

Education

Rochester Institute of Technology, Rochester, NY
College of Science and College of Imaging Arts and Science
Double Major: Biology and Biomedical Photographic Communications
GPA 4.0/4.0: summa cum laude
B.S. May 2014:

Skills

Microscopy; including two-photon, confocal, and SEM
Small animal handling and surgery; murine model
Adobe Creative Suite: Photoshop, InDesign, Premiere
Tradeshaw Booth Design and Outreach Materials

Image Processing: Fiji
3D Imaging Software: Imaris and arrivis
Microsoft Office
Employee training

Current Employment

TissueVision: Research Associate **Oct. 2014 to Present**
Automated whole organ imaging for pharmaceutical
and academic clients

Tasks:

CRO Imaging: Sample processing, image acquisition, and timely data delivery to clients

Client directed research projects with direct client contact
Employee training ranging from animal handling to microscope usage
Help maintain laboratory reagents and data management

Staff and create marketing material for conference with 30,000 attendees

Create data visualizations used by clients in papers and presentations

Assist with microscope installation in the US and abroad

Research Presentations and Papers

Papers:

Hudry E, Martin C, Gandhi S, Gyorgy B, Scheffer D I, Mu D, Merkel S F, Mingozi F, Fitzpatrick Z, Dimant H, Masek M, Ragan T, Tan S, Brisson A R, Ramirez S H, Hyman B T, and Maguire C A, "Exosome-associated AAV vector as a robust and convenient neuroscience tool", *Gene Therapy* 23, 380-392 (2016)

Luke J. Mortensen, Clemens Alt, Raphaël Turcotte, Marissa Masek, Tzu-Ming Liu, Daniel C. Côté, Chris Xu, Giuseppe Intini, and Charles P. Lin, "Femtosecond laser bone ablation with a high repetition rate fiber laser source," *Biomed. Opt. Express* 6, 32-42 (2015)

Posters:

Masek M, Mortensen L, Lin C, "In Vivo Femtosecond Laser Ablation for Bone Removal" Massachusetts General Hospital Wellman Center, August 2013

Presentations:

Masek M, Kerimo J, DiMarzio C, "Three-Photon Fluorescence of Pheomelanin for In vivo Melanin Detection" Northeastern University, August 2012

Achwei H, Masek M, Kerimo J, DiMarzio C, "Spectrometer for Keck Microscope and Melanin Fluorescence Spectra" Northeastern University, August 2011

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Research Experience

Massachusetts General Hospital

HST- Biomedical Optics Wellman Center Photomedicine

PI: Prof. Charles Lin

Summer 2013

Bone Repair Research: Optics, In vivo imaging

Long-term goal: Visualize role Prx1+ plays in dermal bone repair

Project: Optimize ablation for bone in mouse model

Tasks:

Independent use of fiber based ablation system

In vivo imaging using a murine model and performed small animal surgery

Image Processing with Fiji

Northeastern University

REU Optical Science Laboratory

PI: Prof. Charles DiMarzio

Summer 2012 and 2011

Melanin Research: Optics, Microscopy, MATLAB, Organic Synthesis

Long-term goal: Noninvasive method of melanoma detection

Project: Examine pheomelanin optical properties

Tasks:

Independent use of Multi-modal Keck Microscope; Modes used:

Confocal, 3-Photon Fluorescence, Line Scan Hyper-Spectral

Initiated Collaboration with 3 other laboratories for:

SEM, ATR, Melanin Synthesis,

Sample of Melanin from Published Paper

Examined Bovine Retinal Pigment Epithelium for Melanin

Confocal, 3-Photon Fluorescence, Line Scan Hyper-Spectral

Image Processing with MATLAB

Previous Employment

2014

Microscopy Technician at
Nikon Imaging Center at Harvard
Medical School

2011 to 2014

Resident Advisor: RIT
Leadership, Problem solving,
Teamwork, Community building

2011 to 2014

Photography Cage: RIT
Photography equipment; cameras,
lighting kits, etc

Awards

Alpha Sigma Lambda Honorary Society 2014
Activities, Scholarship, and Leadership

Cover of RIT Chemistry publication *The Schlieren* 2014

Cover of RIT *Photographic Sciences Bulletin* Fall 2013

Best Student Image BioCommunications Assoc. 2013

David M. Baldwin Scholarship 2013

Outstanding Undergraduate Scholar 2013

No more than 1% of each college selected by

GPA, Community service, and Leadership

RIT Academic Scholar 2010-2014