

FORUM

# How Artificial Intelligence can change the pharmaceutical landscape



In collaboration with



Farma Industria Ticino

With the extraordinary participation of



DIE STIMME

WEDNESDAY, OCTOBER 9<sup>TH</sup> 2019

1.30 p.m. - 5.45 p.m.

LAC Lugano Arte e Cultura - Lugano, Switzerland

**Artificial Intelligence (AI)** is gaining more and more importance in the pharmaceutical sector, deeply **transforming the drug discovery process**. There are many potential benefits of applying AI techniques to improve the **development of new molecules and the identification of new targets**, cutting R&D costs and time.

In drug discovery, AI helps in **predicting the efficacy and safety of molecules**. It gives researchers a much broader chemical pallet for the selection of the best molecules for drug testing and delivery. In this context, **drug repurposing is another important area** where AI can have a substantial impact.

With the extensive amount of clinical and pharmaceutical data available to date, AI algorithms find suitable drugs that can be repurposed for an alternative use in medicine.

Moreover, with the help of AI, it becomes easier to run clinical tests, diagnose diseases and provide the **most effective treatment** for a particular disease. As it can interpret test results, AI can also look through various sources including publications to correctly diagnose critical ailments.

**New approaches** based on AI in the drug discovery process and in the repositioning of old molecules will be presented during this particular Forum. We hope to provide an overview of the sectors where AI might have an impact on the pharmaceutical pipeline and play a **crucial role in the pharmaceutical world** in the coming years.

Further information:  
CG MKT [info@cgmkt.it](mailto:info@cgmkt.it)

*Chairman:* Andrea Danani  
IDSIA, USI & SUPSI, Lugano, Switzerland

1.30 p.m. Welcome of IBSA Foundation,  
IDSIA and Città di Lugano

2.00 p.m. **JUERGEN SCHMIDHUBER**  
NNAISENSE Lugano, Switzerland; Swiss AI Lab  
IDSIA, Manno, Switzerland; USI & SUPSI,  
Lugano, Switzerland  
**True Artificial Intelligence for learning robots**

2.25 p.m. **ED GRIFFEN**  
MedChemica Ltd., Biohub, Alderley Park,  
Macclesfield, Cheshire, United Kingdom  
**Emerging challenges for Artificial Intelligence  
in medicinal chemistry**

3.00 p.m. **GIANNI DE FABRITIIS**  
ICREA, Barcelona, Spain; Universitat Pompeu Fabra,  
Barcelona, Spain; Acellera, Barcelona, Spain  
**Can we machine learn chemistry and  
drug discovery?**

3.25 p.m. Q&A

3.40 p.m. Coffee Break

4.00 p.m. **SEAN EKINS**  
Collaborations Pharmaceuticals, Inc., Raleigh,  
United States of America; UNC Eshelman School  
of Pharmacy, University of North Carolina at  
Chapel Hill, Chapel Hill, United States of America  
**Machine learning for rare and neglected  
disease drug discovery**

4.30 p.m. **ALEX ZHAVORONKOV**  
Insilico Medicine, Hong Kong; Buck Institute  
for Research on Aging, Novato, United States  
of America; Biogerontology Research  
Foundation, London, United Kingdom  
**New small molecule design pipelines utilizing  
generative models and reinforcement  
learning accelerate drug discovery**

5.05 p.m. **ALESSANDRO CURIONI**  
IBM Research Lab, Zurich, Switzerland; Swiss  
Academy of Engineering Sciences, Zurich,  
Switzerland  
**Artificial Intelligence and the future of discovery**

5.30 p.m. Q&A with closing remarks

Free registration:  
[ibsafoundation.org](http://ibsafoundation.org)

