University of Colorado **Anschutz Medical Campus**

Otolaryngology Omics Research Cluster

Department Research Retreat

Clinicians doing patient research

Sarah Gitomer
Brian Herrmann
Edward Janoff

Microbe-specific expertise

Sarah E. Clark (otopathogens)
Jenna Guthmiller (influenza virus)
Alexander Horswill (Staph/MRSA)

Microbes and Infection

Microbiome

Dan Frank
Jonathan (Kirk) Harris
Janani Ravi
Catherine Lozupone
Breck Duerkop

Technique-specific expertise

Sarah E. Clark (mouse models)
Regie Santos-Cortez (genetic variants)
Eszter Vladar (air liquid interface cultures)
Elan Eisenmesser (proteomics)

Clinical expertise, patient samples and data

Allen, Gregory ‡
Cass, Stephen
CHCO Audiologists ‡
Darr, Owen
Elam, Shannon ‡
Francom, Christian
Friedman, Norman
Gitomer, Sarah
Green, Katherine
Gubbels, Samuel
Herrmann, Brian
Manchaiah, Vinaya ‡
Newton, Stephen
Prager, Jeremy
Schell, Amy
Somme, Stig ‡
Uhler, Kristin
Wine, Todd
Yoon, Patricia
* Chan, Kenny
* Jenkins, Herman

Multi-omics hubs, human and animal models

Santos-Cortez, Regie (otitis media, hearing loss, vestibular, oSDB)
Frank, Daniel (microbiome – oral cancer, otitis media, oSDB)
Lu, Shi-Long (HPV, oral cancer)
Yang, Ivana/Schwartz, David (lung)

Human Genetics & Genomics

Carry, Patrick (orthopedics)
Gao, Bifeng ‡ (sequencing)
Guetz-Lindahl, Shay ‡ (genetic counseling)
Kechris, Katerina (multi-omics analysis)
Hadley-Miller, Nancy (orthopedics)
Phang, Tzu ‡ (bioinformatics)
Pickler, Laura ‡ (genetic syndrome)

Mouse model

Clark, Sarah ‡ (immunology, microbiology)
Greene, Nathaniel ‡ (hearing)

* retired
‡ new, not yet co-authored
4 surgeons moved/not listed
Does not include non-omics R25 co-Is/collaborators outside campus

Focal Points

1. Omics technologies for application to multiple subspecialties

2. Access to patient tissues and clinical data

3. Research concentrations
   a) Microbe-centric: microbiome for head and neck cancer, infections (otitis media and sinusitis), sleep disordered-breathing
   b) Host-centric: genome/transcriptome/epigenome/proteome/immunome for various disorders

Strengths

1. Widespread interest and diverse expertise in omics methods

2. Diverse portfolio of research conducted by both clinicians and basic research scientists

3. Access to patient samples, clinical data and animal models