Examples of current projects:
- anaerobes from hyperalkaline fluids that utilize $H_2$ or $CH_4$ from rock reactions
- sulfur biomineralization
- microbial lipid preservation in mineral reaction products

Methods:
- raman spectroscopy
- cultivation of strict anaerobes
- trace gas measurements
- electron microscopy
Examples of current projects:
- oral, skin, gut microbiomes of veterans
- longitudinal study of microbiomes of USAFA cadets
- mycobacteria and immunoregulation

Methods:
- neuroendocrinology
- immunohistochemistry
- behavioral assays
- marker gene sequencing
Valerie McKenzie
Dept. of Ecology & Evolutionary Biology

https://mckenzielab.com/

Examples of current projects:
- captivity and the mammalian gut microbiome
- amphibian skin microbiome and chytrid disease
- land-use change and parasite ecology

Methods:
- marker gene sequencing
- cultivation of bacteria with anti-fungal properties
- parasite community surveys
Examples of current projects:
- microbial diversity in Antarctic cryoconite holes
- spatial and temporal dynamics of soil microbiomes at high elevation sites
- connectivity of terrestrial and aquatic microbiomes in the CO Front Range

Methods:
- cultivation of extremophiles
- microbial biogeochemistry
- marker gene sequencing
Alisha Quandt
Dept. of Ecology & Evolutionary Biology
(starting January 2018)

http://alishaowensbyquandt.weebly.com/

Examples of current projects:
- microbiome of fungal fruiting bodies
- microbiome of marine snails
- assembling fungal genomes from metagenomes

Methods:
- microscopy
- cultivation of fungi
- genomics/metagenomics
- marker gene sequencing
Examples of current projects:
- isotopic analysis of microbial growth rates
- microbial nitrogen cycling (including denitrification)
- microbial iron oxidation

Methods:
- isotopic analyses/labeling
- microbial geochemistry
- biogeochemical modeling
Noah Fierer
Dept. of Ecology & Evolutionary Biology
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http://fiererlab.org/

Examples of current projects:
- Mycobacterial ecology
- Characterizing novel soil microbial taxa
- Microbiology of the atmosphere
- Arthropod microbiomes
- Volatile-mediated microbial interactions

Methods:
- high-throughput cultivation/phenotyping
- marker gene sequencing
- shotgun metagenomics
The BioFrontiers Next-Gen Sequencing Facility

1 Illumina NextSeq500 instrument
2 Illumina MiSeq instruments

advanced library preparation for DNA/RNA sequencing

Short-Read Sequencing Analysis Workshop