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Collaborative "Hack Day"

On December 13th, in collaboration with the University of Washington's Seattle TB Research Advancement Center (SEATRAC) Data Science Core, the Bioinformatics and Integrated Systems Biology (BISB) Core kicked off our Emory/Georgia TRAC's first small group training session focused on '-omics' platforms with a "Hack Day."



The Hack Day offered hands-on training on analytic pipelines for bulk and single cell transcriptomics data, as well as a small-group hack time with publicly available datasets. Emory informaticists and BISB Core leaders Ashish Sharma and Khader Ghneim, and BISB Core Director Jeffrey Collins provided in-person, one-on-one training with virtual presentations from SEATRAC. Twelve participants attended in person and 3 remotely via Zoom, including participants from the Centers for Disease Control and Prevention, and the University of Georgia.

TRAC Hosts the TB Trials Consortium Biannual Meeting & Holiday Reception

TRAC hosted the Centers for Disease Control and Prevention Tuberculosis Trials Consortium (TBTC)'s biannual meeting December 12-15, 2023. Emory students, fellows, and faculty attending many of the TBTC scientific sessions on the latest in TB clinical trials. In addition, TRAC and TBTC members had an opportunity to relax and start the Holiday season at a members' reception.



TRACcolades



TRAC Clinical and Population Sciences Core Co-Director Sarita Shah, MD, PhD and TRAC member Nadine Rouphael, MD, MSc have been elected to one of the nation's oldest and most prestigious medical honor societies, the American Society for Clinical Investigation. New members will be officially inducted into the Society at the ASCI Dinner and New Member Induction Ceremony on April 5, 2024, in Chicago.

Congratulations to **Adrian King**, Business Manager for the Epidemiology Department TB research group, who completed a dual MBA/MHA degree from the J. Mack Robinson School of Business, Georgia State University on December 13th.

Upcoming Events

TB WORKS IN PROGRESS: "PRELIMINARY RESULTS FROM A POST-TB STUDY OF NON-COMMUNICABLE DISEASES FROM THE COUNTRY OF GEORGIA"

Matthew Magee, PhD, MPH
Emory University, RSPH, Epidemiology DEPT.
Friday January 19, 2024 9-10am
RRR 345 and Zoom (Register here)



EMORY/GEORGIA TRAC PUBLIC DATABASES FOR TB RESEARCH LECTURE SERIES: "NCBI DATA RESOURCES FOR TUBERCULOSIS RESEARCH"

Rana Morris, PhD, Staff Scientist/ Outreach Program Lead, NCBI/NLM/NIH
Michael Feldgarden, PhD, Staff Scientist, NCBI/NLM/NIH
E. Sally Chang, PhD, Genome Education Specialist/Education Team Lead,
NCBI/NLM/NIH

Tuesday February 13, 2024 12-1:15pm CNR 3001 and Zoom (Register here)







"SYSTEMS BIOLOGY APPROACHES TO DISSECT HOST DETERMINANTS OF TB RISK"

Sara Suliman, PhD, MPH
University of California San Francisco, Dept. of
Experimental Medicine

Wednesday February 14, 2024 9-10am RRR 40 and Zoom (Register here)



Core Services Highlight: CPS Core

Dataverse



- Are you looking for a user friendly, searchable library of TB studies by TRAC investigators?
- Are you looking for well-characterized TB clinical research cohorts and archived samples available for secondary data analysis?

The TRAC Data Library has over 50 projects with hundreds of related publications for your review.

Access the Emory/Georgia TRAC Dataverse **HERE!**

Bulletin

Dr. James A. Ferguson Emerging Infectious Diseases Research Initiatives for Student Enhancement (RISE) Fellowship Program

Ferguson RISE (12-Month & Summer) Fellowship Application Deadline: **Wednesday**, **January 31**, **2024** (11:59 PM EST)

More info and application here!

December Publications

Kimuda S, Kasozi D, Namombwe S, Gakuru J, Mugabi T, Kagimu E, Rutakingirwa MK, Leon KE, Chow F, **Wasserman S**, Boulware DR, Cresswell FV, Bahr NC. <u>Advancing Diagnosis and Treatment in People Living with HIV and Tuberculosis Meningitis</u>. *Curr HIV/AIDS Rep.* 2023 Dec;20(6):379-393. doi: 10.1007/s11904-023-00678-6.

Feng PI, Horne DJ, **Wortham JM**, Katz DJ; <u>CDC Tuberculosis Epidemiologic Studies Consortium.</u> <u>Trends in tuberculosis clinicians' adoption of short-course regimens for latent tuberculosis infection.</u> *J Clin Tuberc Other Mycobact Dis.* 2023 Jun 13;33:100382. doi: 10.1016/j.jctube.2023.100382.

Adekoya N, Chang MH, **Wortham J**, Truman BI. <u>Disparities in Rates of Death From HIV or Tuberculosis Before Age 65 Years, by Race, Ethnicity, and Sex, United States, 2011–2020</u> Public Health Rep. 2023 Dec 18:333549231213328. doi: 10.1177/00333549231213328.

