



## **ARIANA PHARMA ANNOUNCES ExtempoNMR, A NEW PARTNERSHIP WITH THE POTENTIAL TO REVOLUTIONIZE BRAIN CANCER SURGERY**

**Neuro-oncology diagnostic tool aims to give surgeons the ability in ‘real-time’ to discriminate brain tumor tissue from surrounding healthy tissue.**

**Radical new approach utilizes High Resolution Magic Angle Spinning Nuclear Magnetic Resonance technology**

*Paris, France, and Cambridge, Massachusetts USA, 10 December 2013* – Ariana Pharma, developer of innovative clinical data analysis and diagnostic solutions for the healthcare sector, today announced the launch of ExtempoNMR, a project to develop a new method of *in vitro* cancerous tissue diagnosis in near real-time conditions during surgical procedures. The project benefits from Ariana’s KEM® (Knowledge Extraction and Management) data analytics technology and is a joint partnership with Bruker Biospin, the world leader in magnetic resonance scientific instrumentation, and the University and University Hospitals of Strasbourg.

The ground-breaking project aims to provide a new diagnostic tool delivering near real-time accurate information on the nature of tissue removed during surgery and their degree of malignancy along with prognosis indicators. This tool will enable surgeons to adapt their approach and post-operative care to each patient’s personal pathological profile.

The radically new approach, based on the detection of specific metabolic biomarker signatures using KEM and High Resolution Magic Angle Spinning (HR-MAS) Nuclear Magnetic Resonance (NMR) technology, will provide precise biochemical information in less time than the current histopathological examinations. This current medical practice requires freezing that deteriorates brain tissue, has low diagnostic accuracy, requires 20 to 30 minutes and needs to be systematically confirmed after operation. As a result, the lengthy procedure is not used and surgeons often must ‘blindly’ remove brain tissue after viewing it on a scanner.

**Ariana Pharma Founder and Chief Executive Officer Dr. Mohammad Afshar** said: “We are delighted to be a partner in this ground-breaking project, which demonstrates the benefits of combining sophisticated data analytics with disease understanding and diagnostic technologies. Using our proprietary in-depth knowledge of identifying multi-parametric biomarker signatures we will develop predictive models to discriminate tumor tissue(s) from the surrounding healthy tissue. We are confident that the knowledge gained will enable us to extend these real-time analytic methods to other cancer types, and to provide the medical community with a new service for metabolic data analysis.”

The first phase of ExtempoNMR will run to December 2017 and aims to demonstrate the method’s efficiency on a significant number of patients affected by glioma. The initial steps will be to collect and analyze samples from patients in two French hospitals, building up the

database and predictive models, which will then be validated with real-time analysis in the fourth year of the project. Once validation is achieved the project will be extended to other hospitals at a national level. At that time the consortium will also initiate a strategy aimed at marketing the diagnostic tool with a regulatory certification and applying the same methodology to other pathological indications.

**About Ariana Pharma [www.arianapharma.com](http://www.arianapharma.com)**

Ariana Pharma develops innovative clinical data analysis and diagnostic testing solutions to help the healthcare sector better adapt patient treatments to individual biological characteristics. Ariana Pharma's KEM® technology enables personalization of therapies, improves the efficacy and safety of patient treatment, reduces risks and drug development costs, and accelerates time to market. KEM® is the only FDA tested technology that systematically explores combinations of biomarkers, producing more effective biomarker signatures for personalized medicine. Founded in 2003 as a spin-off of the Institut Pasteur, Paris, France, the company opened a subsidiary in the United States in 2012.

**About Bruker Biospin [www.bruker.com](http://www.bruker.com)**

Bruker Biospin, which is part of the Bruker Corporation group, is the world leader in magnetic resonance scientific instrumentation. Bruker Biospin develops and markets a full range of NMR systems, including preclinical magnetic resonance imaging (MRI) and electronic paramagnetic resonance apparatus

**About University Hospitals of Strasbourg and the University of Strasbourg [www.chru-strasbourg.fr](http://www.chru-strasbourg.fr)**

The University Hospitals of Strasbourg represent a group of seven sites in the Strasbourg region with 2,423 beds and 282 places. They hold the status of Regional and University Hospital Centre (CHRU), and are the only CHRU in the Alsace region.

The University Hospitals are associated with the University of Strasbourg (UDS) in order to train doctors, dental surgeons and pharmacists. Their objective is to develop high-level clinical and translational research.

**About ICube [icube.unistra.fr](http://icube.unistra.fr)**

ICube is a joint research unit (UMR7357) under the co-supervision of the University of Strasbourg, the CNRS, the ENGEES and INSA, Strasbourg. With more than 450 members, the ICube Laboratory brings together in equal parts two scientific communities at the interface between the digital world and the physical world, thus giving it a unique configuration. United by imaging, ICube has health and environmental engineering, and sustainable development as its main field of application.

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