

# *Application for Visitors to the Boulder Laboratory for 3D Electron Microscopy of Cells*

The Boulder Laboratory for 3D Electron Microscopy of Cells is supported by the National Center for Research Resources to develop technologies for specimen preparation and image analysis that will enhance the study of cell structure in three dimensions. Our laboratory is available for visitors who wish to learn such techniques. Upon receipt of a completed application, the laboratory staff will review the application to determine if a visit is warranted. Selection criteria include: suitability for tomography, scientific merit, lab visitor schedule, and availability of facility staff.

Completed applications can be sent by email, fax, or snail-mail to:

Nancy Neumann  
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phone: (303) 492-8593  
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University of Colorado, Dept. MCDB  
The Boulder Laboratory for 3D Electron Microscopy of Cells  
347 UCB  
Boulder, CO 80309

Visitors to the facility can expect one-on-one interaction with multiple staff members. To ensure a visit that is most productive, we suggest you keep the following in mind before applying:

- Visits are typically 1 week or less.
- Evaluation of specimen quality by light microscopy or conventional electron microscopy prior to the visit is very important in order to determine the appropriateness of the sample and to allow us to plan an efficient and productive visit for you.
- Whenever possible, send either blocks or sections to the facility so we can evaluate the suitability of the specimen and staining for electron tomography before scheduling a visit.
- If you require specimen preparation by rapid freezing and freeze-substitution (RF/FS), keep in mind that these preps should be done before your visit. These preps usually require 7-10 days and often a few iterations to produce samples appropriate for electron tomography. There are many facilities in the US and abroad that have extensive RF/FS experience in specimen preparation and that provide this type of service. If RF/FS preparation of your samples needs to be done in Boulder, arrangements must be made at least 1 month prior to your visit so that the samples are ready for use when you arrive.
- Microscope time is limited to 2-3 days so prescreening and mapping of grids for potential electron tomography candidates is desired, as this will make your microscope sessions more efficient.
- Cryo-electron tomography is extremely time consuming. Therefore samples for cryo-electron tomography should be evaluated by conventional negative stain and/or 2D cryo-EM prior to the visit.
- Visitors wishing to learn IMOD should download and study the [IMOD tutorial](#) prior to visiting.

Date of application: \_\_\_\_\_ Investigating PI: \_\_\_\_\_

Name of visitor(s): \_\_\_\_\_

Address: \_\_\_\_\_

Phone number: (\_\_\_\_) \_\_\_\_\_ Email: \_\_\_\_\_

Requested visit dates: \_\_\_\_\_  
(An updated visitor calendar is maintained at [www.calendarhub.com/pub/BL3DEMC](http://www.calendarhub.com/pub/BL3DEMC))

Please attach a 500 word description of your scientific question with specific aims to be accomplished during your visit, what preliminary data is already in hand, and your current funding.

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**Internal use only:**

Date of visit: \_\_\_\_\_

Personnel working with visitor: \_\_\_\_\_

Brief description of visit: \_\_\_\_\_

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