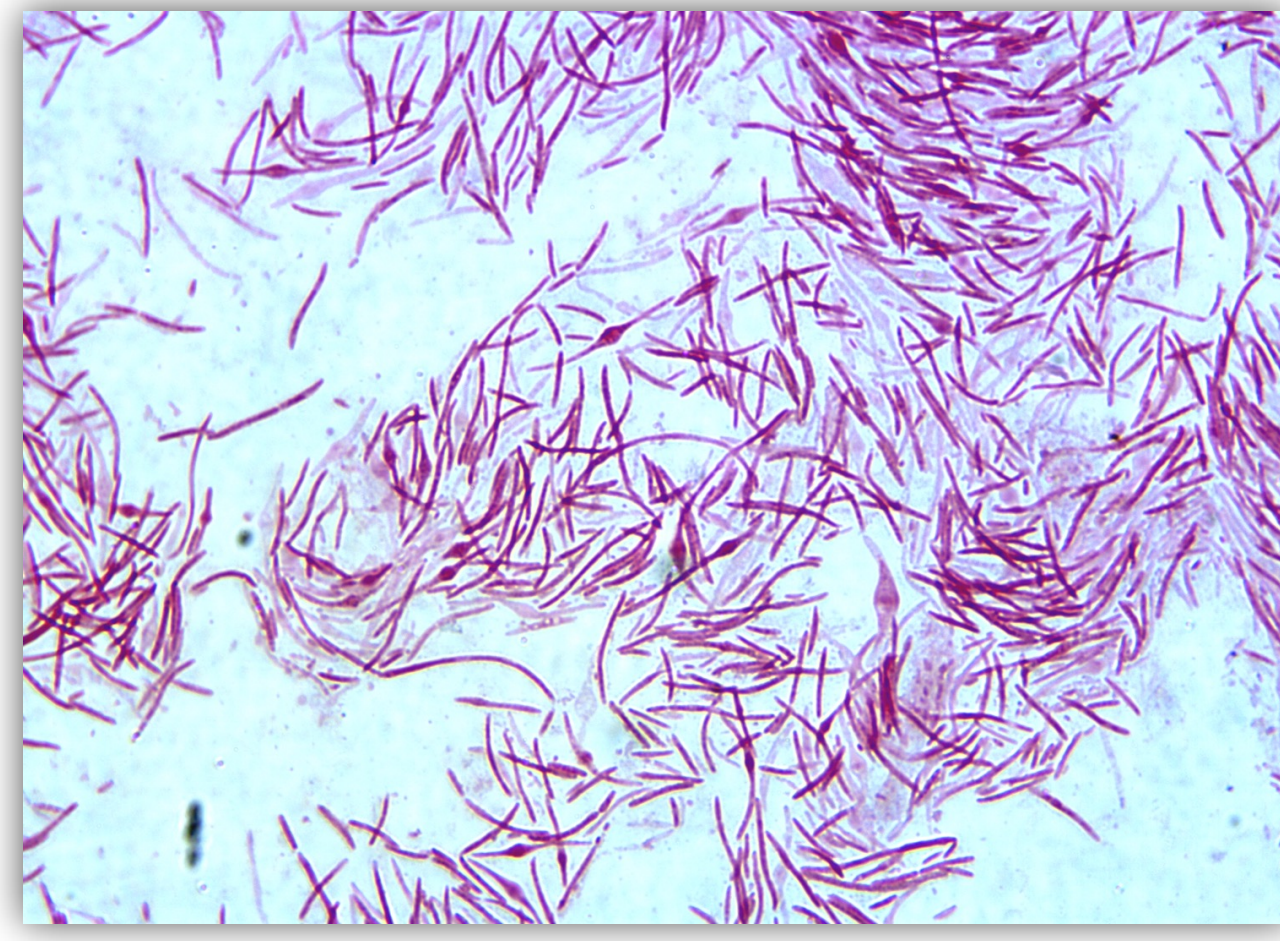


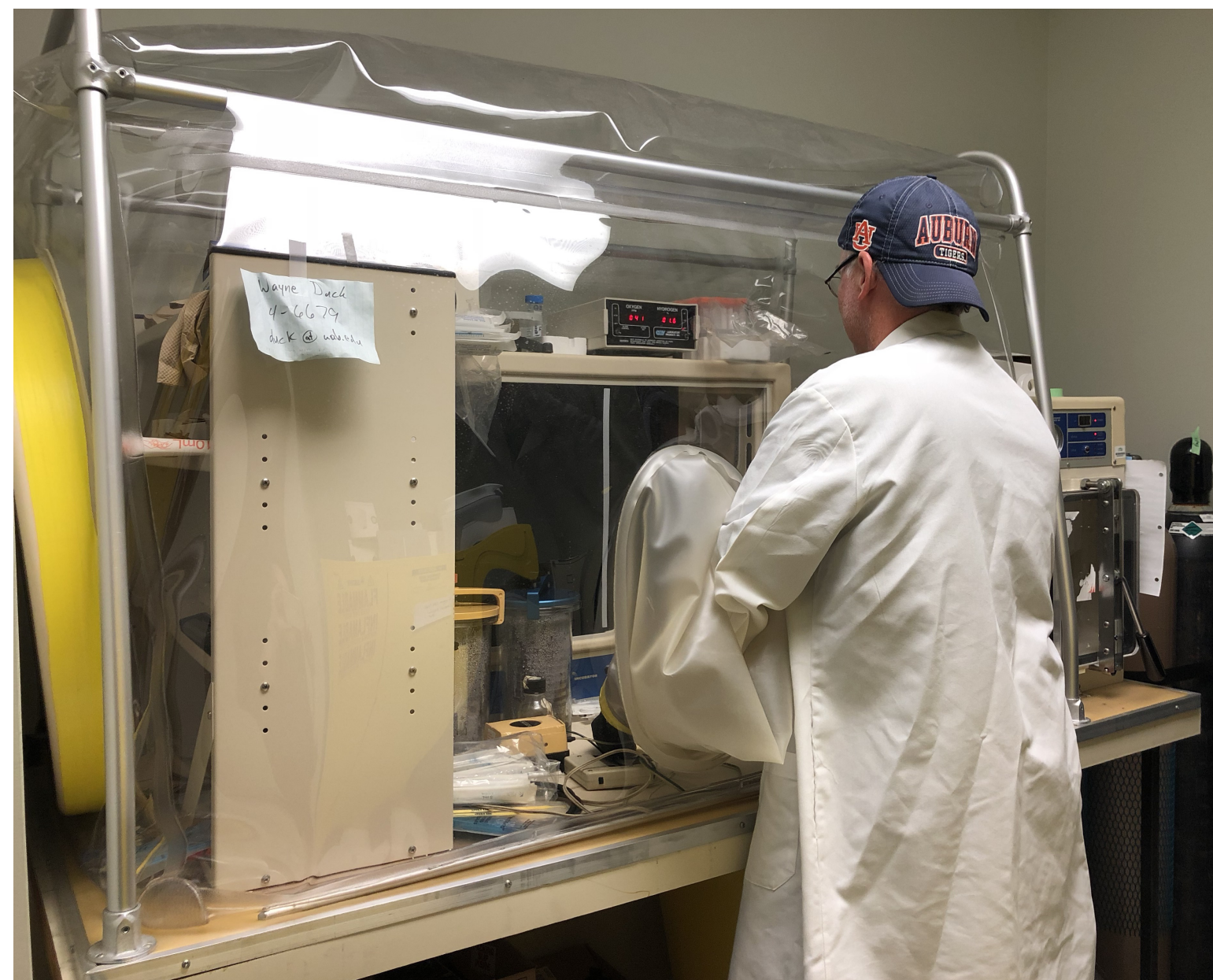
Obtaining and growing defined bacteria from culture collections, including strict anaerobes.

