



On the importance of MSA scholarships to undergraduate students...

One of the most satisfying parts of mentoring undergraduate students, particularly those who join the lab relatively early in their university tenure, is witnessing a student's gradual transformation from rank amateur in the lab to engaged and competent young scientist who thinks deeply about and is excited about his or her project. An MSA Undergraduate Research Scholarship recently was awarded to one of my students, Kendra, who has been working diligently on a serially sectioned EM data set that extends through the depth of the neuropil of the ventral nerve cord of *Drosophila*.

But, Kendra wanted to ask other EM questions of importance to the lab, which is what she proposed in her scholarship application. She could not do that without support from outside the lab. The day she received the letter from MSA, we heard a whoop and feet running down the hall. She was bursting with excitement!

Kendra is one of those students who you might say has a morphological eye – she loved the images from the beginning and quickly developed the capability to read them, with her focus being the relationship between glial cell processes and synapses. At this point, when she asks to meet with the experienced EM microscopists in the lab with her questions about interpreting this piece of the image or that one, we smile knowing that we likely will conclude with either "Hmhm, that's just too difficult to call" or "Well, we think it is x." We often find that she has noticed details that would have escaped notice by any but very accomplished microscopists, or that she has suggested explanations that reflect high-level integration of the information in the data set. Her 3D reconstructions are beautiful, and highly informative, and she has mastered that process with little help.

Kendra already has started learning to do EM herself, starting with learning to dissect larval *Drosophila*. I fully expect her to handle ultra-thin sectioning with aplomb. We deeply appreciate MSA's support for students like Kendra, knowing that such students might be the core of a new generation of microscopists.

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Scholarship Chair's Note:

Nearly every award is met with a very substantial degree of enthusiasm and appreciation. Over the years I have seen my share of students who tell me the award was the difference between doing a research project and working at McDonalds. Other awardees have published first author full length manuscripts in M&M, and still others have given presentations at our annual meeting based on the work supported by one of our MSA Undergrad Research Scholarships.

Another indicator of the appreciation for these awards is seen in the recipients' universally positive responses on occasions when we inquire whether they can adjust their budget a little, so we can fund or at least partially fund one additional project. We have never been turned down when we make that request.

Information about MSA Undergraduate Scholarships is available at:

<http://www.microscopy.org/awards/scholarships.cfm>