DELIVERING INNOVATIVE DRUG DISCOVERY STARTING POINTS

TORSTEN HOFFMANN, Senior Vice President of Drug Discovery, **Taros**

Torsten has spent 20 years in pharmaceutical R&D. He is the inventor of anti-emetic medicine Netupitant, which was FDA approved as Akynzeo in 2014, and since 2015 is recommended by the National Comprehensive Cancer Network for preferred use.

At Roche, he created new R&D department and delivered later 52 new lead series into lead optimization, 32 small molecules into regulatory Tox studies, and more than 20 NCEs into clinical studies over 8 years. Over the past 6 years he has been in leading roles and as a Scientific Advisory Board member in the European biotechnology industry, has successfully prioritized and advanced strong R&D portfolios, and has implemented novel approaches to encourage and enable innovation. He has authored more than 95 publications, patent applications and published conference reports. He is currently Senior Vice President of Drug Discovery at Taros in Germany.

What is your role at Taros Chemicals? Could you briefly describe what the European Lead Factory is and your involvement in the efforts.

At Taros, I am leading the Drug Discovery efforts with an international and diverse team that has more than 180 combined years of pharmaceutical R&D experience. Collectively, we worked on more than 120 biomolecular targets from all major gene families and across all main therapeutic areas. The European Lead Factory (ELF) is a collaborative public-private partnership, with originally 30 contributing organisations, aiming to deliver innovative drug discovery starting points. Having established the first European Compound Library and the first European Screening Centre, the ELF gives free access to up to 550,000 novel compounds, a unique industry-standard uHTS platform. Funded by the Innovative Medicines Initiative (IMI) with EUR 196 million from 2013-2018, Taros has been leading the Discovery Chemistry efforts which was followed by an additional project budget of EUR 36.5 million, granted in 2019 under the second framework IMI. 20 partners in 7 countries will continue pushing forward the transformation of potential novel drug targets to create new medicines by conducting additional 185 new target screening campaigns until the end of 2023. As member of the ELF Screening Selection Committee, Taros is involved already at the level of project initiation.

What work have you done in building and growing proprietary R&D portfolios since you joined the European Biotechnology industry sector 6 years ago?

Wherever I have been leading R&D organisations in Biotechnology companies, our main goal was to prioritise and rigorously advance best assets into clinical outcome trials and to terminate those projects with lower likelihood of clinical success. By having enabled entrepreneurial R&D teams, several mid to late stage clinical trials are ongoing today, among them clinical phase 3 trials in the treatment of diabetes, a global epidemic disease with an estimated number of 439 million diabetic adult patients by 2030. It has always been my guiding principle, to empower teams, to relief them from constant review burden and to create an environment that enables innovation and significantly reduces scientific bureaucracy at the same time.

What are the opportunities and challenges in Drug Discovery?

The main challenge in Drug Discovery has been and remains, to enable broad innovation in pharmaceutical R&D. Innovation cannot be scheduled rather the environment to allow for it. And innovation opportunities in pharmaceutical R&D are bold. To give a few examples, there are opportunities in epigenetic targets and regenerative medicine approaches, in peptide, oligoribonucleotide and protein/antibody therapeutics as well as their conjugates, opportunities in phenotypic drug discovery and RNA as a drug target to interfere with protein biosynthesis at the cellular level. It will be critically important to select novel targets and to follow therapeutic approaches choosing the best suited modality in an unbiased manner. With respect to small molecule therapeutics, the ELF will add significant value to pharmaceutical R&D in Europe.