- We already have an extensive library of bacteria obtained from ATCC and DSMZ including many obligate anaerobes isolated from human and mouse gut.



Lachnospiraceae bacterium A4

- We have worked with Drs. Casey Morrow, Craig Maynard, Matt Stoll and others in obtaining and growing difficult to manage organisms necessary for their research.

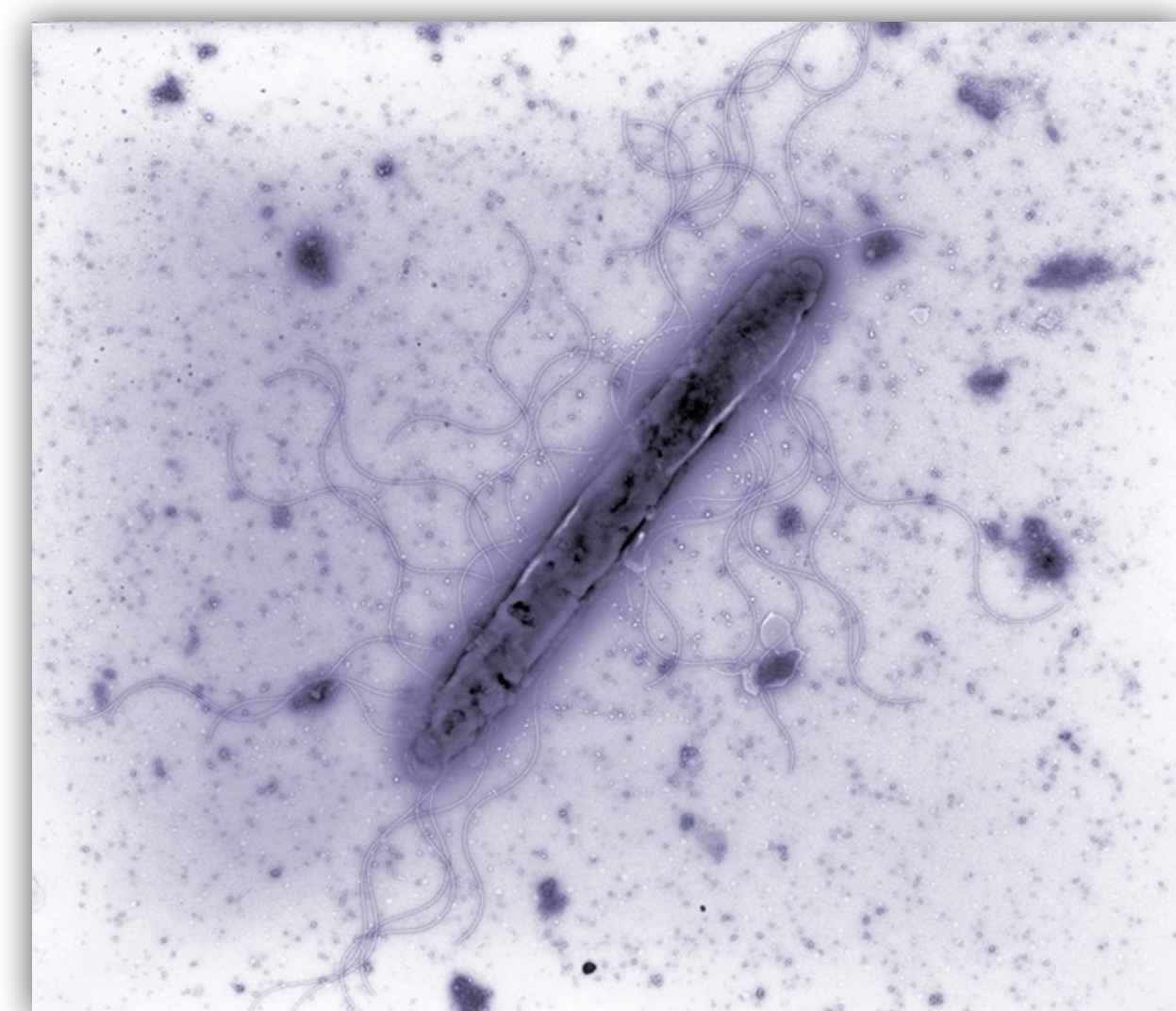


Isolating bacteria of interest from complex biological samples

Culturing the unculturables

- We have isolated numerous organisms yet classified that belong to the families Lachnospiraceae and Ruminococcaceae, a notoriously difficult to isolate and propagate group.

