

SECTION OF EPIDEMIOLOGY AND POPULATION SCIENCES

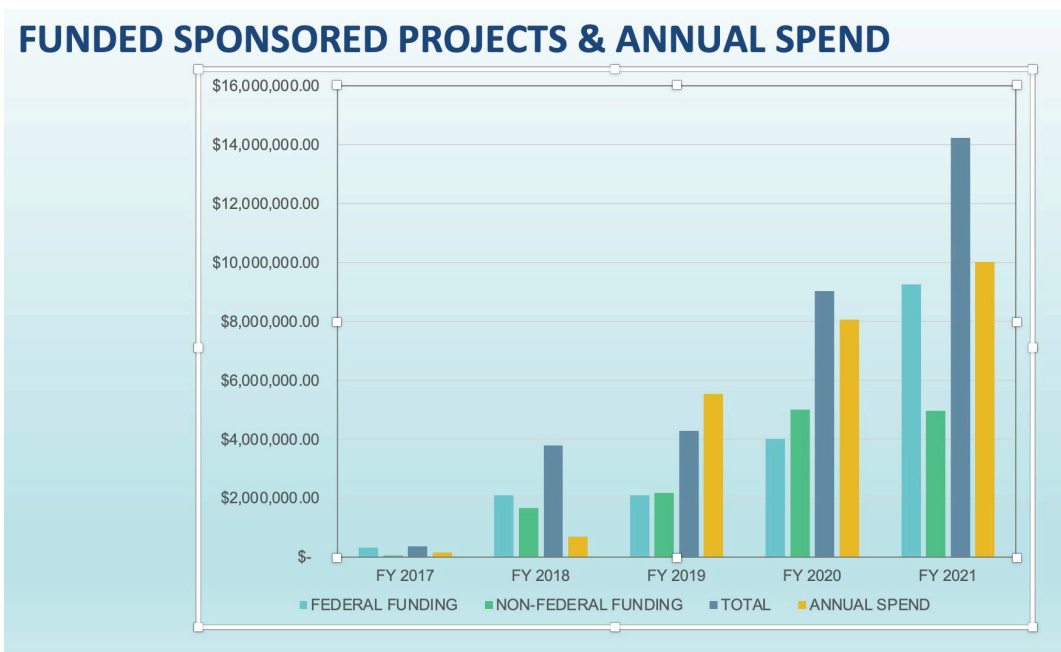
SECTION ACCOMPLISHMENTS

- The section was awarded a new Cancer Prevention Research in Texas (CPRIT) training award Systems Epidemiology for Cancer Training Program
- In 2020, the ICTR Biostatistics group collaborated with investigators on 263 unique, new research projects across departments of Medicine, Pediatrics, Radiology, Anesthesiology, Obstetrics & Gynecology, Molecular and Human Genetics, Surgery, Ophthalmology, Neurology, Dermatology, Orthopedic Surgery, Emergency Medicine, Urology, Family & Community Medicine, Physical Medicine and Rehabilitation, Otolaryngology, Psychiatry & Behavioral Sciences, and others
- The section’s annual funding for fiscal year 2021 was \$14.3 million dollars. Of this award, \$3.5 million dollars was funded by CPRIT



INTERIM SECTION CHIEF

Chris Amos, PhD



Annual funding for past five years.

- Researchers in the section participated in Covid-19 research, including the Community Prevalence of SARS-CoV-2 Study (COMPASS—COVPN5002) and the NIH Community Engagement Alliance Against COVID-19 Disparities study



COVID-19 research study site.

