



# The Story of Micropen Medical

*How a Boutique Capital Equipment Maker Evolved  
into a Leading Medical Device Manufacturer*

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*Graduate student Laura Hobbs (left) and Prof. Greg Gdowski of the Center for Medical Technology & Innovation, University of Rochester, working with a porcine renal artery to test the ablation characteristics of a printed denervation balloon.*

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**Software and its Role in Product  
Development for Healthcare**

# Students on the Job

## Research Co-op Experience in Microfluidics and Dielectrophoresis

by Alexandra LaLonde



This summer I had the privilege of working as a research assistant in Dr. Blanca Lapizco's Microscale BioSeparations Lab at Rochester Institute of Technology as my first co-op. During this co-op I worked on several different projects that focused in microfluidics, specifically on how the geometry of insulating structures affected the ability of an iDEP microdevice to concentrate particles. Throughout the summer I conducted a series of experiments and was able to become an expert on dielectrophoresis, which I had no prior knowledge of before starting my co-op. This co-op was a great first experience because not only was I working in a familiar place on campus, but I was working for one of my professors. I really appreciated that instead of just being told what to do in the lab by Dr. Lapizco and the post-doctoral fellow working in the lab, Dr. Aytug Gencoglu, they both explained to me why we were running an experiment and offered guidance every step of the way. They were not just

focused on getting something done in the lab for the sake of doing it; rather they cared enough to take the time to teach me the process.

While working I had the opportunity to be a part of two journal publications, one in the Journal of Electrophoresis and the other in the Journal of Nanotechnology in Engineering and Medicine. This was a very rewarding experience because I was able to be involved in the planning, experimental, and revision process. I felt like I made an impact on both of these papers, which as an undergrad is very rare. Dr. Lapizco has not only presented me many opportunities, but has made a significant impact on who I am as a student here at RIT, and what direction I want to take my career after finishing my undergrad. At the end of the summer I put together a poster for the **2013 RIT Undergraduate Research Symposium**. My family was able to come to the Symposium and see what I had been doing all summer. This was a great way to end my summer co-op because I was able to confidently explain what I had learned, and show how much I had grown as a student and person in the last ten weeks.

Currently I am continuing my work in the lab for my fall co-op. I cannot express enough how the short amount of time I have been on co-op has enriched my undergrad experience at RIT. Additionally, now I have the opportunity to teach someone else about my research. I am currently mentoring a 2nd year Biomedical Engineering student and we have been running experiments together, that hopefully will produce another journal article, in which I am the lead of the experiments. As a Biomedical Engineer there are many different directions to take your career in. It is remarkable to have so many options, but can also be overwhelming to figure out what exactly it is you want to do. Being able to co-op and gain an experience that I would never be able to have otherwise has been very valuable and an opportunity I would recommend to any undergrad student.

