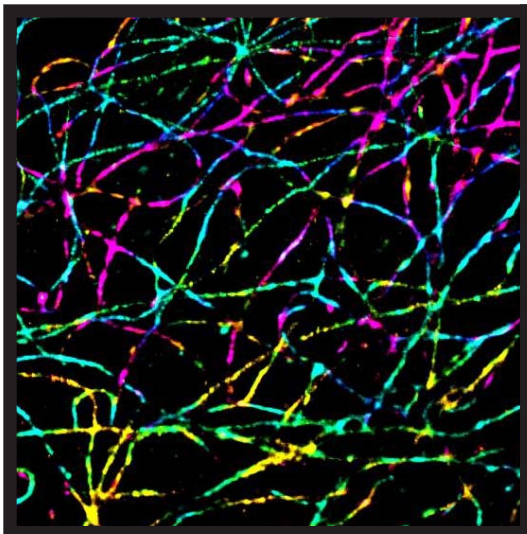
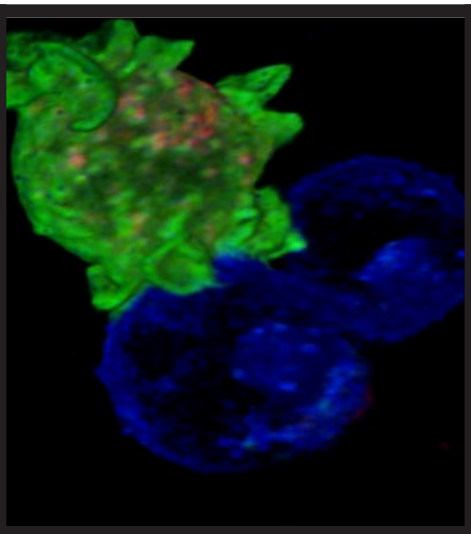
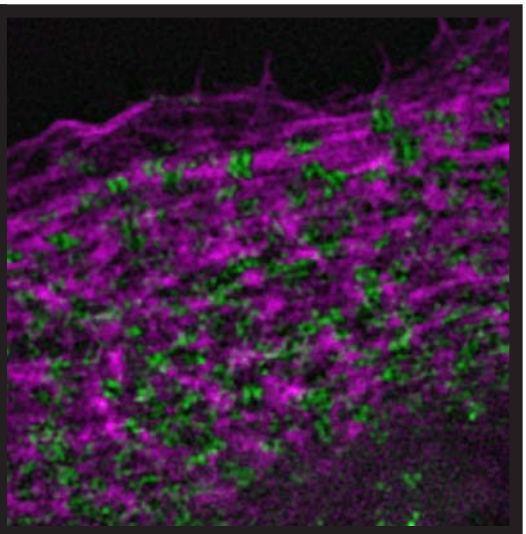
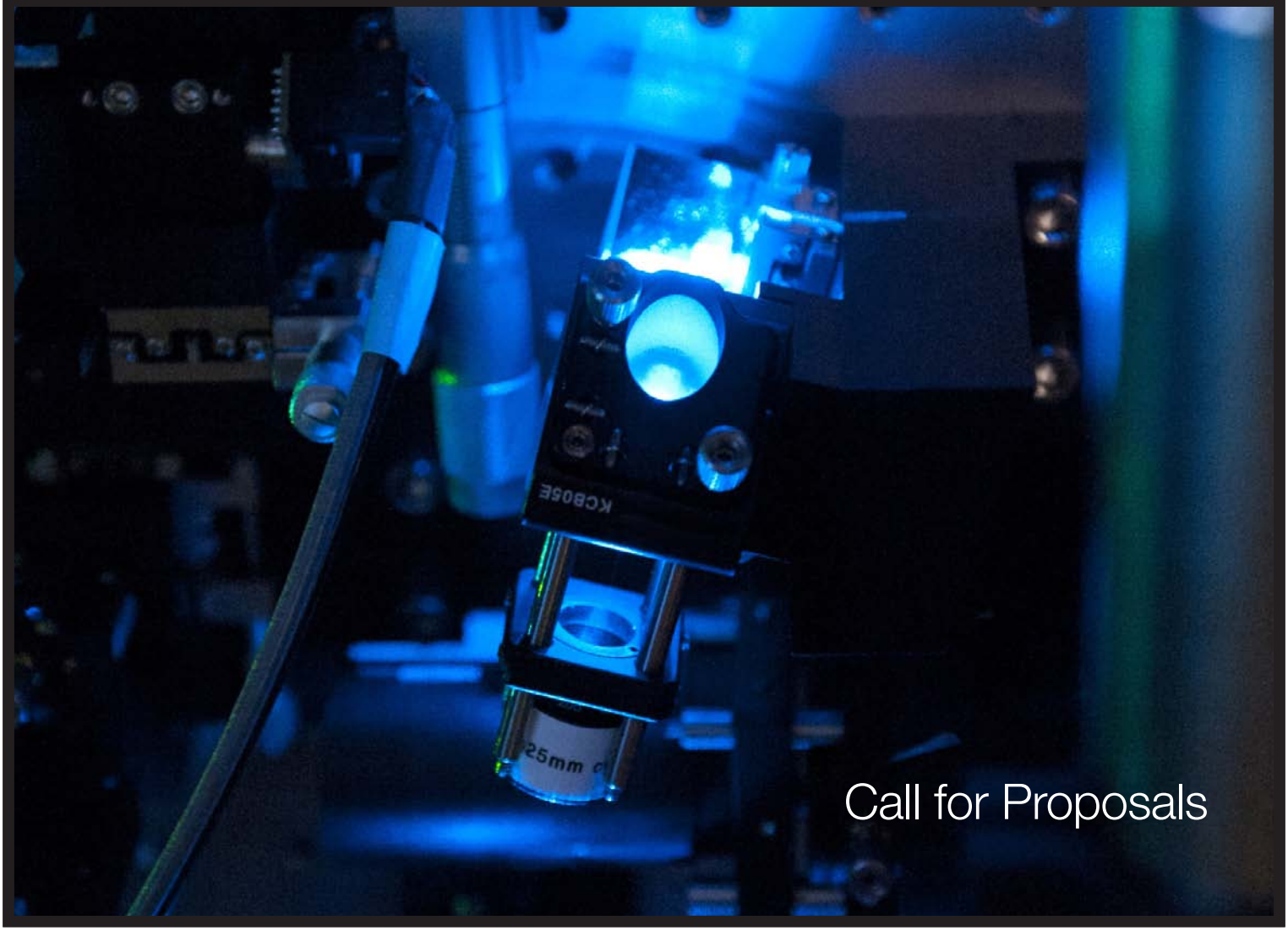






