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Boehringer Ingelheim acquires ICD Therapeutics

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New molecular platform to access intracellular targets across a broad range of tumor cell types



Boehringer Ingelheim has announced that it acquired ICD Therapeutics. The acquisition includes rights to ICD's innovative MacroDel biologics-delivery platform. Boehringer Ingelheim will employ this platform for the development of novel therapeutics in collaboration with nanoPET Pharma GmbH, a former shareholder of ICD Therapeutics. Further details of the acquisition are not being disclosed.

"Boehringer Ingelheim's collaboration with nanoPET Pharma has the potential to eliminate the hurdle that many cancer biologics face: getting access to targets inside tumor cells," said Norbert Kraut, Ph.D., Global Head of Cancer Research, Boehringer Ingelheim. "We will use ICD's MacroDel technology to develop first-in-class potential drug candidates for intracellular targets across a variety of tumor types, for the benefit of patients who so far have no or only inadequate treatment options."

Engineered proteins and peptides offer great potential to block protein-protein interactions inside cancer cells, but their large size is generally assumed to prevent intracellular delivery. ICD's MacroDel technology exploits transporter proteins in the cell membrane to deliver such drug candidates inside tumor cells. This opens up therapeutic targets that would be otherwise inaccessible.

"nanoPET Pharma looks forward to collaborating with Boehringer Ingelheim on the pre-clinical refinement of ICD's MacroDel to achieve effective intracellular delivery of macromolecules such as peptides and proteins," said Andreas Briel, Ph.D., Managing Director of nanoPET Pharma GmbH. "We are excited to contribute to Boehringer Ingelheim's discovery and development of innovative medicines for patients in need."

Tree-like highly branched molecules known as dendrimers form a fundamental component of the MacroDel platform. The size, shape and electrical charge of this structure permit it to grasp large therapeutic biological molecules. After binding with the biologic, the resulting compound selectively interacts with transporter proteins known to be highly expressed on tumor cell wall membranes. These transporters help "carry" the compound through the membrane and into the cell. The medicinal cargo is then in position to disrupt the disease process in a precise manner at a molecular level.

A prior investment from Boehringer Ingelheim's Venture Fund (BIVF) supported ICD's development of the MacroDel technology. The BIVF strategically invests in groundbreaking therapeutics-focused biotechnology companies to enable development of their technologies for therapeutic applications that have potential for strategic partnerships with Boehringer Ingelheim or other pharmaceutical partners.