- These families are also under-represented in having their genomes sequenced. We have contributed 15 isolates which have been genome sequenced. Some represent unique genera that have no other close relative.

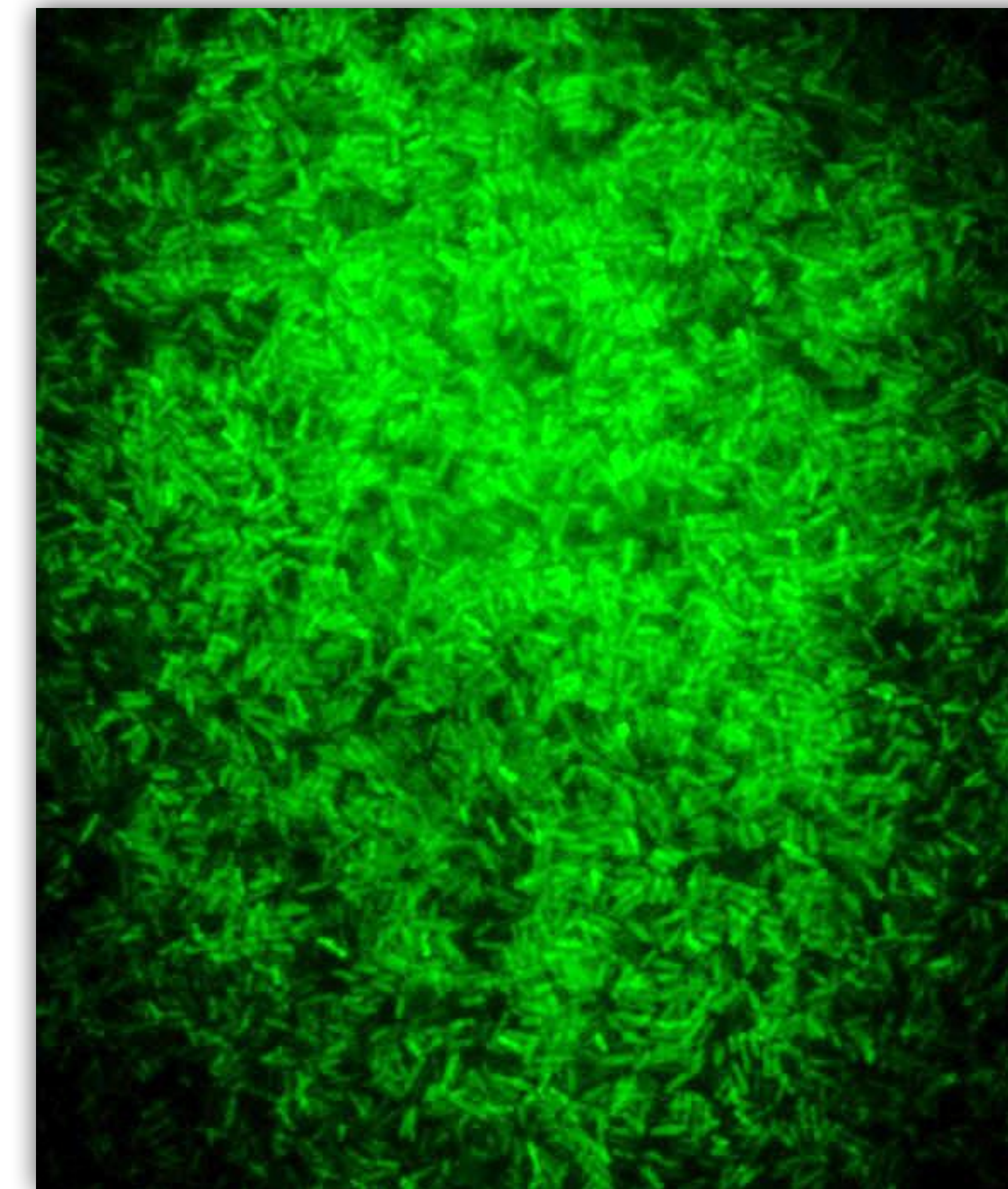
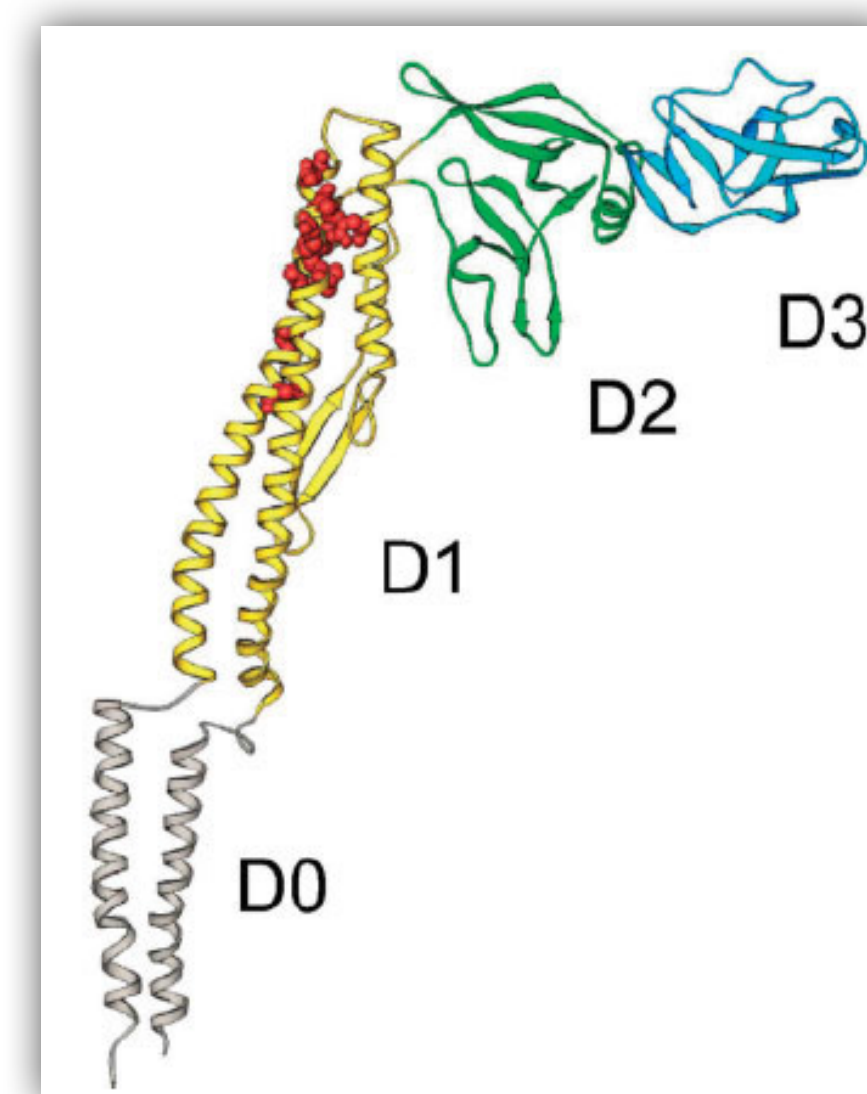


Lachnospiraceae bacterium A4

What We Can Do For You

“Each living creature must be looked at as a microcosm--a little universe, formed of a host of self-propagating organisms, inconceivably minute and as numerous as the stars in heaven.” Charles Darwin

Isolating, expressing, and purifying recombinant microbiota bacterial proteins.

