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New facility in Singapore to boost environment research

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Singapore: The Singapore Centre on Environmental Life Sciences Engineering (SCELSE) has launched a $5.1 million (S$6.5 mn) Advanced Biofilm Imaging Facility at Nanyang Technological University (NTU) in partnership with optical and opto-electronic leader Carl Zeiss.

SCELSE, a first-of-its-kind research institution that aims to harness the powers of micro-organisms for environmental and water sustainability, is a S$120 million center funded by the Singapore government. With the new facility and state-of-the-art

imaging equipment from Carl Zeiss, SCELSE aims to become the first research center in the world to achieve real-time observation of how bacteria interact with each other and to conduct unique DNA testing so as to develop new research techniques not possible before in this field.

This new facility is part of a long-term collaboration between SCELSE and Carl Zeiss. Leveraging advanced imaging technologies from Carl Zeiss such as the high-resolution, high- sensitivity laser scanning confocal system, SCELSE will embark on bacteria research projects in used water treatment, public health and other critical environmental life sciences engineering research in Singapore.

Professor Staffan Kjelleberg, director of SCELSE, said, "Through its partnership with Carl Zeiss, the SCELSE has become the first institution in the world to use such advanced imaging equipment in pushing the frontiers of environmental life sciences, enabling us to achieve a deeper understanding of bacterial interactions in numerous environments. Our students and researchers are already working on several environmental projects such as used water treatment and surface waterways. We are confident that this new collaboration with Carl Zeiss will help deliver ground-breaking findings and intellectual property to help strengthen Singapore's position as a global leader in environmental life sciences engineering R&D."

This is the first time that Carl Zeiss is working with a partner in the field of environmental life sciences engineering. As part of the MOU agreement, the optical and opto-electronic leader and SCELSE will explore ways to make optimal use of the systems for research in this emerging field of study.

Mr Ven Raman, managing director of Southeast Asia, Carl Zeiss, added, "Carl Zeiss is very excited to partner SCELSE, a world-class research group helmed by pioneers in environmental life sciences engineering. We are looking forward to working closely with SCELSE to explore the unexplored area of bacterial interaction, and harness that knowledge for important projects such as water treatment and public health for the benefit of all Singaporeans."

The Advanced Biofilm Imaging Facility by SCELSE and Carl Zeiss is located at 60 Nanyang Drive, School of Biological Sciences, Nanyang Technological University.