

Assistant/Associate/Full Professor Microbial Omics and Data Integration

The Arizona State University's College of Health Solutions (CHS) and Biodesign Center for Health Through Microbiomes (HTM) invite applications for a full-time, 9-month tenure-track faculty position at the rank of assistant, associate, or full professor. The position is a joint hire between CHS and HTM.

Expertise on functional annotation, genetic variation analysis, statistical analysis, modeling, and data integration are critical for targeted microbiome interventions and discovery of potential treatment agents and microbiome-based biomarkers. To meet the growing need for these areas in collaborative research, we seek candidates with expertise in microbial omics (metagenomics, metabolomics, metatranscriptomics, metaproteomics, culturomics) analyses and integration. Research areas of high interest for this position include: bioinformatics, machine learning, data analytics, data integration, biostatistics. Originality, fit with HTM, strong interdisciplinarity, and the potential impact of the candidate are higher priorities than specific research area.

We seek applicants who will contribute to our programs and expand collaborations between the Biodesign Institute and CHS.

Through teaching, academic programs, service and research, all faculty at the College of Health Solutions address one or more of our three major areas of focus: 1) The systems of health care and the health needs of populations; 2) Health and human performance of individuals across the lifespan; 3) Personalized interventions through precision health. Across these areas, we work to address complex and difficult health problems which require transformative collaboration, translational research and innovation. We are particularly interested in making an impact on populations with significant health disparities.

The Biodesign Institute at ASU delivers the future of nature-inspired scientific innovation today for the betterment of human health, community safety, and global sustainability. Created on the premise that scientists can overcome complex societal issues by emulating and re-imagining the "design rules" and trial-and-error approach found in nature, the institute's researchers are addressing an expansive array of global challenges by creating "bioinspired" solutions, including: new vaccine discovery and delivery; early detection and treatment of cancer and infectious diseases; techniques for detecting and removing contaminants from air and water; and the application of nanotechnology for biomedicine and electronics. To advance its bioinspired research mission, the Biodesign Institute has established 17 different research centers and has more than 200 active research projects.



Our team in the Biodesign Center for Health Through Microbiomes contributes to the robust research activities of the Institute by applying microbe-based strategies to advance society's health and welfare by improving the environment and enhancing health outcomes. The center's research spans from fundamental to applied science and leverages industry and foundation collaboration. HTM will establish an ecosystem of innovation in which fundamental knowledge is used to develop microbial-based health interventions and diagnostics. We investigate the fundamental mechanisms of the effect of microbes on human health.

Responsibilities for this position include developing and maintaining a successful research program, teaching undergraduate and graduate courses, mentoring students and junior faculty, and providing service to the program and university as well as to the community and profession. The ideal candidate will present evidence of a successful research trajectory commensurate with the appropriate rank (Assistant, Associate, Professor) including promise of or sustained extramural funding and peer-reviewed publications, and a strong commitment to high quality teaching and mentoring.

At ASU, the College of Health Solutions, the Biodesign Institute, and the Biodesign Center for Health Through Microbiomes work to maximize opportunities for people from diverse backgrounds, abilities, and perspectives. We value and encourage cultural and intellectual diversity, and we strive to foster a welcoming and inclusive environment for all faculty, staff and students - which we believe is critical to our success as a community. All individuals who can strengthen the diversity of our academic community are encouraged to apply, and will be considered without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other basis protected by law.

About the College of Health Solutions

The College of Health Solutions is committed to translating scientific health research and discovery into practice to improve health outcomes through education, research and service. We equip students with the knowledge and skills to influence healthier lifestyle choices; develop creative interventions to improve the health of people and populations; analyze and translate large amounts of health data into solutions; and maximize the technology, science, business and application of diagnostics. Our research programs encompass basic science, discovery science, clinical trials, intervention science and measurement of health outcomes. In all cases, our faculty use interdisciplinary approaches to address the complex systems that underpin health problems. We are highly collaborative, transparent and team-oriented. Our innovative organizational structure includes translational teams that move science from labs into communities with evidence-based interventions that make a difference, as well as affinity networks where teams of people work together to improve methodologies and processes. All of our programs, in and out of the classroom, are designed with the goal of improving the health of people and communities.



Current training programs include behavioral health, biomedical diagnostics, biomedical informatics, exercise science, health promotion, health sciences, kinesiology, medical studies, nutrition, population health, the science of health care delivery, and speech and hearing science. Our programs are offered at ASU's Downtown Phoenix, Tempe, Polytechnic, West and Lake Havasu campuses, as well as on Mayo Clinic's campus in north Phoenix.

About the Biodesign Center for Health Through Microbiomes

Research into the microbiome, a crucial bridge between our diet and our health, will revolutionize medicine. The overarching goal of HTM is to manage the human microbiome to transform human health. We leverage industry ties to secure funding and commercialize the technology developed within the Center.

