



김동영 (金炯瑩) 이력서

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학력

- 2014 – 2016 미국 **Texas A&M University** 의공학 박사 (Ph.D.)
College station, Texas, USA
- 2012 – 2014 미국 **The University of Texas at Dallas**
전자 컴퓨터 공학, Biomedical application 연구원
Richardson, Texas, USA
- 2010 – 2012 미국 **The University of Texas at Dallas** 전자공학 학사 (B.S.)
Richardson, Texas, USA
- 2006 – 2012 **경북대학교** 전자 컴퓨터 공학 학사
대구, 대한민국

경력

- 2017 – 현재 한국 **기초과학연구원**, 첨단연성물질 연구단
연구요원 (Research Fellow)
- 2014 – 2016 미국 **Texas A&M University**
연구원 (Research Assistant)
- 2010 – 2014 미국 **The University of Southwestern medical center**
연구원 (Research Assistant)
- 2010 – 2014 미국 **The University of Texas at Dallas**
연구원 (Research Assistant)
- 2009 – 2010 **임베디드소프트웨어 연구센터**
연구원 (Research Assistant)
- 2010 – 2010 호주 **EOS Australia**
인턴쉽

수상

2016	스위스 SMLMS Challenge (EPFL) 3D single molecule localization microscopy 부문 1 위
2014 – 2016	미국 Texas A&M University 연구 장학금
2012 – 2014	미국 The University of Texas at Dallas 연구 장학금
2011 – 2011	미국 The University of Texas at Dallas 학사 연구 장학금
2011 – 2011	미국 The University of Texas at Dallas Senior Design Project 2 위
2010 – 2012	미국 The University of Texas at Dallas 학사 장학금

논문

Kim D, You S, Ward E.S., Ober R.J, **Imaging three dimensional single molecule dynamics in its cellular context**. Nature Methods, 2017 (Under review)

Devanaboyina, S. C., Khare, P., Challa, **Kim, D.**, Ober, R. J., and Ward, E. S. Engineered clearing agents for the selective depletion of antigen-specific antibodies. Nature Communications, 8, 15314, 2017.

Kim, D., Chao, J., Velmurugan, R., You, S., Ward, E. S., and Ober, R. J. Remote focusing multifocal plane microscopy for the imaging of 3D single molecule dynamics with cellular context. Proceedings of the SPIE, Three-Dimensional and Multidimensional Microscopy: Image Acquisition and Processing XXIV, 10070: 100700L, Feb. 2017, San Francisco, CA.

Vahid, M. R., Chao, J., **Kim, D.**, Ward, E. S., and Ober, R. J. State space approach to single molecule localization in fluorescence microscopy. Biomedical Optics Express, 8(3): 1332-1355, 2017.

Cohen E. A. K., **Kim D.**, Ober R.J, **Cramer-Rao Lower Bound for Point Based Image Registration with Heteroscedastic Error Model for Application in Single Molecule Microscopy**. IEEE Transactions on Medical Imaging 04/2015; DOI:10.1109/TMI.2015.2451513

Poovasery J.S., Kang J.C., **Kim D**, Ober R.J, Ward E.S. **Antibody targeting of HER2/HER3 signaling overcomes heregulin-induced resistance to PI3K inhibition in prostate cancer**. International Journal of Cancer 12/2014; 137(2). DOI:10.1002/ijc.29378

Devanaboyina SC, Lynch SM, Ober RJ, Ram S, Kim D, Puig-Canto A, Breen S, Kasturirangan S, Fowler S, Peng L, et al. **The effect of pH dependence of antibody-antigen interactions on subcellular trafficking dynamics.** mAbs 11/2013; 5(6):851-9. DOI:10.4161/mabs.26389

Ram S, Kim D, Ober RJ, Ward ES. **The level of HER2 expression is a predictor of antibody-HER2 trafficking behavior in cancer cells.** mAbs 09/2014; 6(5):1211-9. DOI:10.4161/mabs.29865

Ram S, Kim D, Ober RJ, Ward ES. **3D Single Molecule Tracking with Multifocal Plane Microscopy Reveals Rapid Intercellular Transferrin Transport at Epithelial Cell Barriers.** Biophysical Journal 10/2012; 103(7):1594-603. DOI:10.1016/j.bpj.2012.08.054

Ram S, Kim D, Ober RJ, Ward ES. **Fast 3D Single Molecule Tracking with Multifocal Plane Microscopy in Polarized Epithelia Reveals a Novel Cellular Process of Intercellular Transfer.** Biophysical Journal 01/2013; 104(2):535-. DOI:10.1016/j.bpj.2012.11.2962

Kim D, Ram S, Ober RJ, Ward ES. **3D single molecule tracking of rapid intracellular trafficking imaged by multifocal plane microscopy** Microscopy and Microanalysis 18(s2):146-147 · June 2012

Kim D, You S, Ward E.S., Ober R.J, **Imaging of three-dimensional single molecule dynamics with cellular context: Antibody trafficking and interaction with cell membrane and sorting endosomes.** ASCB, Dec. 2016, San Fransisco, CA.

특허

Kim D, Ober R.J, **Advanced multi-dimensional microscopy system for single particle & structure imaging.** U.S. Patent pending, 2016.

기술

프로그래밍	MATLAB, Python, C, C++, JAVA
데이터 처리	Optimization (nonlinear least squares, maximum likelihood estimation, expectation maximization) Artificial intelligence (machine learning, representation learning, deep learning)
시스템 디자인	NI LabWindows/CVI, NI LabView

광학설계
현미경

Zemax

형광 현미경 (Epifluorescence, TIRF microscopy, Confocal microscopy)

생세포 영상 기술 (Live cell imaging)

전자현미경 (Transmitted electron microscopy)

초고해상도 형광 현미경 (Super-resolution microscopy)

단일 분자 현미경 (Single molecule tracking)

유동 세포 분석법 (Flow cytometry)

언어

한국어 모국어, 영어 유창함