

Duke Aquaterrestrial Biogeochemistry Lab - LAB CONTRACT

Version 1.1.19

5 OVERALL LAB STRATEGIC GOAL → At every time step everyone in the lab is gaining/getting the data, skills, grants, publications, fellowships, jobs necessary to enable our collective ability to produce high quality science.

LAB MOTIVATIONAL QUOTE - "If it's your job to eat a frog, it's best to do it first thing in the morning. And If it's your job to eat two frogs, it's best to eat the biggest one first." -- Mark Twain¹



Weekly Frog



Semester Frog



Annual Frog

10 OVERALL LAB PHILOSOPHY → The more frogs² we eat, the better off we all are - frogs taste better when shared with colleagues

MOTIVATIONAL PRIZES → In any week with 100% of weekly frogs consumed, Emily will order pizza for the following week. Two weeks in a row and she'll also buy beer³.

#DukeBGC Lab Goal Statement:

15 Welcome to Duke's Aquaterrestrial Biogeochemistry research group (aka the Bernhardt lab). You have joined a group of people that share your passion for scientific research and your interests in biogeochemistry and ecology. **Our collective goal is to help every member of the lab to grow intellectually, to produce excellent scientific insights and to achieve their next desired career goal.** To accomplish this goal we expect every member of the lab to: 1) be generous in sharing their advice, expertise and constructive criticism; 2) be proactive in seeking
20 advice, learning from the expertise of others; and 3) be responsive to useful critique. Ultimately, we want the entire group to be producing top quality, creative and useful science by pushing and helping one another to do our very best work.

¹ Although this quote is widely credited to Mark Twain, the lab has recently learned that in fact the quote derives from a French writer named Nicholas Chamfort (source <https://quoteinvestigator.com/2013/04/03/eat-frog/>)

25 ² frogs = challenging items on our to do list that must be accomplished in order to do great science and/or advance professionally

³ Emily B. will still have to buy pizza/beer if she is the only person who does not eat her weekly frog

The Lab Tenets:

(1) Thou shalt:

- 30 ● Share your good ideas freely in order to further improve them
- Keep careful written laboratory and field notes to document your work. Assume that your work will someday be subjected to an audit.
- Credit your sources and your collaborators generously and appropriately
- Abide by all lab safety protocols
 - 35 ○ No food, open-toed shoes, pets in the lab
 - Be cautious in your use, disposal, and labeling of all chemicals
 - Leave shared lab spaces cleaner than you find them
- Be professional and respectful in your interactions with others
- When you screw up, own your mistakes and learn from them

(2) Thou shalt not:

- 40 ● Fail to credit the ideas of others
- Engage in scientific misconduct -
 - No fabrication or manipulation of data to achieve a desired result
 - No p hacking
- 45 ● Plagiarize - all work done by others must be correctly attributed
- Endanger yourself or others by failing to abide by lab protocols
- Verbally or physically harass, intimidate, or disrespect others
- Fail to take responsibility for your mistakes

(3) Earn Your Salary & Fulfill Your Obligations to Taxpayers

50 Each member of the lab has a responsibility to the entities that are supporting their salary. If you are funded by Duke's graduate school to teach, you should invest energy in doing that job well. If you are funded by a federal or state research agency, you owe it to the taxpayers that fund your work to not only do careful science but to publish your work in the public sphere. It is the expectation of the lab that all PhD students will publish a minimum of three peer reviewed papers from their dissertation research. It is the expectation of postdocs that they will publish a

55 minimum of one lab-supported publication annually. Support staff are expected to help the PI, postdocs, and PhD students achieve these goals and may, under some circumstances, be offered the opportunity to lead their own projects and manuscripts.

(4) Datasets Funded by Grants to Bernhardt belong to #DukeBGC

60 You have a responsibility to carefully collect, document and archive your research findings to enable discovery and use by others. Data that is collected as part of the lab group belongs to

the lab rather than the individual. Those responsible for data collection and analysis have priority but not exclusive rights to lab datasets. Ultimately, we hope that the usefulness of your dissertation and postdoctoral data will continue beyond your tenure in the lab. To that end all of your research results must be clearly documented; your data must be archived with the necessary metadata to allow reanalysis; and your QA/QC'd datasets must be accessible to all members of the research group. Ideally, important datasets will be published during or shortly after your time in the lab as data papers, making your data available not only to the lab but to the global research community.

(5) Remember that we are a team.

It is our goal to do our very best science individually and collectively. We can only do that by supporting one another. Yet, any group of people working hard in the same space will encounter conflicts. It is inevitable that members of the lab will occasionally compare themselves to one another; find themselves wanting to use the same space or the same resources at the the same time; or have poor communications that lead to a misunderstanding. We cannot eliminate all conflict, but we can work to proactively avoid predictable conflicts and to deal swiftly and thoughtfully with conflicts as they arise. We agree to work together to overcome conflict and to convert competitive interactions into synergistic ones.

Proactive Strategies to Minimize Conflict

- Regular Contact: All lab members are expected to attend weekly lab meetings except in the case of illness or travel
 - Lab members should inform everyone ahead of when they expect to be engaged in intense lab work that will take up more space, supplies, support staff time than usual.
 - Lab members should feel free to raise tragedy of the commons issues in lab meeting and all members should help devise strategies for resolving these problems.
- Honest Use of Supplies: Lab supplies are expensive and they are generally purchased with grant money. Be mindful that there are both ethical and financial obligations that should prevent you from using supplies that you have not purchased. Plan your use of supplies according to your budget and your time frame to avoid conflicts.
- Clean up after yourself and ensure any lab members that you supervise do the same.
- Celebrate Success: Successes should be shared! Any success by a member of our lab group is a success for our team. Snaps, claps and hugs are the correct response and successes should be shared.
- Share Problems: Problems should be shared! When one member of our lab has a failed experiment, a rejected paper, a harsh review or when any of the other million things that

can go wrong in science have gone wrong for them they can expect understanding, commiseration and support from the rest of the lab.

Conflict Resolution

100 It is our hope never to have an interaction within the lab that requires engaging law enforcement, but it must be stated here that any act against a lab member that is illegal should be reported immediately to Durham police. This includes any form of physical assault or verbal abuse that fits the legal definitions of harassment or assault. Our lab has a zero tolerance policy for harassment.

105 Conflicts with lab members other than PI

In less severe cases where any form of conflict between lab members is escalating, lab members are strongly encouraged to discuss the issue with the lab PI. For most issues, Bernhardt will either suggest strategies for resolving the conflict without her direct involvement or will create an opportunity for mediation of the conflict between the involved parties. Unless
110 explicitly authorized by the reporting individual/s to do so, Bernhardt will not share the identify of the reporter with the involved parties. As lab PI, Bernhardt wants to learn about conflicts before they escalate into problems. Please keep in mind that sharing concerns is not a waste of her time and is not gossip, but instead an opportunity to improve our collective and individual approaches to conflict resolution.

115 **(6) Be kind, employ empathy, assume the best of one another**

Everyone is busy, everyone is at least occasionally stressed. Sometimes we say or email things in haste, miss appointments, fail to consume a promised frog, or make a mistake. We can have high expectations of ourselves and one another while still being kind and employing empathy in our dealings with one another. "Everyone here is smart, distinguish yourself by being kind"⁴

120 ⁴ Source of quote - <https://twitter.com/annegalloway/status/438412389319319552?lang=en>