Ph.D.

NINA J. KRISTOFIK

396 MAIN ST, UNIT 11, WALLINGFORD, CT 06492
(203) 216 - 9200 | NINA.KRISTOFIK@YALE.EDU

EDUCATION

Yale University (New Haven, CT) | August 2007 - Present
Ph.D., Biomedical Engineering – Expected 2017
M.Phil., Biomedical Engineering – May 2014
M.S., Biomedical Engineering – December 2013
B.S., Biomedical Engineering – May 2011

SUMMARY OF QUALIFICATIONS

- Proven record as an accomplished leader, collaborator, and self-driven professional
- Able to write, speak, and otherwise communicate scientific ideas effectively to a variety of audiences
- Advanced graduate coursework:
    - **Molecular / cell biology**: vascular biology, immunobiology, systems cell biology, molecular mechanisms of disease and injury
    - **Engineering**: differential equations, vector analysis, linear algebra, physical and chemical basis of biosensing, continuum biomechanics, biomaterials, biomaterial-tissue interaction, tissue engineering
- Expert proficiency in wide range of scientific techniques, including:
    - **Analytical techniques and data analysis**: Atomic force microscopy, scanning electron microscopy, transmission electron microscopy, whole tissue decellularization, rodent survival surgery, tissue isolation, animal husbandry, immunohistochemistry, cryosectioning, primary cell isolation, electrospinning, Excel, ImageJ, Metamorph, and LabVIEW
    - **Molecular / cell biology / biochemistry**: primary cell culture, plasmids, transfection, RNA purification, RT-qPCR, gel electrophoresis, western blotting, protein purification, aseptic technique, bacteria culture, transformation
- Proficient in establishing, planning, and executing short- and long-term goals
- Recognized as a valued mentor

RESEARCH EXPERIENCE

Yale University School of Medicine (New Haven, CT) | January 2012 - Present
Ph.D. candidate in the laboratory of Themis R. Kyriakides, Ph.D.

- Developed a method for the production of a thromboresistant coating in the lumen of decellularized small-diameter arteries and successfully tested said vascular grafts in vivo
- Collaborated with Laura Niklason's lab on vascular graft implantation studies
- Collaborated with Jay Humphrey's lab on the mechanical testing of arteries isolated from thrombospondin-2 knock-out mice
- Managed graduate, undergraduate, and highschool research projects on decellularization of extracellular matrix through apoptosis and the effect of tissue transglutaminase inhibition on extracellular matrix structure

Yale University School of Medicine (New Haven, CT) | August - December 2011
Ph.D. rotation student in the laboratory of Laura Niklason, M.D., Ph.D.

- Examined the effects of repopulating decellularized lung tissue with human definitive endoderm
- Trained in the technique of decellularizing tissue and confirming stem cell phenotype

Yale University School of Medicine (New Haven, CT) | May 2008 - August 2011
Undergraduate research assistant in the laboratory of W. Mark Saltzman, Ph.D.

- Conducted experiments to determine transfection potential of 3T3 fibroblasts on 3D electrospun scaffolds
- Successfully transfected cells growing in three dimensions
- Collaborated with the Kyriakides lab to perform in vivo testing of our gene-activated material
- Presented results to students and faculty (August 2008, 2009, 2010)