

Araclon is an R&D company specializing in immunotherapy and diagnosis of Alzheimer's and other degenerative diseases

Grifols opens new head office of Araclon Biotech in Zaragoza (Spain)

- Grifols acquired 51% of Araclon in March 2012, ensuring the continuity of its research projects, including an early diagnosis kit and a vaccine against Alzheimer's disease.
- The new facilities occupy a 1,500m² site, housing a laboratory that is one of the most advanced in Europe, equipped with the very latest technology and employing almost thirty members of staff, 80% of whom are researchers.
- Araclon's research projects are part of Grifols' global Alzheimer's research strategy focusing on three key fields: early diagnosis, prevention through the development of a vaccine, and new treatments to slow down its progress.

Barcelona, February 26, 2014: Araclon Biotech, a company founded in Spain's Aragon region in 2004 by researcher Manuel Sarasa and in which Grifols is the majority shareholder, has opened its new corporate headquarters in Zaragoza (Vía de la Hispanidad, 21), a site that will also house all of its research activity, specializing in immunotherapy and diagnosis for Alzheimer's and other degenerative diseases.

The new 1,500 m² site houses a laboratory consisting of three areas: microscopy and molecular biology; mass spectrometry; and immunology and cell cultivation. It incorporates the very latest technology, including one of Europe's most powerful and sensitive mass spectrometers, and a cutting-edge peptide synthesizer, together with modern cell cultivation equipment and a team of highly qualified staff. Of the 30 people employed by Araclon, 80% are researchers.

The official opening was attended by the President of the Aragon region, Luisa Fernanda Rudi, the mayor of Zaragoza, Juan Alberto Belloch, and a number of members of the Aragon and La Rioja regional parliaments. They were accompanied by Manuel Sarasa, scientific director of Araclon Biotech, Víctor Grifols, President and CEO of Grifols, and other representatives of the company's senior management.

The continuity of Araclon's projects is now assured. In March 2012, Grifols, the world's third-largest plasma product manufacturer and a pioneer in the research and development of therapeutic alternatives designed to contribute to both scientific and social development,

acquired 51% of the equity of Araclon. Grifols has guaranteed the viability of Araclon's existing initiatives, including the development of an early diagnosis kit and vaccine for Alzheimer's disease. Both of these lines of research complement Grifols' strategy for an integrated approach to this disease.

Its principal research projects are part of Grifols' integrated strategy for fighting Alzheimer's disease

Grifols believes it is essential to promote research into Alzheimer's disease in the light of the gradual ageing of populations in the developed world, if current projections are confirmed. According to the WHO, 24.3 million people currently suffer from Alzheimer's disease, with 4.6 million new cases each year.

Grifols implements its Alzheimer's disease research strategy both directly and through Araclon Biotech, enabling it to offer an integrated approach in its three main fields of activity: early diagnosis of the disease, development of a vaccine as a prophylactic measure, and new treatments that could at least slow its progress.

- **Diagnosis and prevention: the focus of Araclon's activities**

Early diagnosis is vital to the ability to take effective action. However, diagnosis is currently only possible when the disease is at an advanced stage.

Araclon Biotech is actively working towards the validation of an early diagnosis kit (ABtest) for Alzheimer's disease, based on the detection of beta amyloid (A β) peptides 17, 40 and 42, three of the most common proteins in the blood, that may be candidates for use as potential biomarkers for preclinical diagnosis of the disease.

In collaboration with leading research groups across the world (Australia, Europe, USA) the company currently has a number of studies under way involving over 1,000 participants, with the aim of providing data to validate these kits, which are based on ELISA techniques.

Over the longer term, it is working to develop a vaccine against Alzheimer's disease that would open up the possibility of combating the disease in its asymptomatic (pre-clinical) stages. This is based on immunization against amyloid beta (A β). More concretely, it is an innovative, active immunotherapy that acts specifically against amyloid beta (A β) proteins 40 and 42 using the C-terminal part of these amyloid beta proteins.

The vaccine has already passed the animal experimentation stage and in September 2013 the Spanish Medicines Agency authorized the start of phase I of the clinical trial in humans. Patient recruitment has already started, although it should be noted that phase I is a preliminary phase primarily involving the evaluation of tolerability and safety of the ABvac40 vaccine in patients with mild or moderate Alzheimer's disease. Its efficacy is not being evaluated.

The phase I clinical trial is being coordinated by the Fundació ACE. It is a blind study involving a total of 24 participants: 16 patients diagnosed with mild Alzheimer's disease (as mild as possible) and 8 patients who will receive a placebo. Phase I is scheduled for completion in 2015.

Tests performed on animal models have shown that the vaccine exercises the desired action in the brain: reducing the levels of soluble amyloid beta in the brain, preventing the deposit of amyloid beta protein and, as a result, the formation of senile plaques and neurodegeneration.

- **Treatment of Alzheimer's disease with plasma proteins: the AMBAR study ("Alzheimer Management by Albumin Replacement").**

AMBAR is a trial of a combined therapy of plasma exchange with albumin replacement in different doses, an innovative approach to the treatment of Alzheimer's disease.

AMBAR is a multi-center study that will include 365 people with Alzheimer's disease at the mild to moderate stage, randomly assigned to three treatment groups plus a fourth control group, recruited from hospitals in both Spain and the United States. Patients will be recruited through 17 hospitals in Spain and 20 hospitals in the United States currently participating in the study.

The AMBAR project will be directed by Grifols, and the principal investigator is Dr. Mercè Boada, medical director of Fundació ACE.

Grifols' Alzheimer's research projects

	GRIFOLS	ARACLON	
	Therapy	Diagnosis	Vaccine
Current prospect	Plasma replacement with albumin (plasma protein)	Simple test available	Active immunotherapy that acts specifically against amyloid beta (A β) proteins 40 and 42
Status	AMBAR study with 365 patients	Validation process in progress	Start of Phase I clinical trial. Evaluation of tolerability and safety. Efficacy not evaluated

About Grifols

Grifols is a global healthcare company with a 70-year legacy of improving people's health and well-being through the development of life-saving plasma medicines, hospital pharmacy products and diagnostic technology for clinical use.

The company is present in more than 100 countries worldwide and its headquarters are located in Barcelona, Spain. Grifols is a leader in plasma collection with a network of 150 plasma donation centers in the U.S., and is a leading producer of plasma-derived biological medicines. The company provides a comprehensive range of solutions for in vitro diagnostics for clinical laboratories, blood banks and blood transfusion services, and it is a point of reference in the field of transfusion medicine.

In 2013, sales exceeded 2,740 million euros with a headcount of 13,200 employees. Annually, Grifols allocates approximately 5% of income to R&D; this investment is evidence of its commitment to scientific progress.

The company's class A shares are listed on the Spanish Stock Exchange, where they are part of the Ibex-35 (MCE:GRF). Its non-voting class B shares are listed on the Mercado Continuo (MCE:GRF.P) and on the U.S. NASDAQ via ADRs (NASDAQ: GRFS). For more information, visit www.grifols.com