

# **Strategies and lessons from CACHE challenges**

## **(Critical Assessment of Computational Hit-finding Experiments)**

Artem Cherkasov

*University of British Columbia, Vancouver, BC Canada*

The ongoing democratization of drug discovery is driven by recent advances in A.I. technology, emergence of Big Data and Open Science initiatives [1, 2]. These disruptive changes aim to address rising times and costs of drug developments, and help advancing drug RnD within academia and small- to mid size companies.

We place a particular emphasis on the transformative role of democratization of drug discovery along with recent significant Open Science efforts such as CACHE – (Critical Assessment of Computational Hit-finding Experiments) initiative. We further reflect on our participation in three CACHE competition and discuss winning strategies and novel approaches aiming to democratize drug discovery practices, to reduce times and costs of drug development and, ultimately, to address global demand for novel, potent and affordable therapeutics.

### **Bibliography :**

1. Diamandis PH, Kotler S. *Bold: How to Go Big, Create Wealth and Impact the World*. Reprint Edition. New York, NY: Simon & Schuster; 2016.
2. Tropsha A, Martin H-J, Cherkasov A. The Six Ds of Exponentials and drug discovery: A path toward reversing Eroom's law. DDT, 104341, 2025