

University of Rochester / St. John Fisher College  
Nanotechnology Research

NSF Supplemental Award

Goal	Input	Activity / Participants	Short term outcome	Medium term outcome	Long term outcome
To facilitate interdisciplinary STEM awareness and training among students and faculty in undergraduate institutions	NSF supplement award  The Integrated Nanosystems Center at the University of Rochester and the McGrath Lab.  Biology Department and Dr. Ontiveros Lab at St. John Fisher College (SJFC)	Summer internship / research and development opportunity at the University of Rochester  McGrath research team  Undergraduate students and faculty at Fisher	Under the guidance of UR students, faculty and staff, Fisher students and faculty receive training and perform research in the field of nanotechnology during the summer break	Undergraduate students pursue a career in STEM seeking to perform translational research. Faculty at a primarily undergraduate institution uses training and own research to promote careers in STEM	Students join the STEM-related workforce in academia and industry
			<p>Microfluidic platforms allowing the production of low cost, rapid synthesis of nanoparticles at SJFC.</p> <p>Microfluidic chips for instructional purposes (Nanobiotechnology elective course).</p> <p>Nanomembranes for the separation of lipid nanovessels from protein/antibodies and nucleic acids (<i>functional agents</i>)</p> <p>In-chip testing of nanoparticle uptake by macrophages under shear flow.</p>	<p>UR/Fisher faculty &amp; students publications</p> <p>Fisher students enrolling in graduate programs in STEM</p> <p>Development of a Nano-Research Summer Program for local, non-U of R undergraduate students</p>	<b>Outcome measures</b>