



Max-Planck-Innovation

## **Daфра Pharma R&D has been awarded an exclusive licence from the Max Planck Society to develop a drug against leishmaniasis**

Max Planck Innovation, the technology transfer agency of the Max Planck Society based in Munich, Germany and Daфра Pharma R&D, a Belgian research company belonging to Daфра Pharma International, signed a license agreement today for the development and commercialisation of a new drug against leishmaniasis.

### **Leishmaniasis**

Leishmaniasis is a so-called 'neglected' parasitic disease. It occurs in 88 different countries spread over 4 continents and is most frequent among the most vulnerable, poorer populations of East Africa, the Indian subcontinent and South America. In other words, there are some 350 million people living in the 'danger zone' for this disease. According to WHO figures, around 12 million people are infected with the disease, which is transmitted by the bite of an infected female sandfly. Sandflies are usually infected by animal reservoir hosts, but humans can also pass on some forms.

The disease manifests itself in three ways: cutaneous, mucocutaneous and visceral. Cutaneous leishmaniasis is the most frequently occurring form, entailing wounds (lesions) that remain localised on the skin, developing into ulcers that can lead to severe mutilation and/or leave permanent scarring. By contrast, visceral leishmaniasis (also known as kala azar and black fever) attacks the victim's organs, causing chronic symptoms characterised by irregular bouts of fever, substantial weight loss, a distended spleen and liver and also anaemia. The visceral form of leishmaniasis is the severest form of the disease, invariably proving fatal if left untreated.

### **A promising new treatment for leishmaniasis?**

Until 10 years ago, there was no really effective treatment for leishmaniasis. Existing therapies, like pentavalent antimonials (antimony) and (liposomal) amphotericin B, have never been optimal and even have serious drawbacks, such as toxicity and neural effects. Moreover, the parasites have developed resistance to these drugs, and treatment is very expensive mainly due to the required parenteral routes of administration. This is problematic since the disease affects poorer people. On top of this, leishmaniasis has recently turned out to be a highly opportunistic infection, affecting vulnerable AIDS and transplant patients, for example.

In 2000, the Max Planck Society announced the pharmaceutical formulation of a chemical called hexadecylphosphocholine as a ground-breaking new therapy for leishmaniasis. It is the first drug against leishmaniasis which, by oral application, can cure this fatal disease. The active substance was discovered by Professor Hansjörg Eibl at the Max Planck Institute for Biophysical Chemistry, working together with Professor Clemens Unger at the University of Göttingen.

After many years of practical application, the spectrum of side-effects is well-known: very common are vomiting, diarrhoea, and increase of liver enzymes. These restrictions for hexadecylphosphocholine in the treatment of leishmaniasis led to a comprehensive re-study of structural variation in alkylphosphocholines. One of the most important representatives of this new class is oleylphosphocholine.

Oleylphosphocholine is particularly active against the parasite that causes leishmaniasis. Administering a pharmaceutical formulation of this compound to affected animals leads to their full recovery. Even better, according to Professor Eibl, the active substance's safety and lack of side-effects have now also been confirmed by further animal studies. Consequently, further refinement of the substance for its use in humans is an obvious next step. It can be expected that the treatment of leishmaniasis with oleylphosphocholine can completely control, even cure this fatal disease in humans.

### **Cooperation between Dafra Pharma R&D and Max Planck Innovation**

The Max Planck Society was founded in 1948, and is the successor organization to the Kaiser Wilhelm Society, which was established in 1911. Max Planck Society has produced no fewer than 17 Nobel Prize winners and its primary goal is to promote research at its own institutes. Conducting research for the future also means serving society by conducting research for mankind. The Max Planck Society's subsidiary, Max Planck Innovation, passes on the results of its parent's basic research to industry.

Dafra Pharma R&D was chosen for the continued development and commercialisation of the new product oleylphosphocholine. The goal of the partners' cooperation is to produce a better, cheaper treatment for leishmaniasis, and Dafra Pharma R&D has been issued an exclusive licence to do just that.

Dafra Pharma R&D belongs to the Dafra Pharma International group, which made its reputation by developing and marketing the latest generation of antimalarial drugs (ACTs) at affordable prices. The company has done a tremendous amount of pioneering work in introducing these ACTs to Africa and has now duly become the market leader on the African continent.

In addition to its commercial strength in Africa, Dafra Pharma International also has a strong R&D subsidiary, and for some years now that company, led by Dr F.H. Jansen, has been focussing on the development of new molecules designed to counter 'neglected diseases', including TB (tuberculosis), schistosomiasis (bilharziosis), trypanosomiasis (African sleeping sickness) and toxoplasmosis. At least 1 billion people suffer from one or more of these 'neglected tropical diseases' (NTDs), which together claim an estimated 500,000 to 1 million lives every year.

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Max Planck Innovation advises and supports scientists of the Max Planck Society in evaluating inventions and filing patent applications. Max Planck Innovation markets patents and technologies to industry and coaches founders of new companies based on research results from Max Planck Institutes.

Every year, Max Planck Innovation evaluates about 150 inventions, of which about half lead to the filing of a patent application. Since 2000, Max Planck Innovation advised more than 35 spin-offs, closed more than 700 license deals and generated proceeds of more than 130 million Euros for inventors, institutes and the Max Planck Society. As a result, Max Planck Innovation is among the world's most successful technology transfer organizations.

Max Planck Innovation was founded in 1970 as Garching Instrumente GmbH and operated under the name of Garching Innovation from 1993 to 2006.

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Dafra Pharma International nv:

Dafra Pharma International is a family-run holding of several pharmaceutical SMEs that have already clocked up over 10 years of experience in a niche market, namely the development, production and distribution of the latest generation of antimalarial drugs (ACTs, or Artemisinin-based Combination Therapies). Dafra Pharma International has a unique distribution and promotional network of approximately 130 medical representatives who are active in over 30 African countries. Over the last few years, Dafra Pharma R&D has been focusing on the development of new therapies for the treatment of 'neglected tropical diseases' (NTDs).