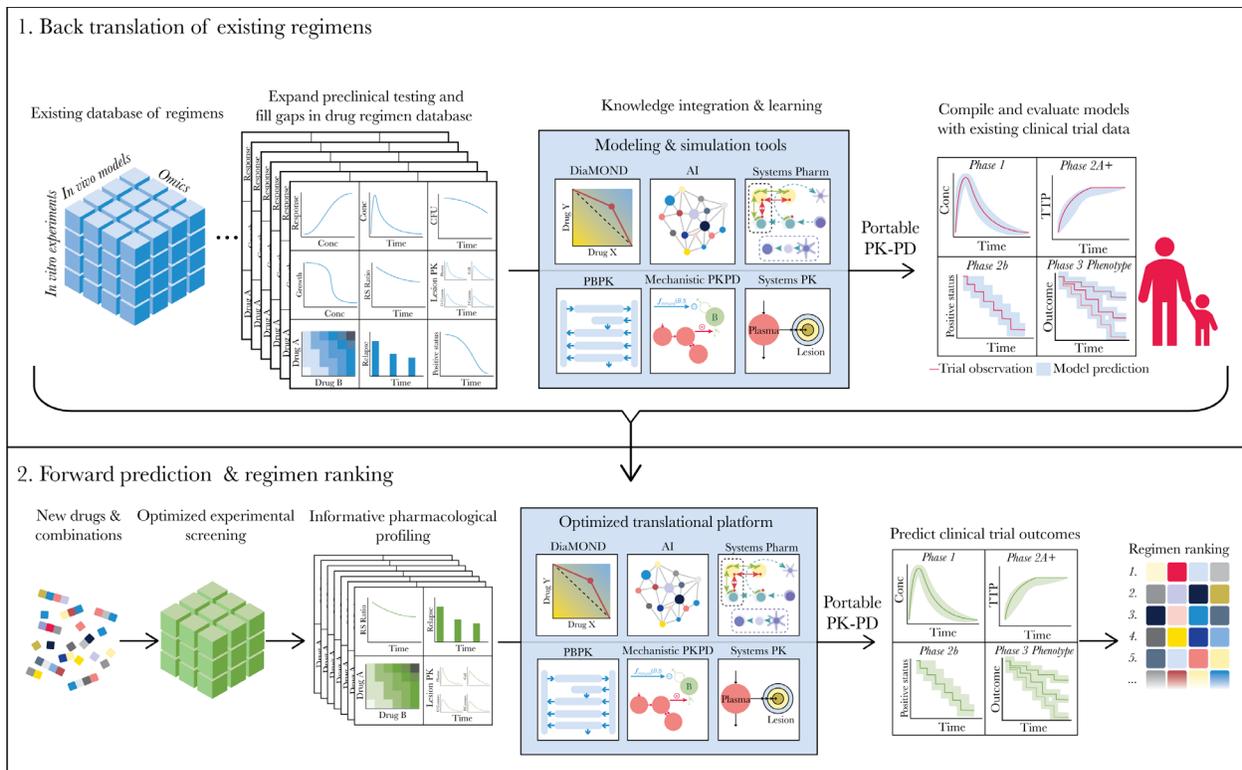


A closer look at the Data Science and Modeling Group (DSMG)

Who we are: We are a group of scientists with computational, statistical, clinical, and experimental backgrounds, aiming to build accurate, transparent, and implementable tools for informing anti-TB drug development and clinical practice.

Our goals: We create models using the knowledge and data generated from experimental and computational experts across the Preclinical Laboratories to build effective, shortened treatment durations, including recommendations for most appropriate companion drugs, doses, and treatment durations to optimize treatment success and minimize risk of resistance. We also work on informing regimens for special populations, such as pediatrics, and build risk algorithms to stratify treatment across diverse patient populations.

Our approach: We perform back-translation of clinical regimens tested in trials such as Study 31/A5349, SimpliciTB, and CLO-FAST to understand how we could have predicted these trial outcomes early in development. We use these learnings to then inform novel regimens, including those tested in RAD-TB/A5409 and CRUSH trials, using our pharmacokinetic-pharmacodynamic, lesion penetration, and relapse prediction tools. Both back-translation and forward prediction are essential to improve anti-TB treatment.



Our history: While we continue to focus on improving the predictability and value of our tools, we have a strong track record of having already provided tool validation:

- *Eur Respir J.* 2023 Aug 31;62(2):2300165. doi: 10.1183/13993003.00165-2023
- *Nat Commun.* 2024 Aug 25;15(1):7311. doi: 10.1038/s41467-024-50781-4.
- *Sci Transl Med.* 2025 Feb 5;17(784):eadi4000. doi: 10.1126/scitranslmed.adi4000.