FACULTY

Interim Chief

- Christopher Amos, PhD

Professor

- Yong Li, PhD
- Margaret Spitz, MD

Associate Professor

- Aaron Thrift, PhD
- Bo Peng, PhD
- Chao Cheng, PhD
- Hoda Badr, PhD
- Ivan Gorlova, PhD
- Kristina Whitworth, PhD
- Olga Gorlova, PhD

Assistant Professor

- Charles Minard, PhD

- Jinyoung Byun, PhD
- Younghun Han, PhD
- Yafang Li, PhD
- Yanhong Liu, PhD
- Abiodun Oluyomi, PhD
- Tuna Musaffe, PhD

Instructor

- Xinfang Yu, PhD

Postdoctoral Associates

- Alexander Renwick, PhD
- Chongming Jiang, PhD
- Chunmei Fan, PhD
- Jian-Rong Li, PhD
- Maral Adel Fahmideh, PhD
- Navid Sobhani, PhD
- Quinn Ostrom, PhD
- Syed Ahsan Raza, MD, PhD

- Wei-Jen Chen, PhD
- Wei Hong, PhD
- Wei Li, PhD
- Wilson Da Costa Jr. MD, PhD
- Xiaotao Zhang, PhD
- Xinfang Yu, PhD
- Yadong Dong, PhD
- Zhihui Zhang, PhD

Secondary Appointments

- Richard Finnell, PhD
- Philip Lupo, PhD
- Javad Razjouyan, PhD
- Michel Scheurer, PhD
- Lea Steele, PhD
- Elaine Symanski, PhD
- Cheryl Walker, PhD

Adjunct Appointments

- Elmer Bernstam, PhD

HONORS AND ACHIEVEMENTS

Chris Amos, PhD

- Board of Scientific Counselors, National Institute for Environmental Health Science
- American Association of Cancer Research/American Cancer Society Award for Excellence in Cancer Prevention
- Board of Advisors, University of Michigan, Rogel Cancer Center
- Editorial Board, Genes and Immunity
- Editorial Board, Human and Molecular Genetics
- Served as the co-national leader of the COVPN-5002 COMPASS study
- Served on the national Needs and Assessment Working Group of the NIH Community Engagement Alliance Against COVID-19 Disparities

Hoda Badr, PhD

- Fellow at the 2020-2021 Hedwig van Ameringen Executive Leadership in Academic Medicine Program for Women, 09/2020-07/2021

Aaron Thrift, PhD

- Associate Editor, Clinical Gastroenterology and Hepatology
- Member, Clinical Guidelines Committee, American Gastroenterological Association Institute

Jinyoung Byun, PhD

- Teaching Activities: 2020 Spring GS-GG_6301_4_DIDAC Bioinformatics & Genomic Analysis – Term 4 AY19
- 2020 Fall GS-GS_6400_1_DIDAC Foundations B: Biostatistics – Terms 1&2 AY20

Chao Cheng, PhD

- Lecturer, GS-QC-5105: Seminar in Quantitative Biosciences (Graduate students)
- Lecturer, QCB: Advanced topics (Graduate students)
- Lecturer, GS-GG-6301: Bioinformatics and Genomic Analysis (Graduate students)

Yafang Li, PhD

- Instructor in Foundation B course for graduate students

Yanhong Liu, PhD

- Presented the first-authored work “Immunogenetic determinants of head and neck cancer in Veterans in the Million Veteran Program cohort” at the American Association for Cancer Research annual meeting
- Published one first-authored paper in NPJ Precision Oncology: Rare deleterious germline variants and risk of lung cancer
- PI of a newly awarded NCI R03 project, “Evaluating the impact of metatranscriptomic and immunological features in early-stage lung cancer”

Charles Minard, PhD

- Chief Biostatistical Consultant for the Institute for Clinical and Translational Research
- 2019-20 GSBS Best Course in GS/Foundational Courses, Co-Director Foundations B: Biostatistics
- Senior Statistician for the Phase 1/Early Phase 2 Pilot Consortium studies with the Children’s Oncology Group
- Institutional Review Board #3 Biostatistician
- Faculty Senator for Institute for Clinical and Translational Research

Abiodun Oluyomi, PhD

- BCM Career Advancement Series Candidate, Assistant Professors Category
- Member, Policy Advisory Committee of North American Chapter, International Society for Environmental Epidemiology
- Guest lecturer and panelist, “Asthma, social determinants of health, and mobile health (mHealth) technology. An environmental health case history” as part of a 1st-year medical degree course on The Social Determinants of Health, at the Engineering Medicine program, Texas A&M University
- Lecturer, NIEHS T32 Training Program; Precision Environmental Health, Faculty Mentor
- Scholarship Oversight Committee for Maria Castellanos, MD, Pediatric Hematology/Oncology Fellow at Texas Children's Hospital
- Scholarship Oversight Committee for Danielle Gonzalez, MD, Neonatal-Perinatal Medicine Fellowship, Baylor College of Medicine

