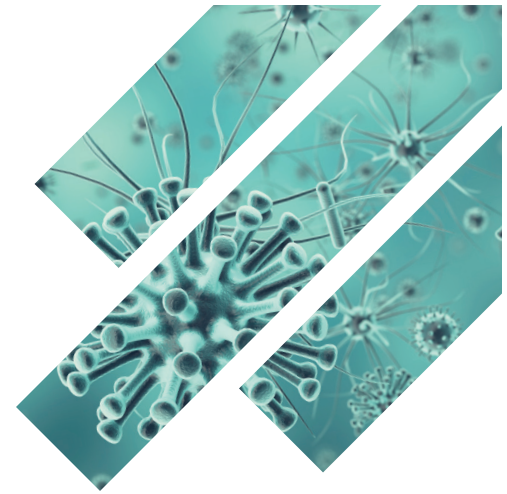


# The Campaign For UC San Diego

At the University of California San Diego, challenging convention is our most cherished tradition. The Campaign for UC San Diego is a university-wide comprehensive fundraising effort to transform the student experience, our campus, and ultimately the way humanity approaches problems and develops solutions.



## Center for Microbiome Innovation

### Transforming health, energy, and agriculture

**The microbiome is intimately coupled to the development of the human body and its environment.**

While we have still to define what constitutes a “healthy” microbiome, some of the major 21st century diseases are now linked to the microbiome, such as asthma; cystic fibrosis; childhood obesity; Inflammatory Bowel Disease (IBD); fatty liver disease; rheumatoid arthritis; and neurological diseases including autism, Parkinson’s Disease, and cancer.

In contrast to the human genome, which is challenging to alter, we modify our microbiome on a daily basis through diet and supplements. Defining positive interventions will require more research, but it’s within our reach. Additionally, engineering microbes, including eukaryotic microbes such as yeast and algae, to deliver drugs offers the potential for novel therapeutic platforms. To get there, we need to understand microbial contributions to development from an individual, a community, and a global health perspective.

**The Center for Microbiome Innovation leverages UC San Diego’s world-class experts across multiple disciplines and access to all the latest omics tools.** These include genomics, metagenomics, metatranscriptomics, metabolomics, multiplex proteomics, artificial intelligence, and more to process hundreds of thousands of samples each year and analyze and collect data for some of the largest microbiome cohorts in the world.

**Accelerating the impact of microbiome research means investing in opportunities** to develop novel tools and methods for analyzing and manipulating microbiomes. It means partnering with stakeholders invested in ending diseases confounding conventional medicine, innovative environmental solutions, and transformative applications in personalized wellness.

120+

Faculty

600+

Projects scientists, post-doctorates and graduate students

\$1M+

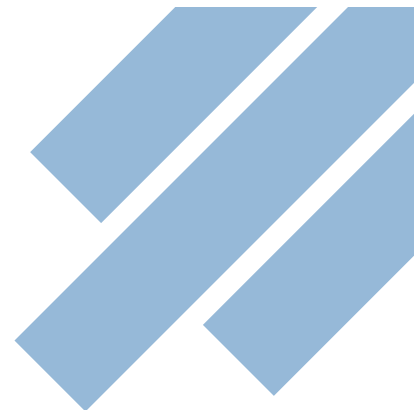
In industry sponsorships, and another \$1M+ in Directed Research Projects

120,000+

Sample processing power per year

## Continue the nontradition.

# Center for Microbiome Innovation Priorities



## Pioneering new directions

Groundbreaking microbiome research suggests its role in a vast range of diseases and disorders. Projects focused on the following unexplored areas may yield exhilarating solutions or paradigms for progress.

- » Foodomics
- » NICU/Hospital Environment
- » Early Childhood Development
- » Environmental Toxins
- » Autism
- » Kawasaki Disease
- » Immuno-oncology
- » Parkinson's Disease

## Accelerating the momentum

A number of projects funded in part by industry partners and other stakeholders offer ample opportunity for growth. By contributing to one of these ongoing projects, you directly help advance our understanding of the role microbes play in these areas, as well fast-track our ability to manipulate them to better the human condition.

- » Diabetes and metabolic diseases
- » Antibiotic Resistance
- » IBD/Colitis
- » Non-Alcoholic Fatty Liver Disease
- » Artificial Intelligence
- » Restoring Microbes After C-Section
- » Tooth Health
- » Technical Clothing
- » Skin Microbiome for Atopic Dermatitis/Psoriasis

## Help us continue the nontradition.

**With your help**, UC San Diego will convert the possibilities of microbiome research into actualities — solutions that save lives, restore our habitats, and build new vectors between organic and built materials. Together with your philanthropic support of the **Campaign for UC San Diego**, we can develop the talent and technology the industry — and our world — need for the future of microbiome research.

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***Learn more at [cmi.ucsd.edu](http://cmi.ucsd.edu)***