

LIGHT Thematic Workshop
22 September 2023

**"AI: new opportunities and challenges for Drug Discovery,
Repurposing and Toxicology"**

Venue: Aula A - Edificio Centrale di Medicina -Viale Europa 11
Universita' degli Studi di Brescia

Time 14:30-16:00

Introduction by Prof. Marina Pizzi, *DMMT University of Brescia and
LIGHT Center*

Prof. Weida Tong, *FDA/NCTR*

"The ascent of AI: Predicting drug-induced liver injury".

PhD. Andrea Beccari, *Dompé Exscalate Platform*

"EXSCALATE: An Extreme-Scale Virtual Screening AI Platform for
Drug Discovery"

Dr. Cesare Furlanello, *LIGHT Center Brescia*

"AI regulatory sandboxes for Personalized Medicine: risks,
opportunities, and impacts of the AI-Act"

Evento aperto a tutti gli interessati



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Biographies

Dr. Weida Tong is Director of the Division of Bioinformatics and Biostatistics at FDA's National Center for Toxicological Research (NCTR). He has been an FDA Senior Biomedical Research and Biomedical Product Assessment Service expert since 2011.

He also holds several adjunct positions at universities, including an associate professorship at Rutgers University in Princeton, New Jersey and a full professorship at the University of Arkansas at Little Rock. He has served on science advisory boards for several multi-institutional projects in Europe and the U.S. and also holds adjunct appointments at several universities. His primary research interests are in the fields of bioinformatics, artificial intelligence (AI), molecular modeling and data analytics for biomarker discovery, drug safety and repurposing, pharmacogenomics/toxicogenomics, and precision medicine. He has been: 1. Developing machine learning and AI for digital health and drug repositioning; 2. Supervising and leading MAQC, an FDA-led community wide consortium to analyze technical performance and utility of emerging genomics technologies with an emphasis on regulatory science and precision medicine; 3. Developing Liver Toxicity Knowledge Base to address drug safety concerns related to drug-induced liver injury; 4. Designing and developing computer-based technology to support FDA's effort on bioinformatics and scientific computing; and 5. Conducting molecular modeling and structure-activity relationships on various toxicological endpoints, such as endocrine disruption and carcinogenicity. Dr. Tong has published over 300 peer-reviewed papers and book chapters.

Andrea R. Beccari, Senior Director EXSCALATE Dompé. Promoter of the open innovation project Italian Drug Discovery Network and co-founder of the interest group for in silico medicine Avicenna Alliance (Brussels). Andrea since 2000 does research in pharmaceutical science and is an expert of advanced modelling and AI. His current projects are focused on rare & communicable diseases . Promoter of two series of congresses: Computational Driven Drug Discovery Meeting and Italian Drug Discovery Summit. Active with the Commission and the European Parliament in promoting the use of simulation in health. Coordinator of two European projects EXSCALATE4COV and LIGATE. Co-inventor on more than 15 patents and author of more than 50 articles.

Cesare Furlanello is an expert in Machine Learning, predictive models, and reproducibility of AI; since June 2023, he is Director of LIGHT Center Brescia. Former Director of Data Science and Head of the Predictive Models for Biomedical & Environmental Data research Unit at Fondazione Bruno Kessler (FBK, Italy). National habilitation as full professor in Biomedical Engineering. Adjunct faculty at Wistar Institute (Philadelphia, USA). Editorial board member of Nature Scientific Data and British Journal of Clinical Pharmacology. AI and Bioinformatics collaborator within the MAQC/SEQC initiative, and of the FANTOM5 consortium. Formerly, President of the international Massive Analysis and Quality Control (MAQC) Society. He is a founder at HK3 Lab and Orobix Life, AI startups for Predictive Health.