Syed Ahsan Raza, PhD

- Podcast guest, “Patterns of Infectious Disease and Cancer: Syed Ahsan Raza Fights Disease through Epidemiology” by Richard Jacobs, Host, Finding Genius Podcast, June 13, 2020

Navid Sobhani, PhD

- Thesis published: The predictive role of the immune system for response to therapy - and survival in patients with solid tumors

Xiaotao Zhang, PhD

- Recipient, American Association of Cancer Research-Bristol-Meyers Squibb Oncology Scholar-in-Training Award

RESEARCH ACTIVITIES

Grants

Chris Amos, PhD

- NIH Community Engagement Alliance (CEAL) 1OT2HL158258-01; Texas CEAL Consortium (part of Against COVID-19 Disparities); \$315,115 (subcontract to UNTHSC)
- 3UM1AI148575-02S2; Vaccine and Treatment Evaluation Units (VTEU) S2; \$1,363,461
- 5U01CA243483; Sequencing Familial Lung Cancer; \$2,796,500
- R01CA217105; Discovery, Biology and Risk of Inherited Variants in Glioma; \$593,750

Hoda Badr, PhD

- P30 CA125123-14S7; Improving coordination and delivery of financial navigation services at the DLDFCC; \$150,000

Chao Cheng, PhD

- NIH/NIEHS 5R01ES031511; Systems-wide analysis of oxidative stress-responsive m6A epitranscriptome; \$2,011,540 (co-I, \$860,000 subaward to BCM)

Yafang Li, PhD

- 1R21CA235464 (NIH/NCI); Genetic Interaction Analysis Involving Oncogenesis Related Genes in Lung Cancer; \$169,149

Yong Li, PhD

- NIH; TP53 Germline Mutations: Beyond LFS; \$366,000
- NIH; Dietary Carcinogens for Colorectal Cancer; \$366,000
- CPRIT; Comprehensive Analyses of Cancer Etiological Factors; \$1,100,000
- NIH; Polycyclic aromatic hydrocarbons: ultrasensitive detection, early life exposures-clinical outcomes (preterm births, chronic lung disease, and neurocognitive deficits), prevention and remediation; \$10,000
- International Waldenstrom's Macroglobulinemia Foundation; Direct targeting the MYD88 L265P driver mutation in Waldenstrom's Macroglobulinemia; \$200,000

Yanhong Liu, PhD

- NCI R03; Evaluating Etiological Impact of Metatranscriptomic and Immunological Features for Lung Cancer; \$100,000

Charles Minard, PhD

- OT2HL155038; Biomarkers for gene-based therapy, National Heart, Lung, and Blood; \$409,398
- NIH Eunice Kennedy Shriver National Institute of Child Health & Human Development P50 HD103555; Baylor College of Medicine Intellectual and Developmental Disabilities Research Center; \$1,251,099

Bo Peng, PhD

- R01HG008972; Computational tools for sequence-based large-scale epidemiology studies; \$60,000

Aaron P. Thrift, PhD

- CPRIT RP200537; Genetic Epidemiology of Hepatocellular Carcinoma in Hispanics; \$2,437,314