Ross J, Perumal R, Wolf A, Zulu M, Guzman K, Seepamore B, Reis K, Nyilana H, Hlathi S, Narasimmulu R, Cheung YKK, Amico KR, Friedland G, Daftary A, Zelnick JR, **Naidoo K**, O'Donnell MR. <u>Adaptive evaluation of mHealth and conventional adherence support interventions to optimize outcomes with new treatment regimens for drug-resistant tuberculosis and HIV in South <u>Africa (ADAP-TIV): study protocol for an adaptive randomized controlled trial.</u> *Trials.* 2023 Dec 1;24(1):776. doi: 10.1186/s13063-023-07520-9.</u>

Du DH, Geskus RB, Zhao Y, Codecasa LR, Cirillo DM, van Crevel R, Pascapurnama DN, Chaidir L, Niemann S, Diel R, **Omar SV**, Grandjean L, Rokadiya S, Ortitz AT, Lân NH, Hà ĐTM, Smith EG, Robinson E, Dedicoat M, Nhat LTH, Thwaites GE, Van LH, Thuong NTT, Walker TM. <u>The effect of M. tuberculosis lineage on clinical phenotype</u>. PLOS Glob Public Health. 2023 Dec 20;3(12):e0001788. doi: 10.1371/journal.pgph.0001788

Perumal R, Bionghi N, Nimmo C, Letsoalo M, Cummings MJ, Hopson M, Wolf A, Jubaer SA, Padayatchi N, **Naidoo K**, Larsen MH, <u>O'Donnell M. Baseline and treatment-emergent bedaquiline resistance in drug-resistant tuberculosis: a systematic review and meta-analysis.</u> Eur Respir J. 2023 Dec 14;62(6):2300639. doi: 10.1183/13993003.00639-2023.

Lale Ngema S, Dookie N, Perumal R, Nandlal L, Naicker N, Peter Letsoalo M, O'Donnell M, Khan A, Padayatchi N, **Naidoo K**. <u>Isoniazid resistance-conferring mutations are associated with highly variable phenotypic resistance.</u> J Clin Tuberc Other Mycobact Dis. 2023 Jul 26;33:100387. doi: 10.1016/j.jctube.2023.100387.

Campbell JR, Brode SK, Barry P, Bastos ML, Bonnet M, Guglielmetti L, **Kempker R**, Klimuk D, Laborín RL, Milanov V, Singla R, Skrahina A, Trajman A, van der Werf TS, Viiklepp P, Menzies D. <u>Association of indicators of extensive disease and rifampin-resistant tuberculosis treatment outcomes: an individual participant data meta-analysis.</u> Thorax. 2023 Dec 22:thorax-2023-220249. doi: 10.1136/thorax-2023-220249.

Segala FV, Nigussa W, Guido G, Kenate B, Facci E, Tsegaye A, Gulo B, Manenti F, **Bobosha K**, Cotugno S, Asmare AB, Cavallin F, Tilahun M, Miccio M, Abdissa A, Putoto G, Saracino A, Di Gennaro F. <u>Active close contact investigation of tuberculosis through computer-aided detection and stool Xpert MTB/RIF among people living in Oromia Region, Ethiopia (CADOOL Study): protocol for a prospective, cross-sectional study. BMJ Open. 2023 Dec 21;13(12):e074968. doi: 10.1136/bmjopen-2023-074968.</u>

Hassan-Moosa R, Motsomi KW, Narasimmulu R, Sivro A, Naidu KK, Kharsany ABM, Samsunder N, Perumal R, **Naidoo K**. <u>Drug-Resistant TB, HIV and COVID-19 Co-Infection: Case Reviews from Kwa-Zulu Natal, South Africa</u>. *Infect Drug Resist*. 2023 Dec 15;16:7663-7670. doi: 10.2147/IDR.S433695.

Lanni F, Antilus Sainte R, Hansen M Jr, Parigi P, Kaya F, LoMauro K, Siow B, Wilkinson RJ, **Wasserman S**, Podell BK, Gengenbacher M, Dartois V. <u>A preclinical model of TB meningitis to determine drug penetration and activity at the sites of disease.</u> Antimicrob Agents Chemother. 2023 Dec 14;67(12):e0067123. doi: 10.1128/aac.00671-23.

Tomalka J, Sharma A, Smith AGC, Avaliani T, Gujabidze M, Bakuradze T, Sabanadze S, Jones DP, Avaliani Z, **Kipiani M**, **Kempker RR**, **Collins JM**. <u>Combined cerebrospinal fluid metabolomic and cytokine profiling in tuberculosis meningitis reveals robust and prolonged changes in immunometabolic networks.</u> <u>Tuberculosis</u> (Edinb). 2024 Jan;144:102462. doi: 10.1016/j.tube.2023.102462.

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