THE ADVANCED IMAGING CENTER
AT JANELIA RESEARCH CAMPUS



hhmi | janelia

GORDON AND BETTY MOORE FOUNDATION

janelia.org/AIC

Call for Proposals

THE ADVANCED IMAGING CENTER AT JANELIA RESEARCH CAMPUS

We are now accepting proposals from scientists who are interested in conducting experiments at the Advanced Imaging Center (AIC).

Submit a proposal by October 1, 2015.

Our Mission

The AIC makes cutting-edge, pre-commercial microscopes available to visiting scientists **at no cost**, maximizing the impact of the latest developments in optical instruments and emerging microscopy technologies.

We encourage applications from scientists who are addressing significant scientific questions that require measurements of cellular/molecular behavior at spatial and/or temporal resolutions that would only be possible for them through access to the AIC.

Visiting scientists spend 1-2 weeks at Janelia conducting experiments on their chosen microscope with the support of the AIC team. The Janelia Visitor Program covers the cost of lodging for the visiting scientists, experiments, technical support, and scope time.

Submit a Proposal

janelia.org/aic15

Application Deadline

October 1, 2015

Eligibility

This program is open to investigators at non-profit institutions.

Requirements

Prior to proposal submission, applicants are strongly encouraged to contact the AIC for technical consultation.

All proposals must include:

- Scientific narrative (limited to 1,000 words and up to three figures), which should include:
  - Abstract
  - Specific aims/questions
  - Justification for using AIC instruments
  - Preliminary data
  - Experimental design
- Cited bibliography
- Biosketches

Janelia's unusual research culture values collaboration and vibrant intellectual life. That's reflected in our history, our philosophy, and our campus.



