



The Center for Computational Life Sciences (CCLS) Inaugural Symposium

AI for Biology and Medicine (AI4BM)

October 30, 2025

Gateway Center, University of North Texas

Schedule

Time	Session
8:00 – 8:45 AM	Registration & Light Breakfast
8:45 – 9:00 AM	Welcome & Opening Remarks
8:45 – 8:50 AM	Opening Remarks – Harrison Keller , President, University of North Texas
8:50 – 8:55 AM	Opening Remarks – Ed Dzialowski , Dean, College of Science, University of North Texas
8:55 – 9:00 AM	Welcome and Introduction of Keynote Speaker – Serdar Bozdag , Director, Center for Computational Life Sciences
9:00 – 10:00 AM	Keynote Address <i>Artificial Intelligence and Foundation Models for Reproductive Medicine: From Embryo to Ovary</i> Iman Hajirasouliha , Weill Cornell Medicine, Cornell University
10:00 – 11:00 AM	Session 1: Computational Drug Discovery and Precision Oncology Moderator: Mark Albert, University of North Texas
10:00 – 10:15 AM	<i>"Drugging the Undruggable": Discovering inhibitors of the GTPase-accelerating activity of RGS14 via AI-directed virtual screening</i> David Siderovski , UNT Health Science Center
10:15 – 10:30 AM	<i>Machine Learning Models for Liquid Biopsy-Based Treatment Response Prediction and Biomarker Discovery in Cancer</i> Jianli Zhou , Lantern Pharma
10:30 – 10:45 AM	<i>From General-Purpose to Disease-Specific Features: Aligning LLM Embeddings on a Disease-Specific Biomedical Knowledge Graph for Drug Repurposing</i> Suman Pandey , University of North Texas
10:45 – 11:00 AM	<i>Machine Learning Ensemble Models for In Silico Screening and Prediction of Blood-Brain Barrier Permeability: A Comprehensive Approach Using Molecular Fingerprints and Descriptors</i> Rick Fontenote , Lantern Pharma
11:00 – 11:30 AM	Poster Session with Coffee

Time	Session
11:30 – 12:30 PM	Session 2: Gene regulation and Multi-Omics Integration Moderator: David Siderovski, UNT Health Science Center
11:30 – 11:45 AM	<i>ASPECT: Classifying Alternative Splicing Events with Transformers Model</i> Sahil Thapa , University of North Texas
11:45 – 12:00 PM	<i>Deconvolving intra-tumor heterogeneity using tissue morphology</i> Aleksandra Nielsen , University of Texas Southwestern Medical Center
12:00 – 12:15 PM	<i>HINN: Hierarchical Input Neural Network identifies multi-omics biomarker for cognitive decline</i> Yashu Vashishath , University of North Texas
12:15 – 12:30 PM	<i>MultiGEOmics: Graph-Based Integration of Multi-Omics via Biological Information Flows</i> Bizhan Alipourpajani , University of North Texas
12:30 – 1:00 PM	Lunch
1:00 – 2:00 PM	Poster Session
2:00 – 3:00 PM	Session 3: 3D Genomics and Circuit Modeling Moderator: Todd Castoe, UT Arlington
2:00 – 2:15 PM	<i>Data-Driven Frameworks for Neural Dynamics: Applications to Sleep, Pain, and ADHD Biomarkers</i> Pedro Maia , University of Texas at Arlington
2:15 – 2:30 PM	<i>HiC-LEGO: A Generalized GAT-Based Framework Leveraging Domain Ensembles for High-Resolution 3D Genome Reconstruction from Hi-C Data</i> Abhishek Pandeya , University of North Texas
2:30 – 2:45 PM	<i>Canonical recurrent neural circuits: A unified sampling machine for static and dynamic inference</i> Eryn Sale , UT Southwestern Medical Center
2:45 – 3:00 PM	<i>Natural gradient Bayesian sampling automatically emerges in canonical cortical circuits</i> Zimei Chen , UT Southwestern Medical Center
3:00 – 3:30 PM	Poster Session with Coffee
3:30 – 4:30 PM	Session 4: Neurodegeneration and Electronic Health Records analysis Moderator: Ke Yang, UT San Antonio
3:30 – 3:45 PM	<i>NaviDoc: A Multimodal RAG-based Clinical Chatbot for Contextual EHR Analysis</i> Gowtham Vuppaladhiam , University of North Texas
3:45 – 4:00 PM	<i>Quantum Transfer Learning to Boost Dementia Detection</i> Himanshu Thapliyal , Southern Methodist University
4:00 – 4:15 PM	<i>A Systematic Fairness Evaluation of Racial Bias in Alzheimer's Disease Diagnosis Using Machine Learning Models</i> Neha Goud Baddam , University of North Texas
4:15 – 4:30 PM	<i>Equitable Electronic Health Record Prediction with FAME: Fairness-Aware Multimodal Embedding</i> Mehak Gupta , Southern Methodist University
4:30 PM	Best Poster Awards & Closing Remarks