Imagine a system for real-time identification of the microbes responsible for life-threatening lung infections in people with cystic fibrosis. In just a few years, clinicians will likely be using these real-time data to prescribe personalized — and far more effective — antibiotics regimens. This is just one of the many ways interdisciplinary microbiome and metabolome research at UC San Diego is poised to disrupt medical research and clinical medicine.
Leveraging the Microbiome Revolution

“Every day we learn more about the crucial roles microorganisms play in life on earth at all scales, from specific regions of the human body, to individuals, populations and ecosystems. At UC San Diego, we pursue the interdisciplinary research and academic-industry collaborations that will ensure that the microbiome and metabolome revolutions address as many of our global society’s pressing challenges as possible.”

— Rob Knight, Ph.D.
Center for Microbiome Innovation, Faculty Director

---

**CLINICAL MEDICINE**

We are changing diagnosis and course of care for conditions including IBD, type 2 diabetes, pulmonary disease and cystic fibrosis. We are exploring connections to psychiatric conditions, autism and more.

---

**DRUG DEVELOPMENT**

Understanding how the microbiome impacts drug efficacy and antibiotic resistance are just two of the many ways the microbiome sciences are transforming drug development.

---

**AGRICULTURE**

We are leaders in efforts to understand how microbes in the soil, and within and on surfaces of plants, leaves, stems, roots and seeds play crucial roles in plant health, productivity and protection from disease.

---

**ENERGY AND ENVIRONMENT**

From ecosystem function to renewable energy development, we uncover and harness the power of microorganisms in ecosystems around the world.

---

**PERSONAL CARE**

Beauty and hygiene products can be improved by understanding how products change, or are changed, by microbial communities on the human body.

---

**TECHNICAL INNOVATION**

We partner with companies focused on genome sequencing, DNA and RNA extraction, DNA synthesis, synthetic biology and more.

---

**CENTER DIRECTOR**

Rob Knight
Professor, Departments of Pediatrics and Computer Science

robnknight@ucsd.edu
+1 (858)822-2379

---

**Join us**

We welcome industry partners, faculty members and researchers to join the Center for Microbiome Innovation.

---

**Anne O’Donnell**

EXECUTIVE DIRECTOR
Corporate Research Partnerships
odonnell@ucsd.edu
+1 (858) 822-5963