Industry Partnerships and Innovation

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Over the past year, the CLF has remained an essential hub for scientific collaboration and discovery. Between April 2023 and March 2024, the CLF worked alongside industrial partners and launched several innovative projects. These initiatives reflect the facility's ongoing commitment to advancing research, driving technological progress, and nurturing valuable partnerships.

In recent years, industry engagement at the CLF has grown significantly. This year alone, approximately 14 weeks of access to industry users has been provided across the Lasers for Science (LSF) and the High Power Laser (HPL) facilities. The Industry Partnerships and Innovation (IPI) group has engaged with a wide array of stakeholders, spanning sectors such as life sciences, net-zero projects, and healthcare. The CLF remains dedicated to strengthening collaborations and building meaningful partnerships with both academic and industrial sectors. In particular, this year, there has been an increase in the number of SMEs accessing CLF, many taking advantage of exciting innovation funding calls supported by UKRI.

Ongoing collaborations with both academia and industry have led to notable breakthroughs. Professor Jim Thomas, along with his spin-out company MetalloBio, has focused his research on unravelling the mechanisms of various antimicrobial complexes. This work is advancing our understanding of antimicrobial resistance and contributing to the development of a new generation of drugs. Professor Thomas had accessed the facility as an academic in previous years; he has now received funding via the STFC Industry Impact Fund (I2F), enabling his spinout to access the facility in the FY 2024-25.

The I2F funding scheme has played a key role in facilitating industry access to the CLF, with two additional companies gaining access via the scheme this year. One of these companies, MetaGuideX, has used both the STED (Stimulated Emission Depletion) microscope and the ONI microscope to investigate surface proteins present in extracellular vesicles. This research is aimed at improving the sensitivity of cancer assays, potentially enabling more accurate detection of cancer at earlier stages.

Phytoceutical, in partnership with the University of Surrey, has been researching their new micellar retinol formulations, using Fluorescence Microscopy to examine how retinol is converted in the skin. This research is focused on understanding the dynamics of retinol conversion, which is essential for its effectiveness in skincare. This year, they were awarded funding via two key calls, I2F and the BBSRC-STFC Facilities Access scheme, to advance their studies of chemical and biological processes at the molecular level. With this financial support, they plan to investigate the performance of their formulations and assess their potential for promoting wound healing. The aim is to understand the efficiency of the formulations in both skincare and therapeutic applications. This collaboration highlights the promising overlap between cosmetic innovation and medical science.

If you have a project that you would like to explore, please do get in touch, the IPI group would be very happy to hear from you. You can reach us via e-mail at **CLFindustry@stfc.ac.uk** or on LinkedIn.