0801940). This appears to be a new target for Pepscan, whose current

pipeline seems to be focussed upon anti-GnRH, anti-Gastrin, anti-PTHrP and anti-VEGF-A vaccines and more recently anti-GPCR monoclonal antibodies.

- **Pharmadeas** has filed four initial applications (GB0802104, GB0802105, GB0802106 and GB0802107) relating to **biaryl amides**. The company, co-founded by former **GSK** medicinal chemist **Dr David Middlemiss**, was incorporated as recently as June 2007 using a registered address on Bexley Business Park. Middlemiss was named on more than 30 patent GSK applications filed between 1971 and 1993, including the product cases for **saprisartan** and **vofopitant**. Since 2003, his name has appeared on patents in the names of such companies as **Cellzome**, **Argenta**, **Oxagen**, **Evotec** and **Nuada**. However, the invention most likely to offer clues to the nature of the new inventions is described in **Vectura's WO2007057714**, since this was initially filed by **Theradeas**, apparently a sister-company of Pharmadeas. Theradeas was also co-founded by Middlemiss (with **Professor Ann Hayes**, also ex-GSK) and the development work being undertaken by Vectura relates to inhalable administration of **methotrexate**.

- **Probiox** has filed GB0802403 claiming **compositions for the treatment of oxidative stress**.

This appears to be a logical sequel to **WO03016527**, the Belgian company's only published patent application, in which a kit for detecting oxidative stress was described. Probiox spun off in 2001 from the **University of Liege**, which retains representation on the board of directors. The company's personalized diagnosis and treatment technologies include the **OxyScore biochemical assay**. In April 2006 a collaborative venture in this field with **Pasteur Cerba** was announced.

- **Syntaxin** has filed GB0802358 claiming **botulinum neurotoxin fusion proteins**. This seems to represent a continuation of the company's work on neurotoxin-based pain treatments, as described for example in **WO2006059093**, a case filed originally by the **Health Protection Agency (HPA, Porton Down)** and **Allergan**, but now the subject of a co-development agreement involving HPA spin-off **Syntaxin** and Allergan. Rights to the program were reported to have passed to Syntaxin soon after its formation in October 2005. Earlier patent rights relating to this program were originated by **CAMR**, now part of HPA; these include **WO9633273**, apparently providing basic protection for the analgesic product, filed jointly with **Ipsen Biopharm** and the **Speywood Laboratory**.