

# CURRENT PATENTS GAZETTE



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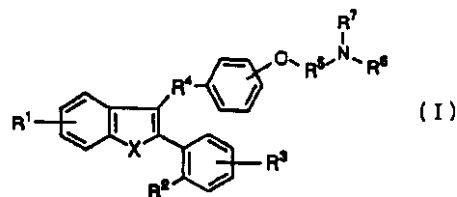
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## DRUG PATENTING IN CONTEXT

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

This week sees the Japanese company **Senga** claiming a range of 1-heteroindene derivatives as estrogen receptor controlling agents. The compounds appear to be close cousins to **Lilly's raloxifene**, launched as **Evista** for the prevention of osteoporosis in post-menopausal women.



## HIGHLIGHTS THIS WEEK

**National news this week, in the UK at least**, included yet another **Viagra** story, this time referring to the possibility that a treatment for **female sexual dysfunction** might reach the market within about three years. This was given prominence in the popular press as a startling new revelation, although Pfizer's reported response was that the findings were early ones, based on a trial not set up by the company. In fact a cursory inspection of the patent literature suggests that the possibility of sildenafil proving useful in this context has been under consideration for at least three years. As early as May 1997, for example, the Texas-base infertility specialist **Zonagen** filed a US patent application, now published as WO9852569, claiming a combination of sildenafil with phentolamine to enhance sexual response in both men and women. Pfizer's own research on sildenafil has yielded two further applications this week, one with claims to novel analogues and another, involving input from the UK and US, claiming treatment of impotence in cases of spinal cord injury.

**Digital Biology** is the subject of an interesting application which appears in Section D this week; **DigiBio** claims a method for **amplifying the formation of ligand-receptor complexes**. The method consists of applying a characteristic electromagnetic signal to the two elements of a ligand/receptor pair, and the invention is said to be applicable to biological diagnosis in human and veterinary medicine, and bacteriological control in the pharmaceutical, cosmetic and food industry. DigiBio is an unusual company, in that its principal mission is to bring an answer to the controversy over Dr. Jacques Benveniste's (Director of Research at **INSERM Digital Biological Laboratory**) observations of what has come to be known as 'the memory of water' phenomenon. His theory is based on the following hypothesis; that water is capable of carrying molecular information (biological messages) and that it is possible to transmit and amplify this information, as can be done for sounds and music. Digital Biology is a radical new approach to biology using the concept that the specific activity of biologically-active molecules can be recorded and digitized using a computer sound card, the signal can then be instantly transmitted and analyzed at the other end of the world by means of telecommunication.

**Patent applications concerning manufacturing methods** of compounds in clinical development are usually a reliable indicator of continued and sustained efforts by the applicants to bring these substances to the market. This week's Section C sees the publication of many such cases. Most of them are unsurprising because the companies involved are known to pursue development of the respective drugs with vigour. To this category belong process patents on **Vanguard Medica's** antimigraine drug **frovatriptan**, **E Merck's** peripherally effective opioid **asimadoline**, **Lilly's** antiseptics and antiinflammatory sPLA2 inhibitor **LY-315920** and the **Shionogi** anti-HIV drug **S-1153**, which has been licensed to **Agouron** who refer to it as **NNRTI AG-1549**. Agouron's anti-HIV compounds feature in a more unexpected case from **Nagase**. This Japanese company has filed a process for the synthesis of optically active intermediates of Agouron's widely launched HIV protease inhibitor **nelfinavir**. No information about any collaborative agreements between Nagase and Agouron (or indeed Japan Tobacco, which markets nelfinavir in Japan) has been identified. Nagase is a supplier of a wide range of pharmaceutical intermediates but the fact that nelfinavir is not due come off patent until around 2013/2014 indicates that there is likely to be some kind of understanding between Nagase and Agouron on Nagase's role in supplying these intermediate compounds.