Publications

- *Alimentary Pharmacology & Therapeutics* (7.731): 1
- *American Journal of Gastroenterology* (10.383): 1
- *American Journal of Hematology* (7): 1
- *Am Journal of Respiratory and Critical Care Medicine* (21.4): 1
- *Anesthesia and Analgesia* (4.3): 1
- *Annals of Surgical Oncology* (4.2): 2
- *Biomedicines* (4.7): 1
- *Blood Advances* (4.9): 2
- *Blood Cancer Journal* (8.023): 1
- *Cancer Communications* (5.627): 2
- *Cancer Epidemiology and Biomarkers* (4.561): 10
- *Cancer Immunology Immunotherapy* (5.442): 1
- *Cancer Letters* (7.36): 1
- *Cancer Research* (12.7): 1
- *Cancers* (6.126): 4
- *Carcinogenesis* (4.546): 3
- *Cellular and Molecular Life Sciences* (6.496): 1
- *Clinical Cancer Research* (12.5): 2
- *Clinical Gastroenterology and Hepatology* (8.549): 3
- *Clinical Nutrition* (7.324): 1
- *Clinical and Translational Medicine* (7.919): 1
- *Diabetes Research and Clinical Practice* (5.6): 1
- *Diabetes Technology and Therapeutics* (6.1): 1

- *Drug and Alcohol Dependence* (4.492): 1
- *Expert Review in Clinical Pharmacology* (5): 1
- *FASEB Journal* (4.966): 2
- *Frontiers in Immunology* (6.429): 1
- *Frontiers in Oncology* (5.66): 3
- *Gastroenterology* (20.877): 4
- *Genome Research* (11.093): 1
- *Hepatology* (14.679): 1
- *Human Mutation* (4.878): 2
- *International Journal of Cancer* (5.145): 4
- *International Journal of Molecular Science* (5.9): 4
- *JAMA Oncology* (31.8): 1
- *JCI Insight* (8.3): 1
- *Journal of Cancer Survivorship* (4.442): 1
- *Journal of Hematology Oncology* (11.059): 2
- *Journal of Medical Internet Research* (5.4): 1
- *Journal of the National Cancer Institute* (12.589): 1
- *Journal of Neuro-Oncology* (4.13): 1
- *Laboratory Investigation* (4.857): 2
- *Molecular Cancer* (15.302): 2
- *Molecular Cancer Research* (4.63): 2
- *Molecular Oncology* (6.574): 1
- *Nature Communications* (12.121): 4
- *Nature Genetics* (38.33): 1
- *Nature Machine Intelligence* (16.65): 1
- *Nature Partner Journals Precision Oncology* (9): 1
- *Oncogenesis* (6.119): 1
- *Pain* (6.02): 1
- *Pediatric Allergy and Immunology* (4.1): 1
- *Pediatric Diabetes* (4.3): 1
- *Proceedings of the National Academy of Sciences* (9.412): 1
- *Science* (41.845): 1
- *The Journal of Nutrition* (4.798): 1

Books and Book Chapters

Hoda Badr, PhD

- Couple-relationships and Cancer Adaptation. In: *Wiley Encyclopedia of Health Psychology: Volume II, The Social Bases of Health Behavior*

Aaron P. Thrift, PhD

- Epidemiology and global impact: is esophageal cancer on the rise? In: *WGO Handbook on Early Diagnosis and Treatment of GI Cancer*

Wilson Luiz da Costa Jr., MD, MPH, PhD

- Prognostic factors of colorectal liver metastasis. In: *Colorectal Cancer Liver Metastases*

Xiaotao Zhang, PhD

- Diet, Microbiome, Inflammation, and Cancer. In: *Inflammation, Infection, and Microbiome in Cancers. Physiology in Health and Disease*

CENTERS

Institute for Clinical and Translational Research

The **Institute for Clinical and Translational Research (ICTR)** managed scientific review for all new human subjects protocols to evaluate the scientific and institutional value, prioritize studies, and expedite their deployment in clinical venues. ICTR also helped to deploy the Datathon, which provided data for quality improvement- and population science-related studies. Data were provided from the Faculty Group Practice and Baylor College of Medicine data and Baylor St. Luke's Medical Center to qualifying investigative teams (chosen after committee review). Next year, the Datathon will also embrace research-related projects. The ICTR facilitated the purchase of i2b2, a software environment that facilitates access to de-identified population-level information about cohorts derived from the faculty group practice at Baylor College of Medicine and Baylor St. Luke's Medical Center. The ICTR also organized training programs for i2b2 and slicer/dicer, software used by clinicians for similar purposes of identifying patients for studies.