Optibrium and University of Nottingham Collaborate on Innovative Teaching Programme

Provides students with the opportunity to design new drug-like molecules targeting fibrotic diseases and malaria with cutting-edge drug discovery software

CAMBRIDGE and NOTTINGHAM, UK, 5th November 2018 – Optibrium™, a developer of software for drug discovery, today announced it had entered into a collaboration with the University of Nottingham, a pioneering research institution and university. Optibrium's StarDrop™ software will be available to a number of 4th year MSci Chemistry project students at the University of Nottingham as part of their training in modern drug discovery to aid in the design of potential new candidate compounds for integrin inhibition in fibrotic diseases and malaria, as part of their collaboration with GSK. Optibrium will also provide teaching on the application of software for drug discovery in support of an initiative to provide students with the most relevant courses for a career in the pharmaceutical industry.

Applying Optibrium's StarDrop software and its unique drug discovery capabilities will enable the students to, for example, characterise properties for known drugs, understand the structure-activity relationships in existing project data and then design new candidate compounds using industry-leading predictive models. The disease areas students will focus on include fibrotic diseases and malaria.

Fibrotic diseases account for approximately 45% of deaths in the industrialised world, with the increasing need for improved treatment options. The key common element causing fibrosis is the build-up of scar tissue in the extracellular matrix of certain organs, in particular the kidneys, liver, lungs and skin. As part of the design for new candidate drug compounds, students will study integrin inhibition, targeting the disease-causing scar tissue.

Malaria is an infectious disease that is transmitted through the *Anopheles* mosquito. The World Health Organisation reported in 2016 that around 212 million cases of malaria occurred worldwide, resulting in 429,000 mortalities in 2015. A global target has been set to reduce the incidence and mortality by 90% by 2030. However, current drug treatments are threatened by the emergence of drug resistant strains, increasing the need for novel drugs to treat and block transmission.

Dr Matthew Segall, CEO of Optibrium, commented: "Our partnership with the University of Nottingham gives us the opportunity to engage with students and provide them with access to cutting edge technology in drug discovery. Fibrotic diseases and malaria continue to cause significant mortality and morbidity so we are delighted to help train future medicinal chemists and to work collaboratively to find improved treatment and preventative therapies."

Mr Thomas McInally, Business Science Fellow in Medicinal Chemistry at the GSK Carbon Neutral Laboratories for Sustainable Chemistry, the University of Nottingham said: "Teaching industry-relevant skills and giving students access to the very latest technologies are critical to develop the next generation of successful drug discovery researchers. Optibrium is supporting us in achieving this by providing access to their world-class StarDrop software and considerable expertise in medicinal chemistry."

For further information on Optibrium and StarDrop, please visit www.optibrium.com/stardrop, or contact info@optibrium.com.

For further information on the School of Chemistry at the University of Nottingham and the GSK Carbon Neutral Laboratory for Sustainable Chemistry, please visit:

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https://www.nottingham.ac.uk/chemistry/research/centre-for-sustainable-chemistry/the-carbon-neutral-laboratory.aspx

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Notes to Editors:

GSK Carbon Neutral Laboratory, University of Nottingham (Images courtesy of University of Nottingham)

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About Optibrium Ltd

Optibrium provides elegant software solutions for small molecule design, optimisation and data analysis. The company's lead product, StarDrop, is a comprehensive suite of integrated software with a highly visual and user-friendly interface. StarDrop enables a seamless flow from the latest data through to predictive modelling and decision-making regarding the next round of synthesis and research, improving the speed, efficiency, and productivity of the discovery process.

Founded in 2009, Optibrium is headquartered in Cambridge, UK with offices in Boston and San Francisco, USA. Optibrium continues to develop new products and research novel technologies to improve the efficiency and productivity of the drug discovery process. Optibrium works closely with its broad range of customers and collaborators that include leading global pharma, agrochemical and flavouring companies, biotech and academic groups.

For further information visit www.optibrium.com or join in discussions on improving the productivity of drug discovery at www.optibrium.com/community.

About the Carbon Neutral Laboratory

Located on the University of Nottingham's award winning innovation Park, the Carbon Neutral Laboratory provides unrivalled facilities for chemistry. The focus on sustainability is reflected in the building itself, which incorporates the latest technologies to allow it to be carbon-neutral over its lifetime.

The laboratory is built from natural materials and energy required to run the laboratory is met by renewable sources such as solar power and sustainable biomass. Excess energy created by the building provides enough carbon credits over 25 years to pay back the carbon used in its construction.

The building occupies 4500 square metres over two floors and in addition to laboratory space for around 100 researchers, it contains dedicated instrument rooms, a teaching laboratory for advanced undergraduate classes, and space for a range of outreach activities.

The £15.8m GSK Carbon Neutral Laboratories for Sustainable Chemistry at the University of Nottingham was officially opened on 27 February 2017. Backed by a £12m fund from GSK, the building is not only designed to offset the carbon emissions from construction within the next 25 years, but also utilises water reduction and heat-capturing technologies to deliver an array of additional environmental benefits.