**Light Microscopy Outreach Seminar Series 2015**

**Fridays, 3:00-3:30 - dates and locations below**

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| **Date** | **Time and Location** | **Topic** | **Lecture Objectives** | **Presenter** |
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| **October 30** | 3:00 – 3:30 –  UPPER Audit 3-7619 | **Lecture 1:**  Overview of Light Microscopy – The 4x Overview | 1) Overview of microscopy  2) Fundamentals of objectives  3) Fundamentals of light paths | Linda Callahan, PhD |
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| **November 6** | 3:00 – 3:30 –  UPPER Audit 3-7619 | **Lecture 2:**  Techniques for Biological Staining | 1) Review of what staining ‘is’  2) Best practices for obtaining good LM staining (and hence data)  3) Fluorescent staining overview, tips and tricks | Paivi Jordan, PhD |
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| **November**  **13** | 3:00 – 3:30 –  UPPER Audit 3-7619 | **Lecture 3:** Overview of Fluorescence Microscopy | Overview of key aspects to consider when designing IF experiments  (bring laptops, smartphones, etc) | Linda Callahan,  PhD |
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| **November 20** | 3:00 – 3:30 –  Class of '62 Auditorium | **Lecture 4:** Overview of Fluorescence Microscopy Applications | 1) Similarities and differences between epifluorescence, confocal, and multiphoton microscopy  2) Deciding which microscopy type is best to use to answer a specific experimental question  3) Overview of the many types of fluorescence microscopy and their applications | Linda Callahan,  PhD |
| **December 4** | 3:00 – 3:30 – Upper Audit | **Lecture 5:** Overview of ‘Detectors’ and an Introduction to Image Analysis for Light Microscopy | 1. Review of what is being detected in light microscopy 2. Cameras versus photomultiplier tubes 3. Digital microscopy: What a digital image 'is' 4. Image analysis guidelines 5. Image analysis - using a workstation vs. using the UR Bluehive Cluster 6. Connecting to the UR Bluehive cluster - the method | Linda Callahan, PhD |
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| **December 11** | 3:00 – 3:30 –  Class of '62 Auditorium | **Lecture 6:**  Artifacts in Imaging & Analysis and  Creating Figures | 1) Review of potential artifacts and how to avoid them  2) Tips for good imaging  1) Taking publication quality images  2) Post processing tips and tricks  3) Exporting and importing high resolution images  4) Basics of using Fluoview and Adobe suite (Photoshop and Illustrator) for creating publication quality figures | Paivi Jordan, PhD |
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| **December 18** | Upper audit | SEMROCK - Lidza Kalifa  3:00-3:30 + |  |  |
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