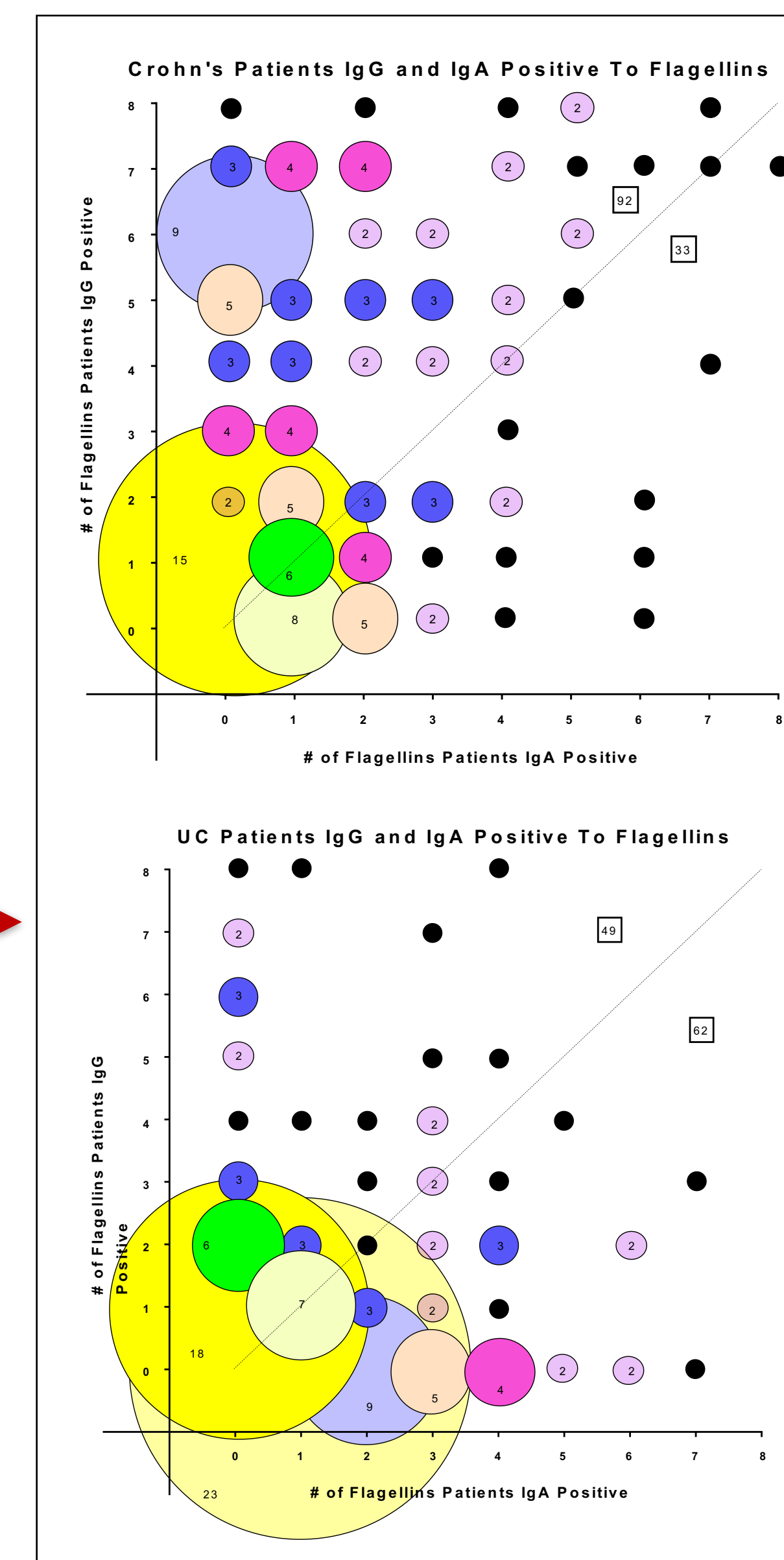
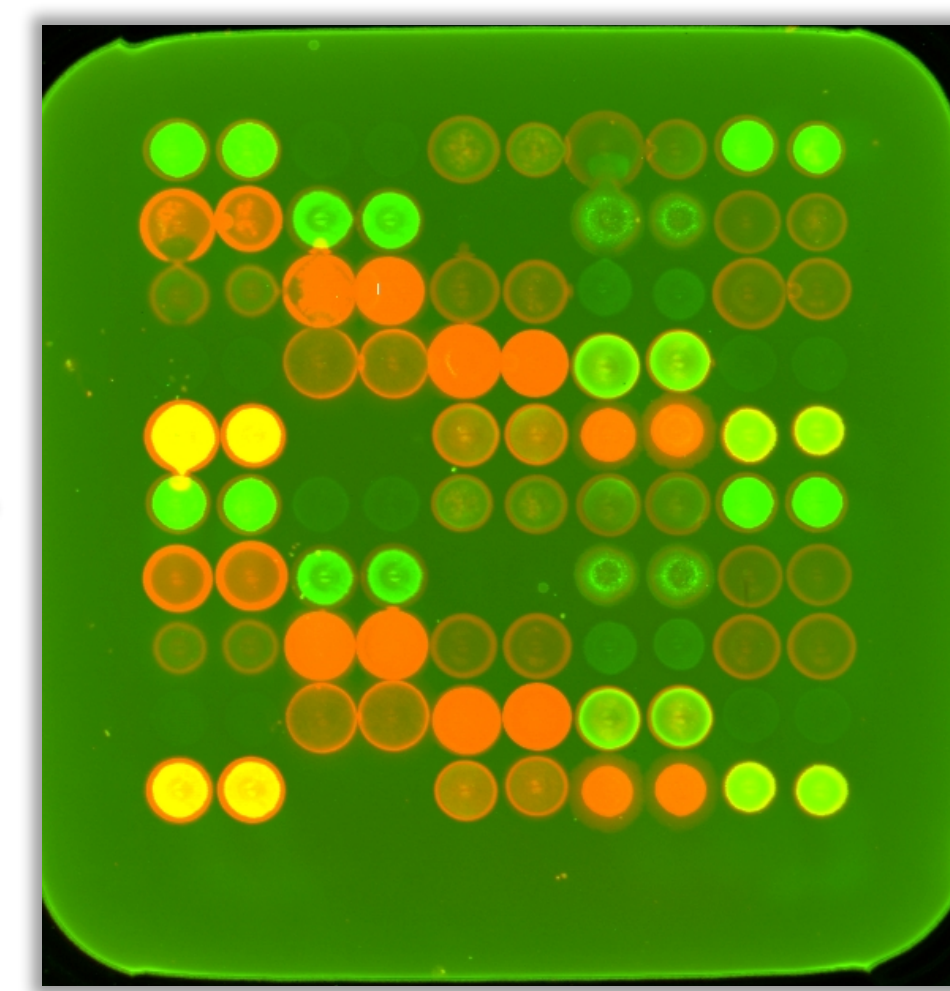
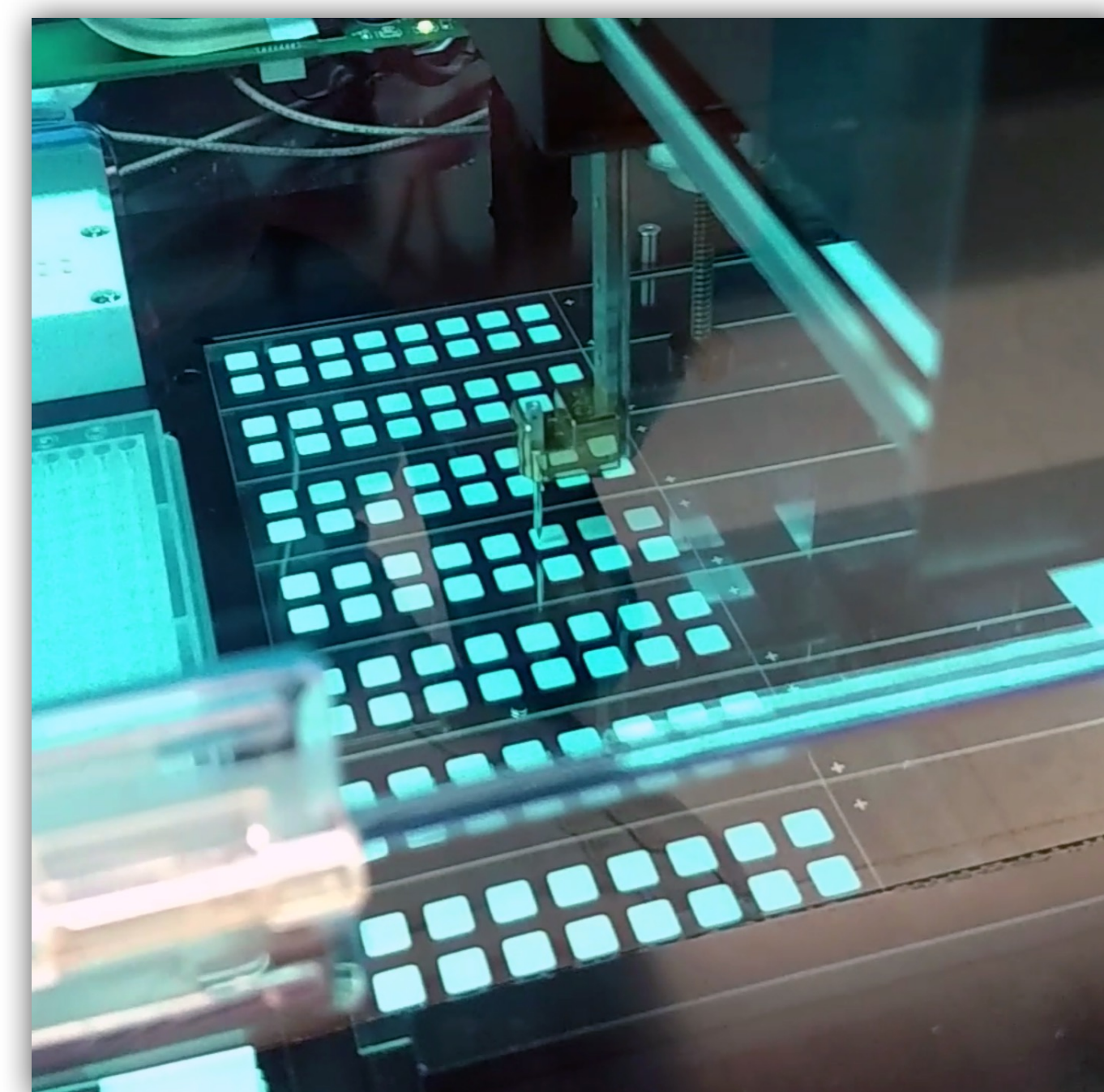


Bacillus subtilis GFP

- We have an extensive library of bacterial proteins isolated from different bacterial families and representing a wide range of functions.
- Our library has a deep and broad representation of Lachnospiraceae and Ruminococcaceae flagellins (above).

Analyzing sera/plasma for IgG or IgA reactivity to defined bacterial lysates or recombinant proteins using a microbiota antigen microarray.

- Our lab is equipped with a Spotbot MicroArrayer (below) capable of printing proteins or bacterial extracts onto nitrocellulose padded slides.
- Slides are then probed with sera and visualized with a fluorescently-labeled secondary antibody
- Scans of the slides are done with a GenePix 4000B microarray scanner.



Instructing lab staff on methods and procedures for direct microbiota experimentation.



Recovery and freezing of mouse anaerobic and aerobic microbiota to preserve and restore organisms that are key to experimental mouse model phenotypes.

