Maryelise Cieslewicz

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EDUCATION

University of Washington, Seattle, WA 98195 June 2010 - Present
Department of Bioengineering, Ph.D. Candidate
Completed Certificate in Biomedical Regulatory Affairs
Pursuing Certificate in Technology and Entrepreneurship
GPA: 3.78/4.0

Massachusetts Institute of Technology, Cambridge, MA 02139 September 2006 – June 2010
Bachelor of Science in Biological Engineering
GPA: 4.8/5.0

AWARDS

National Science Foundation Graduate Research Fellowship Recipient (2011)
National Science Foundation Graduate Research Fellowship Honorable Mention (2010)
MIT Department of Biological Engineering Senior Award (2010)
Tau Beta Pi National Engineering Honor Society Member

RESEARCH AND WORK EXPERIENCE

Graduate Research Assistant, University of Washington, Seattle WA June 2010 - Present
Laboratory of Professor Suzie H. Pun
Department of Bioengineering
- Identified a peptide that targets tumor-associated macrophages for selective elimination
- Characterizing the effect of tumor-associated macrophage elimination on T cell subsets in the tumor microenvironment

Intern, Genentech, Inc., South San Francisco CA June 2013 - August 2013
Laboratory of Germaine Fuh
Department of Antibody Engineering
- Constructed antibody phage display libraries
- Performed biopanning of phage libraries against therapeutic targets

Team Leader, Breast Cancer Start Up Challenge October 2013 - Present
Center for Advancing Innovation, The Avon Foundation, National Institutes of Health
- Leading a team of students in a competition to develop a business plan to commercialized an NIH-patented invention
- Interface with professionals across disciplines such as business, entrepreneurship, law, and medicine

Undergraduate Researcher, Massachusetts Institute of Technology, Cambridge, MA August 2008 – May 2010
Laboratory of Professor K. Dane Wittrup
David H. Koch Institute for Integrative Cancer Research
Amgen Scholars Researcher, Summer 2009
- Investigated a monoclonal antibody reported to bind to cell-bound cancer antigen, but not shed antigen
- Characterized a bispecific antibody construct for targeted delivery of radionuclides to cancer
- Characterized a high affinity antibody to DOTA chelates of multiple radionuclides

Undergraduate Researcher, University of Wisconsin, Madison, WI June 2008 – August 2008
Laboratory of Professor Janet Mertz
McArdle Laboratory for Cancer Research
- Knocked out phosphorylation sites on Estrogen Related Receptor-α (ERRα) to test its effect on the transcriptional regulation of the estrogen responsive element and other post-translational modifications of ERRα in breast cancer cells

Undergraduate Researcher, Massachusetts Institute of Technology, Cambridge, MA September 2006 – May 2008
Laboratory of Professor C. Forbes Dewey
Hatsopoulos Microfluids Laboratory
- Quantified the thickness and mechanical properties of glycocalyx on endothelial cells

Research Trainee, Blood Research Institute, Milwaukee, WI June 2006 – August 2006
Laboratory of Dr. Jack Gorski
- Performed assays to test the binding properties of flu peptides to the class II MHC protein

PUBLICATIONS

M Cieslewicz, J Tang, JL Yu, H Cao, M Zavaljevski, K Motoyama, A Lieber, EW Raines, and SH Pun. Targeted Delivery of Proapoptotic Peptides to Tumor-associated Macrophages Improves Survival. *Proceedings of the National Academy of Sciences*. October 2013. 110(40): 15919 - 15924.

KD Orcutt, M Ackerman, **M Cieslewicz**, E Quiroz, AL Slusarczyk, J Frangioni and KD Wittrup. A Simple Modular IgG-like Bispecific Antibody Topology. *Protein Engineering Design and Selection*. April 2010. 23: 221 - 228.

KD Orcutt, AL Slusarczyk, **M Cieslewicz**, B Ruiz-Yi, KR Bhushan, JV Frangioni, and KD Wittrup. Engineering an Antibody with Picomolar Affinity to DOTA Chelates of Multiple Radionuclides for Pretargeted Radioimmunotherapy and Imaging. *Nuclear Medicine and Biology*. February 2011. 38(2): 223 – 233.

PRESENTATIONS

M Cieslewicz*, J Tang, JL Yu, H Cao, M Zavaljevski, A Lieber, EW Raines, SH Pun. Targeted Delivery of Proapoptotic Peptides to Tumor-associated Macrophages Delays Tumor Growth. Biomedical Engineering Society, 2013 Annual Fall Meeting (oral presentation)

M Cieslewicz, J Tang, M Zavaljevski, E Raines, S Pun. Identification of a New Peptide Ligand for Targeting M2 Macrophages. Gordon Research Conference: Drug Carriers in Medicine and Biology, 2012 (poster presentation)

M Cieslewicz, M Zavaljevski, J Tang, E Raines, S Pun. Phage-displayed Peptide for Specific Targeting of M2 Macrophages. Biomedical Engineering Society, 2011 Annual Fall Meeting (poster presentation)

M Cieslewicz, KD Orcutt, KD Wittrup. Effective Strategy for Targeting Shed Antigen. SWE National Conference, 2009 (Collegiate Poster Competition Finalist)

Y Yao, H Huang*, **M Cieslewicz**, and CF Dewey. Three-dimensional mapping of the glycocalyx layer on endothelial cells. Biomedical Engineering Society, 2007 Annual Fall Meeting (oral presentation)

Y Yao, **M Cieslewicz**, H Huang, ER Damiano, and CF Dewey*. Dynamics of the endothelial glycocalyx layer subjected to unsteady flow. Biomedical Engineering Society, 2007 Annual Fall Meeting (oral presentation)

LABORATORY AND TECHNICAL SKILLS

Laboratory Skills: phage display, mouse work (bone marrow harvest, retro orbital injection, IP injection, subcutaneous tumor injection, perfusion, tumor growth delay studies), tissue culture (primary cell culture and cell line culture), transient transfection, flow cytometry, confocal microscopy, cloning, western blot, ELISA, peptide synthesis, high performance liquid chromatography
Technical Skills: comfortable expressing thoughts through writing and presentations, assisted in the preparation of grant proposals, Microsoft Office programs including Excel, FloJo flow cytometry analysis software

TEACHING EXPERIENCE

Undergraduate Mentor, University of Washington, Seattle WA September 2011 – Present
- Mentoring an undergraduate bioengineering student in the laboratory

Teaching Assistant, University of Washington, Seattle WA March 2012 – June 2012
Bioengineering Capstone Principles
- Responsible for teaching one lecture, holding office hours, and grading undergraduate bioengineering students senior capstone proposals

Teaching Assistant, Massachusetts Institute of Technology, Cambridge MA January 2010 – June 2010
Fields, Forces and Flows in Biological Systems
- Responsible for holding recitation sections and office hours, and grading exams

ACTIVITIES

University of Washington, Seattle WA
UW Women's Initiative – Time to Invent Program Founder and Coordinator
Bioscience Careers Seminar Series – Planning Committee Member

Massachusetts Institute of Technology, Cambridge MA
MIT Society of Women Engineers – VP Outreach Programs (2009), Outreach Chair (2008), Publicity Chair (2007)
Biological Engineering Undergraduate Board – President (2009), Secretary (2008)