Marina N. Sharifi

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Education

2008 – present	University of Chicago Medical Scientist Training Program, Pritzker School of Medicine. **Ph.D.** in Cancer Biology, March 2014; Advisor: Kay Macleod, PhD. Dissertation committee: Ernst Lengyel, MD, PhD (Chair), Geoffrey Greene, PhD, and Suzanne Conzen, MD. **M.D.,** June 2016 (anticipated).
2002 – 2006	University of California Berkeley. **B.A.** in Molecular and Cellular Biology, with Honors. **B.A.** in German, with Highest Honors. Highest distinction in general scholarship (summa cum laude).

Honors and Awards

2014	American Association of Cancer Research (AACR) Scholar-in-Training Award (awarded to <10% of trainee presenters at the AACR annual meeting).
2014	Dissertation Award, University of Chicago Committee on Cancer Biology. (awarded to one dissertation per year).
2012 – 2013	Elaine Ehrman Scholarship, University of Chicago Cancer Center Research Foundation.
2007	Spencer W. Brown Award for distinction in undergraduate genetics research, Department of Molecular and Cellular Biology, UC Berkeley.

Work Experience

2006 – 2008 Staff Research Associate: UC Berkeley, Department of Plant and Molecular Biology.
Principal Investigator: Krishna Niyogi, PhD.

- Participated in experimental design and execution for multiple research projects in the lab.
- Managed ordering and inventory for the 16 member lab.
- Direct supervisor of 2-3 undergraduate work-study students.

Research Experience

2010 – 2014 Doctoral Research: University of Chicago, Committee on Cancer Biology.
Advisor: Kay Macleod, PhD.

- Identified a novel function for autophagy in tumor cell migration *in vitro* and metastasis *in vivo* in a mouse model of metastatic breast cancer

2006 – 2008 Staff Research Associate: University of California, Berkeley, Department of Plant and Molecular Biology.
Principal Investigator: Krishna Niyogi, PhD.
- Identified and cloned novel genes required for chlorophyll biosynthesis in the photosynthetic model organism *Chlamydomonas reinhardtii*.

2005 – 2006 Undergraduate Honors Thesis Research: University of California, Berkeley, Department of Plant and Molecular Biology.
Advisors: Krishna Niyogi, PhD, Sharon Amacher, PhD.
- Identified novel genes required for carotenoid pigment biosythesis in *Chlamydomonas reinhardtii*

Publications

Sharifi MN, Mowers EE, Collier CD, Drake LE, Chen H, Zamora M, Chen H, Mui S, Macleod KF. Autophagy promotes focal adhesion disassembly and cell motility of metastatic tumor cells through the direct interaction of paxillin with LC3. *In press, Cell Reports.*

Chourasia AH, Tracy K, Frankenberger C, Boland ML, Sharifi MN, Drake LE, Sachleben JR, Asara JM, Locasale JW, Karczmar GS, Macleod KF. Mitophagy defects arising from BNip3 loss promote mammary tumor progression to metastasis. EMBO Rep. 2015 Sep;16(9):1145-63. PMID: 26232272

Sharifi MN, Mowers EE, Drake LE, Macleod KF. Measuring autophagy in stressed cells. Methods Mol Biol. 2015;1292:129-50. PMID: 25804753.

Kuo W, Sharifi MN, Lingen M, Karrison T, Nagilla M, Macleod KF, and Cohen E. p62/SQSTM1 Accumulation in Squamous Cell Carcinoma Of Head And Neck Predicts Sensitivity to Phosphatidylinositol 3-Kinase Pathway Inhibitors. PLoS One. 2014 Mar 5;9(3):e90171. PMID: 24599075

Dent RM, Sharifi MN, Malnoë A, Haglund C, Calderon RH, Wakao S, Niyogi KK. Large-scale insertional mutagenesis of Chlamydomonas supports phylogenomic functional prediction of photosynthetic genes and analysis of classical acetate-requiring mutants. Plant J. 2015 Apr;82(2):337-351. PMID: 25711437

Tran PT, Sharifi MN, Poddar S, Dent RM, and Niyogi KK. Intragenic enhancers and suppressors of phytoene desaturase mutations in Chlamydomonas reinhardtii. PLoS One. 2012;7(8):e42196. PMID: 22912689

Oral Presentations

Sharifi, MN, Collier, C, Drake, L, Chen, H, Zamora, M, Mui, S, and Macleod, KF (2013). Autophagy is required for focal adhesion turnover, tumor cell motility, and metastasis. Cancer Biology Training Consortium Annual Meeting, Wilmington, NC.

Sharifi, MN, Collier, C, Drake, L, Chen, H, Mui, S, and Macleod, KF (2011). Loss of autophagy limits metastasis in the 4T1 mouse model of breast cancer. University of Chicago Biomedical Sciences Cluster Retreat, Fontana, WI.

Poster Presentations

Sharifi, MN, Collier, C, Drake, L, Chen, H, Zamora, M, Mui, S, and Macleod, KF (2014). Autophagy is required for focal adhesion turnover, tumor cell motility, and metastasis. American Association for Cancer Research Annual Meeting, San Diego, CA.

Sharifi, MN, Collier, C, Drake, L, Chen, H, Mui, S, and Macleod, KF (2013). Autophagy is required for metastasis in the 4T1 mouse model of breast cancer. Keystone Symposium on Tumor Metabolism, Keystone, CO, February 2013.

Sharifi, MN, Collier, C, Drake, L, Chen, H, Mui, S, and Macleod, KF (2012). Loss of autophagy limits metastasis in the 4T1 mouse model of breast cancer. Joint Meeting of the American Physician Scientist Association/American Society for Clinical Investigation, Chicago, IL.

Sharifi, MN, Collier, C, Drake, L, Chen, H, Mui, S, and Macleod, KF (2011). Loss of autophagy limits metastasis in the 4T1 mouse model of breast cancer. Keystone Symposium on Autophagy, Whistler, B.C., March 2011.

Teaching Experience

2012 — Teaching Assistant, Molecular Mechanisms of Cancer Biology
University of Chicago Biological Sciences Division
Course Director: Kay Macleod, PhD

- Delivered two lectures on current topics in cancer biology for this graduate – level course
- Wrote and graded essay-style exam questions
- Held weekly office hours to assist students with course assignments

2012 — Teaching Assistant Training Course, University of Chicago.

Service

2014 – present — Peer Mentor, American Physician Scientist Association

- Providing one on one peer mentoring to undergraduate students interested in physician scientist careers.

2012 – present — MSTP Student Council, Pritzker School of Medicine

- Organized programmatic events to promote peer-to-peer and faculty-student mentorship.

2012 – 2014 — MSTP Grand Rounds Student Leader, Pritzker School of Medicine

- Organized and led monthly discussions of clinical cases focusing on clinical reasoning and pathophysiology of disease with a group of 8-10 MSTP students across all years of training.

2008 – 2010 — Medical Students for Choice Chapter, Pritzker School of Medicine

- Helped organize and run school-wide events to promote discussion and education related to reproductive health.

Hobbies and Interests

Fluent in German; Classical violinist (University of Chicago Symphony member 2008 – 2012)