This goal will be achieved by applying microbe-based, strategies to advance society's health and welfare, by improving the environment, and enhancing health outcomes. The center's research spans from fundamental to applied science and leverages industry collaboration. HTM will establish an ecosystem of innovation where fundamental knowledge is used to develop microbial-based health interventions and diagnostics. We investigate the fundamental mechanisms of the effect of microbes on human health.

About Arizona State University

Arizona State University is a new model for American higher education, an unprecedented combination of academic excellence, entrepreneurial energy and broad access. U.S. News & World Report ranks ASU #1 in the U.S. for innovation for seven years in a row. This New American University is a single, unified institution comprising multiple differentiated campuses positively impacting the economic, social, cultural and environmental health of the communities it serves. Its research is inspired by real world application blurring the boundaries that traditionally separate academic disciplines. ASU serves 135,000 students across all campuses and on-line as of the Fall 2021 semester. ASU champions intellectual and cultural diversity, and welcomes students from all fifty states and more than one hundred nations across the globe.

For more information about ASU and the College of Health Solutions, visit <u>http://about.asu.edu/</u> and <u>https://chs.asu.edu</u>

Required Qualifications

 Doctorate or other relevant terminal degree in a field relevant to microbiome research such as: Microbiology, Medicine, Computational Biology, Evolutionary Biology, Molecular Biology, Biostatistics, Bioengineering, Ecology, Environmental Engineering, Genetics,



Systems Biology, Physiology, Metabolism, Biochemistry, or a similar discipline that embodies microbiome expertise

- Evidence of a strong potential to obtain or evidence of a successful history of obtaining extramural funding to support a robust research portfolio commensurate with an open rank ranging from assistant to full professor
- Evidence of a sustained history of peer-reviewed publications in high-impact journals commensurate with the appropriate rank
- Evidence of strong potential to teach or evidence of successful teaching at the university level related to the field of microbiome, data analysis, data integration commensurate with the appropriate rank
- Demonstrated ability to work, collaborate, and communicate effectively with diverse students, colleagues, community partners, and staff in a multicultural environment.
- Shows commitment to our <u>College's Justice Equity Diversity and Inclusion Council's</u> mission and vision.

Desired Qualifications

- Expertise in microbial omics (metagenomics, metabolomics, metatranscriptomics, metaproteomics) analyses and integration. Functional annotation, statistical analysis and regression, genetic variation analysis, statistical analysis and modeling.
- Research focus in one of the following areas: microbiome- and obesity-related disorders, nutrition and gut microbiome, autism and gut microbiome, effect of antibiotics on the gut microbiome, chemical(s)-microbiome interactions, interaction of the gut microbiome with diet and food additives
- Background, knowledge, and/or research in the area of science of microbiome and precision medicine relevant to the needs of Arizona's diverse populations
- Experience in developing and maintaining community partnerships and interprofessional or team-based collaborations
- Evidence of impact of research
- Experience teaching online courses at the University level
- Evidence of participation in translational, trans-disciplinary, and team science initiatives relevant to CHS research domains
- Evidence of active involvement in university, community, and/or professional service commensurate with rank

For associate or full professor rank

 Evidence of a successful history of obtaining extramural funding from highly competitive sources such as NIH, PCORI, CDC, NSF, similar federal mechanisms, and/or foundations (e.g., Robert Wood Johnson Foundation)



- Experience teaching graduate level courses and mentoring graduate students in research and publishing
- Demonstrated success and/or commitment to promoting student retention and/or graduation

Application Deadline and Procedures

Application deadline is **December 10, 2021**. Applications will continue to be accepted on a rolling basis for a reserve pool. Applications in the reserve pool may then be reviewed in the order in which they were received until the position is filled.

To apply, click <u>http://apply.interfolio.com/97777</u> to submit the following:

- A letter of interest including the name of the position for which you are applying, your qualifications, and professional experience
- Curriculum vitae
- Statement describing research interests
- Statement describing teaching interests
- Information for three professional references (their position, title, e-mail, phone number). References will not be contacted until the candidate progresses to the latter stages of the search process.
- Diversity and Inclusion statement detailing how your teaching, service and/or scholarship, or other work related to the position, supports ASU's commitment to diversity and inclusion as outlined above and in <u>ASU's charter</u>.

If you have questions regarding the recruitment process, please contact Rachel Otero at <u>Rachel.K.Otero@asu.edu</u>. For further information or questions about the search please contact <u>dr.rosy@asu.edu</u>

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other basis protected by law. (See https://www.asu.edu/aad/manuals/acd/acd401.html and https://www.asu.edu/titlelX/.)

In compliance with federal law, ASU prepares an annual report on campus security and fire safety programs and resources. ASU's Annual Security and Fire Safety Report is available online at https://www.asu.edu/police/PDFs/ASU-Clery-Report.pdf You may request a hard copy of the report by contacting the ASU Police Department at 480-965-3456.