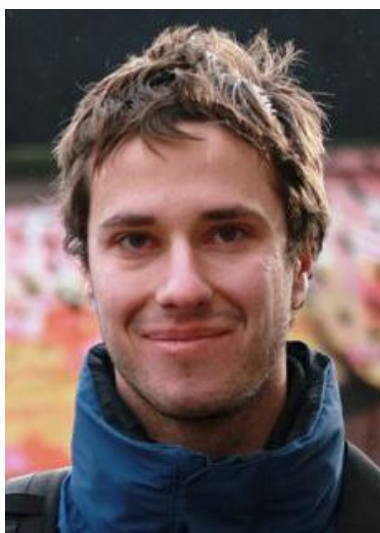


BILBAO

SPAIN

Andrzej Nowojewski

Bio



Machine Learning and AI are changing the world and drug development is no exception. In this talk we will explore three examples of how this new computational paradigm accelerates the development of new drugs in AstraZeneca. First, Cell Painting is a new hypothesis-free data generation approach that can be used to predict safety signals of new drug candidates using machine learning and help triage the toxicology assay cascade. Next, we show how we use AI to automate a routine scientific process – finding population

pharmacokinetic models and reduce the development time from weeks to days. Finally, novel predictive models can help us design better event-driven trials by recruiting patients at high risk which can accelerate proof of concept trials.

Abstract

Andrzej Nowojewski is a machine learning expert with a PhD in Physics from Harvard University. He focuses on applying the most recent AI research in innovative ways in the drug development process ranging from predicting safety issues of new compounds using pre-clinical data, automating ways to find population pharmacokinetics models in Phase 1 trials, building tools that aid patient recruitment in Phase 2 trials and developing predictive models for patient adherence in Phase 3 trials. In over five years in AstraZeneca, he worked in Data Science & AI, Digital Health and now in Clinical Pharmacology and Safety Sciences departments and he is based in Cambridge, UK.