

PRESS RELEASE

Revolutionising Nanoparticle Production: Technical Evaluation Introduces Cutting-Edge Formulation Technology

April 11, 2024 – Munich (Germany) and Strathclyde (UK) – In a significant stride towards advancing nanoparticle drug delivery manufacturing technology, German pharmatech company, leon-nanodrugs GmbH (LEON), proudly announces a pioneering technical evaluation by CMAC, University of Strathclyde. This joint effort brings together the expertise of Professor Yvonne Perrie and the team at CMAC with LEON's science experts. The aim of the studies was to test LEON's proprietary state-of-the-art FR-JET formulation technology poised to reshape the landscape of nanoparticle manufacturing.

Lipid nanoparticles have garnered increasing attention in the pharmaceutical industry for their potential in targeted drug delivery, gene therapy, and vaccine development. However, their widespread adoption has been hindered by limitations in production methods. Recognising this critical gap, LEON embarked on a mission to develop and deploy advanced technology and equipment specifically tailored for the efficient and scalable GMP production of lipid nanoparticles.

The team at Strathclyde were able to support LEON in confirming that the FR-JET technology reduces risks associated with process scale up and can be used to intensify the process to concentrations not usually achievable. The produced LNP models performed well in both in-vitro and in-vivo tests. "This study marks a notable accomplishment for LEON, showcasing the tangible impact that our cutting-edge FR-JET technology can have in pharmaceutical manufacturing, especially for economic individual batch manufacturing," said Dr. Setu Kasera, CSO at LEON.

The collaborative effort underscores the power of partnership in driving technical progress and addressing complex challenges in healthcare. CMAC Director, Prof Alastair Florence said: "This is an exciting development for the centre, demonstrating the power of collaboration to bring leading academic and industry scientific expertise together to accelerate progress in medicines manufacturing."

ABOUT LEON-NANODRUGS

leon-nanodrugs GmbH is a Munich-based pharmatech company specializing in the development of devices for the encapsulation of genetic material and other pharmaceutical active substances into nanocarriers, such as lipid nanoparticles (LNPs). LEON builds its innovative solutions based on its proprietary FR-JET technology. Its portfolio of devices, NANOLab® for process development, and NANOMe® and NANOU® for GMP aseptic manufacturing, enable faster route to clinical batches and are suitable for both individualised scales and commercial production.

LEON's platform is aimed at enabling pharma companies, small biotech, research institutes, as well as CDMOs, to take full advantage of the significant progress being made in advanced therapies. For further information, please visit <https://leon-nanodrugs.com/> and follow us on [LinkedIn](#).

ABOUT CMAC

CMAC is an internationally leading manufacturing research centre with a unique configuration of academic research, applied, and pre-competitive programmes. Working in partnership with Tier 1, Tier 2, academic, and innovation partners, CMAC's goal is to transform Medicines Development, Manufacture & Supply, and further grow its world-class portfolio of multi-disciplinary collaborative



PRESS RELEASE

research. This includes the Digital Medicines Manufacturing Research Centre (DM²), Digital Design and Manufacture of Amorphous Pharmaceuticals (DDMAP), UKRPIF Net Zero Pilot, UKRPIF CMAC Data Lab, and the CMAC Future Manufacturing Research Hub, along with training and translation projects within a world-class facility.

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