Lab Culture

For those looking for information on how our lab works and what culture is promoted, the following provides a summary of what we are trying to achieve.

Our mission

As a group, we strive to develop new and improved methods in cryo-electron microscopy (cryo-EM) that improve the resolution of three-dimensional reconstructions of biological structures. This enables us, and future investigators, to better study the structures of biological macromolecules and understand how they are linked to their functions. The number of lab members has been kept small since its inception in 1999, and our projects usually have biological and methodical components that provide broad training to our group members while keeping a clear focus on methods development. Our backgrounds vary diversely, ranging from biology, biochemistry, chemistry, physics, mathematics, computer science, and engineering. Often, the different expertise of lab members encourages collaboration on projects. Creativity, curiosity, and independence are the most valuable assets that our members bring to the lab, balanced with career perspectives and funding which both depend upon scientific productivity (publications).

The generous and long-term funding provided by the Howard Hughes Medical Institute allows for our members to shape their profile as they see best, and keeps our lab up to date with state-of-the-art resources and new equipment. The freedom enjoyed by our lab is enabled by the independence and self-motivation driving our group members, who are continually designing, executing, and writing about new experiments. There are no defined work hours in the lab, though diligence in project completion and regular contact with other lab members are core factors to our success; this allows for our members to apply their individual preferences in work hours, while spreading the load on our lab equipment. Visiting scientists and new members are trained in cryo-EM and image processing, as each lab member collects and processes their own data.

A dynamic flow of information

While the lab itself is divided into two spaces (a "wet" space where we keep a fully equipped biochemistry laboratory, and a "dry" office area with computer workstations), we maintain a constant, dynamic flow of ideas and information across our group. This allows for scientists with varying levels of training to have ample opportunities to learn from one another. We encourage this exchange of information consistently, and in a variety of settings. Each month, a member of the group leads our group meeting, an hour that resembles more of a casual brainstorming session than a formal progress-updating lecture, and it is often accompanied by coffee and donuts. The goal is that the presenter is able to obtain new ideas to apply towards their research, and vice-versa for the audience. More opportunities for this present themselves nearly every day, multiple times a day whether it be via our tea breaks, lunch times, or even the now-established "Beer Hours" we participate in each Tuesday and Friday at Janelia’s on-site pub. It is a relaxed and friendly atmosphere, where we discuss work, ideas, and problems we encounter while also establishing a trusting, collegial atmosphere.

Joint Electron Microscopy Meetings (JEMM)

Lab members are also encouraged to attend conferences, meetings, courses and workshops to present their work and network with others in the field. At Janelia, our lab partners with the Gonen Lab in organizing a monthly meeting in which new advances in cryo-EM or other areas of structural biology are discussed. The meetings are held in the evening and are kept casual so as to inspire a culture of discussion. A reception precedes the presentation with dinner and drinks, providing more time to meet and talk with other experts in the area. Presenters vary from on-site Janelia researchers, and visiting scientists from other institutes.

-- Estela Diaz

Here is what current and former lab members, and collaborators say:

I spent a summer in Niko's lab and it was a wonderful experience. I learned a lot and the stay was very productive scientifically. I was thoroughly impressed by the knowledge and competence of the group. I enjoyed immensely the friendly and supportive atmosphere which is truly academic in the best sense of the word. It was very interesting to be in the lab in revolutionary times for the EM and when the final touches were put on the new software suite.

-- Marcin Nowotny

I have had a wonderful experience visiting the Grigorieff lab. The stimulating and supportive environment Niko has created here is very special. It's been a joy to work with knowledgeable colleagues who are just as happy to discuss complicated scientific problems as they are to relax afterward and enjoy a beer together. I am especially grateful to Niko, Alexis, and Tim for teaching me image processing. The scientific community is lucky to have researchers like you who are devoted to advancing cryo-EM technology and who generously share...
your developments with the entire scientific community. Thank you.

-- Jue Chen

My stance in the Grigorieff lab has been a really productive time both for the generation of new exciting high quality EM data as well as for the acquisition of new knowledge in a really friendly environment. Their impressive facilities together with the kindness of Grigorieff lab members sharing their help and expertise has converted my visit into a pleasurable and easy experience.

-- Daniel Luque Buzo

To be in daily contact with a critical mass of coworkers who are all passionate about the methods of EM and image analysis and a core of experienced software developers has been invaluable to my development as a scientist. There is a collective breadth of experience in the lab which I look forward to continue exploring in my time here. The support structures are such that I've never had to worry as a postdoc about anything other than the project(s) I'm involved with, which is a real luxury especially considering how well the microscopy, wet lab and computer resources are managed.

-- Alexis Rohou

The Grigorieff lab is an excellent learning and training environment, stocked with resources and expertise. I enjoyed being a part of this group of diverse and friendly researchers.

-- Hazel Levy

Collaborating with the Grigorieff Lab has been a very enjoyable and extremely fruitful experience. This excellent research lab is a great place for insightful discussions and sharing knowledge, all in a very friendly atmosphere.

-- Franck Fourniol

It's like a candy store here. The lab is brimming with ideas, which have many chances to exchange thanks to a plentitude of opportunities for socializing, including of course the all-important Friday Happy Hour. Niko manages to achieve a wonderful balance between on the one hand making room for creativity and exploration, and on the other hand acknowledging the need for publishable results at the end of the day.

-- Chuck Sindelar

Thank you for giving me the opportunity to work at your lab this summer. From talks, lunch conversations, book/articles, and projects, I had a great time, met a lot of people, and learned soooooooo much! I can't wait to come back in the fall!

-- Erin Fan

If it was easy, it wouldn't be called Science.

-- Axel Brilot

A place in which work turns into joy by challenging your own horizons and instigating your curiosity to know what lies behind it.

-- Andreas Martin

As a visitor to the lab I must say I've been impressed with what I've seen. The cumulative expertise present here is truly impressive, and there is always someone to discuss ideas with - producing an ideal environment for creative science. This combined with the friendly and helpful people, along with some great social occasions have made the lab a true pleasure to visit!

-- Tim Grant

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