



Bioneer acquires Model Gut Contract Research business and is granted licence to the Dynamic Gastric Model

The Dynamic Gastric Model expands Bioneer's readily available services for pharmaceutical dosage form testing, drug discovery screening, bioequivalence assessment, and functional food analysis.

Bioneer has signed an exclusive license agreement with UK technology management company Plant Bioscience Limited (PBL), regarding use of the Dynamic Gastric Model (DGM) developed at the Institute of Food Research, UK. Bioneer has also acquired PBL's highly successful DGM contract research business (www.modelgut.com) which provides specialist DGM services to the pharmaceutical and food-related industries. The Model Gut services will be integrated into Bioneer's own service offering, under the Bioneer:FARMA brand. The DGM is a breakthrough in the accurate simulation of the human gastric compartment. It is the first truly 'dynamic' *in vitro* system that fully replicates the complex biochemical conditions, as well as the array of gastric forces crucial for the prediction of the bio-performance of active pharmaceutical ingredients (APIs) and pharmaceutical dosage forms.

Bioneer:FARMA provides formulation testing, drug screening and bioavailability services and Professor Anette Müllertz, Head of Department, is excited about the innovative technology and its prospects.

"The DGM takes our services to a highly advanced level. In combination with our existing digestion models, we can now conduct advanced analyses along the whole gastro-intestinal tract," Anette Müllertz says.

Martin Stocks, PBL Business Development Manager, said:

"We are delighted to partner Bioneer:FARMA to take The Model Gut into an exciting new phase. The integration with Bioneer:FARMA will provide a wide array of complimentary capabilities that will both expand and enable the unique capabilities of the Model Gut's technologies for determining the performance of ingested materials in the gastric and intestinal compartments."

The DGM replicates the hydrodynamic and biochemical conditions of the gut

The services now provided by Bioneer:FARMA comprise a range of different assessments fundamental to pharmaceutical formulation and drug development.

Key areas of DGM application include:

- Assessment of the behavior of dosage forms in the stomach to determine the effectiveness of entero-coating, transit time, enzymatic degradation (if relevant), etc.
- Evaluation of the effect of food on the drug release performance and bio-disposition of dosage forms using standardized experimental protocols

- Assessment of dosage form integrity and potential for “burst-release”/ dose dumping under typical and extremes of gastric processing conditions
- Assessment of the gastric disposition of gastro retentive formulation using advanced meal cycle simulation to determine dosage form robustness and gastric residency
- Assessment of the *in situ* chemical and enzymatic stability of prodrug APIs or those targeting local region-specific gastrointestinal delivery.

Additionally, the DGM uniquely allows for an experimental set up and testing of alcohol based interactions which cannot be studied *in vivo* in an ethically justified manner.

The DGM services are currently performed in the UK and are available through Bioneer:FARMA. For more information please contact:

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About Bioneer:FARMA

- is a business unit of Bioneer A/S, physically located at the Faculty of Pharmaceutical Sciences at the University of Copenhagen, building 13, Nørre Allé 67 – 3rd floor (FARMA)
- is based on a grant from the Danish Ministry of Science and Technology given to establish scientific services within the area of Drug Development, in order to help small and medium size biotech and pharma companies to develop new therapeutics
- employs people active in research and interacts closely with the research environment at Department of Pharmacy, SUND, Copenhagen University
- offers pharmaceutical services and contract R&D within the field of drug development
- The services cover the entire research area of the Department of Pharmacy, SUND, Copenhagen University
- For more information visit www.bioneer.dk and www.bioneer-FARMA.dk

About PBL

Plant Bioscience Limited (PBL) www.pbltechnology.com is a technology development and intellectual property management company owned in equal parts by the John Innes Centre www.jic.ac.uk, The Sainsbury Laboratory www.tsl.ac.uk and the Biotechnology and Biological Sciences Research Council www.bbsrc.ac.uk.

PBL promotes the development and commercial uptake of academic research results for public use and benefit and is specialised in life sciences, and in particular plants, agriculture, food and microbial science. PBL is the owner of the patent rights to the Dynamic Gastric Model, created at the Institute of Food Research, Norwich (UK), by Dr Martin Wickham and Richard Faulks.