

PSB 2026 Workshop #5

Trust, Reproducibility, and Progress: The Roles of Independent Blind Prediction, Assessment, and Benchmarking in Computational Biology

Date: Monday, January 5, 2026

Time: 2:30 PM – 5:30 PM

Location: Salon 2 & 3

Co-Chairs: Gaia Andreoletti, Serghei Mangul, Predrag Radivojac, Steven E. Brenner

2:30–2:45 PM (15 min) — Opening Session: The Big Picture of Assessment & Benchmarking

2:45–3:00 PM (15 min) — AI Competitions Provide the Gold Standard for Empirical Rigor in GenAI Evaluation

Speaker: Dr Walter Reade

3:00–3:15 PM (15 min) — CAFA: A Challenge Dedicated to Understanding the Function of Biological Macromolecules

Speaker: Dr Predrag Radivojac

3:15–3:30 PM (15 min) — Critical Assessment of Genome Interpretation (CAGI)

Speaker: Dr Steven Brenner

3:30–3:45 PM (15 min) — The Hidden Dangers of the Reproducibility Crisis and the Path Forward”

Speaker: Dr Brett Beaulieu-Jones

3:45–4:00 PM (15 min) — The Importance of Considering Cell-Type Heterogeneity in (Epi)Genome-Wide Association Studies

Speaker: Dr Lana Garmire

4:00–4:20 PM (20 min) — Break

4:20–4:35 PM (15 min) — Benchmarking the Software Development Rigor of RNA-seq Tools

Speaker: Dr Serghei Mangul

4:35–4:45 PM (10 min) — Short Talk OpenChallenges.io: A FAIR-Compliant, Centralized Platform for Crowdsourcing in Biological Research

Speaker: Dr Gaia Andreoletti

4:45–5:30 PM (45 min) — Panel Discussion

Talk: The Future of Assessment and Benchmarking in Computational Biology

Panelists

Dr Brett Beaulieu-Jones

Dr Steven Brenner

Dr Lana Garmire

Dr Serghei Mangul

Dr Anne O'Donnell-Luria

Dr Predrag Radivojac

Dr Walter Reade

Dr Byron Wallace

Moderator: Dr Gaia Andreoletti