

CURRENT PATENTS GAZETTE



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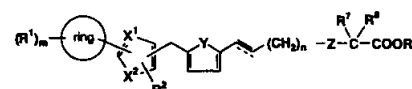
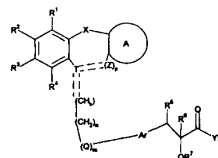
APRIL 28TH 2000

DRUG PATENTING IN CONTEXT

Current Patents *Gazette* is the most rapid competitive intelligence service covering innovation in the pharmaceutical industry. Patent applications published during the past week have been classified and analysed, in order to place the inventions in context. For the most crucial innovations, those involving new chemical compounds, additional information is given in the form of front page images. These can be enlarged to show details of chemical structures and inventor teams, for example. Applications filed jointly, representing collaborative research, are highlighted, as are sequences of inter-related documents.

NEW THIS WEEK

Peroxisome proliferator-activated receptor (PPAR) modulators are subject of much activity this week....



.....with claims to novel compounds of this class from **Novo Nordisk** (above), **Glaxo** and **Ono** (right), describing their use for conditions such as **obesity** and **diabetes**

HIGHLIGHTS THIS WEEK

A **new therapeutic mechanism** is described by the Danish company **BioImage** in a pair of applications published just one year after the former **Novo Nordisk** unit began its separate existence. In one document the methodology for quantifying cellular responses to test substances is defined, and in the other the mechanism is identified, based on modulation of specific isoforms or splice variants of **PDE IV**, **PDE V** or **I-kappa-kinases**. The BioImage Database Project has received coverage in the scientific literature, including a comparison with the US-based **GelCompar** system. Although BioImage retains strong links with Novo, particularly on diabetes, its declared aim is to establish commercialization links with other large pharmaceutical partners.

The French Commissariat à l'Énergie Atomique (CEA) has established a reputation for contributions to **combinatorial technology**, and this week claims a device with sample wells and an analysis support surface. Less obviously, there seems also to be CEA input into an application which names the **Centre National de la Recherche Scientifique (CNRS)** as applicant. Here the technology claimed is directed to screening for potential modulators of **poly(ADP-ribose polymerase)** or **PARP**. This interesting mechanism has attracted considerable attention, and is a specialism of **Guilford Pharmaceuticals**, whose GPI-6000 is being studied in stroke; no candidate, however, has yet entered clinical trials.

Peroxisome proliferator-activated receptor (PPAR) modulators are a hot topic this week, with several companies claiming new compounds exhibiting this activity and their use in the treatment of conditions such as **obesity** and **diabetes**. Most prominent among these are a set of six applications filed jointly by **Novo Nordisk** and **Dr Reddy's Research Foundation** of Hyderabad, India, which form part of a long term collaboration between the two companies that is now beginning to come to fruition. In an agreement established in March 1997, Dr Reddy's granted Nordisk exclusive worldwide licenses to develop and market products based on PPAR agonists for the treatment of diabetes, obesity, dyslipidemia and their associated complications. This project has generated two lead compounds in clinical trials: **NN-622** entered phase I trials for non insulin-dependent diabetes in the third quarter of 1999 and **DRF-2593** which, having completed phase I trials for the same indication, was reported to be in preparation for phase II in December 1999. **Ono** is also building a considerable portfolio of PPAR modulators, with claims this week to conformationally constrained analogs of their phenyloxazolethoxy-butynylthio acetic acid based PPAR γ modulators reported in the recent WO0012491. Elsewhere, **Glaxo** has claims to novel PPAR α agonists and their use in the treatment of obesity. This picks up from work the company has recently disclosed in WO0008002, with the team now having expanded somewhat to include input from an inventor based at the **University of South Carolina**.

It was announced this week that the US District Court of Massachusetts in Boston granted **Amgen's** motion for summary judgment of literal infringement. The court ruled that the **HMR** (now known as **Aventis**) and **Transkaryotic Therapies (TKT)** pharmaceutical composition containing erythropoietin infringes claim 1 of US5955422. However, with respect to claims 1 and 4 of US5756349, which relates to vertebrate cells capable of producing erythropoietin, the court denied summary judgement and deferred the issue until trial, which is scheduled to begin on May 15 2000. Amgen markets EPO in the US as **EPOGEN**® (Epoetin alfa) for the treatment of **anemia** associated with chronic renal failure for kidney dialysis patients.

Also this week, it has been suggested that the Japanese industry is showing an increased willingness to invest in genomics and post-genomics research. This has been brought about by the announcement earlier this month by the biotechnology company **Takara Shuzo** of a high-speed genome-sequencing centre. The company's latest international patent application, WO0014218, seeks to protect a method for synthesizing DNA. The new centre, which represents an investment of US\$60 million, will be located in Kuso-cho, Mie Prefecture. Called **Dragon Genomics**, the center will have a sequencing capacity of about half the peak capacity of the US company **Celera Genomics**, making it the largest sequencing facility in Asia.