

## Myunghwan Choi, Ph.D.

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<https://sites.google.com/site/photomodulation>

### RESEARCH INTERESTS

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Neurophotonics - intravital microscopy, bio-integrated optics, connectomics

### PROFESSIONAL EXPERIENCE

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- 03/2015 – present      Assistant professor  
Global Biomedical Engineering, Sungkyunkwan University
- 03/2011 – 02/2015      Postdoctoral fellow  
Harvard Medical School and Wellman Center for Photomedicine  
Advisor: Seok-Hyun (Andy) Yun, Ph.D.
- 03/2010 – 02/2011      Postdoctoral fellow  
Bio and Brain Engineering, KAIST  
Advisor: Chulhee Choi, M.D., Ph.D.

### EDUCATION

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- 03/2006 – 02/2010      Ph.D. in Bio and Brain Engineering, KAIST  
Thesis title: In vivo optical modulation using a femtosecond laser  
Advisor: Chulhee Choi, M.D., Ph.D.
- 03/2003 – 02/2006      B.S. in Bio and Brain Engineering, KAIST

### SELECTED PUBLICATION

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1. **Choi M**, Humar M, Kim S, Yun SH. Step-index optical fiber made of biocompatible hydrogels. *Advanced Materials* 2015; *In Press*.
2. **Choi M**, Lee WM, Yun SH. Intravital microscopic interrogation of peripheral taste sensation. *Scientific Reports* 2015; 5:8661.
3. **Choi M\***, Kwok SJJ\*, Yun SH. Intravital Fluorescence Microscopy: Lessons from observing cell behavior in their native environment. *Physiology* 2014; *In Press* (\*co-first author)
4. **Choi M**, Yun SH. In vivo femtosecond endosurgery: an intestinal epithelial regeneration-after-injury model. *Optics Express* 2013; 21 (25): 30842-30848 (featured in Virtual Journal of Biomedical Optics)
5. **Choi M**, Choi JW, Kim S, Nizamoglu S, Hahn SK, Yun SH. Light-guiding hydrogels for cell-based sensing and optogenetic synthesis in vivo. *Nature Photonics* 2013; 7 (12): 987-994 (featured in Nature Photonics, Nature Methods, Nature Review of Endocrinology, Thomson Reuter, etc.)
6. Kim JK\*, Lee WM\*, Kim P\*, **Choi M\***, Jung K, Kim S, Yun SH. Fabrication and operation of GRIN probes for in vivo fluorescence cellular imaging of internal organs in small animals. *Nature Protocols* 2012;7:1456-1469 (\*co-first author; cover article).
7. **Choi M**, Ku T, Chung K, Yoon J, Choi C. Minimally invasive molecular delivery into the brain using optical modulation of vascular permeability. *PNAS* 2011;108 (22):9256-9261