Proposal Review

All applications are evaluated using a two-tier review process. The first tier is a pre-screening process by the AIC scientists to determine technical appropriateness and feasibility. The panel will determine whether: (i) the experimental design suits the capabilities of the AIC instruments; (ii) the need for the AIC instrument is technically justified; and (iii) the specimens can be safely handled by Janelia's capacity (we can only receive and handle up to BSL2 samples). The second tier is a peer review of applications against established criteria for determining scientific merit. The panel includes representatives from Janelia Research Campus and the Gordon and Betty Moore Foundation, as well as invited extramural imaging experts.

Review Criteria

- Does the proposed project have the potential to yield novel and significant information?
- Does answering the experimental question require the use of the AIC instruments or can it be addressed with commercially available imaging technologies?
- Is the proposal well-designed and sufficiently focused to be completed efficiently within a reasonable amount of time?
- Are the applicant's background, productivity, and expertise appropriate to accomplish the proposed work with the assistance of the AIC scientists?

Personnel

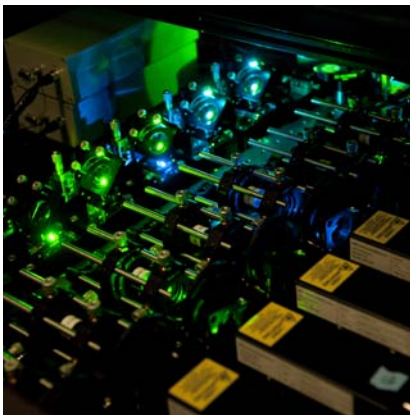
The panel will evaluate how the experience of the designated visitor will help in accomplishing the goals of the proposal with the full assistance of AIC scientists.

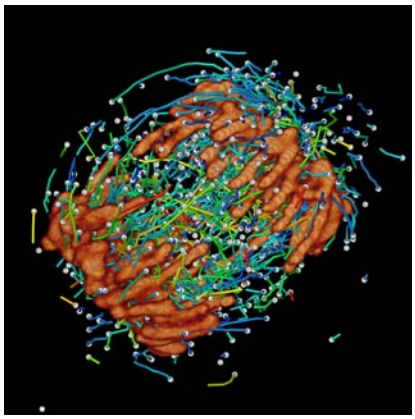
Budget

Janelia will cover all on-campus costs and provide on-site housing. The applicant should confirm that they are able to support travel costs for the personnel who will visit the Janelia campus to perform the research work. Meals will not be covered by this program, although food can be purchased at Janelia at the visitor's own expense.

Near right:
Pre-commerical microscope developed at Janelia

Far right:
High speed tracking of microtubule dynamics during cell division using lattice light sheet microscope.





Our Microscopes

The AIC currently houses five advanced optical microscopes:

Interferometric photoactivated localization microscope (iPALM)
Scientists can use iPALM to pinpoint fluorescent labels in their images to within 10–20 nanometers—about ten times the size of an average protein—in all three dimensions. iPALM has been used to reveal how biomolecules organize themselves into the structures and signaling complexes that drive cellular functions in fixed samples.

Single-molecule total internal reflection fluorescence (sm-TIRF) microscope
This microscope is used for in vitro imaging of complex biochemical reactions, such as RNA transcription, DNA replication, DNA repair, RNA splicing, etc.

Aberration-corrected multifocus microscope (acMFM)
Using this technology, researchers can simultaneously image multiple focal planes to track rapid biological events inside live cells.

Lattice light sheet microscope
This microscope uses a thin sheet of patterned light to peer inside single living cells, revealing the three-dimensional shapes of cellular landmarks in unprecedented detail. The microscope images at high speed, so researchers can create dazzling movies that make biological processes, such as cell division, come alive.

Live cell multicolor structured illumination microscope (3D-SIM)
Through interference patterns generated when grated light illuminates fine biological structures, the SIM system is capable of delivering resolution at 110 nanometers. What sets the 3D-SIM at AIC apart from commercial systems, however, is its maximum speed at six optical sections/µm/second, making this 3D-SIM system perfectly suited for live-cell applications.

Contact

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