

VENTURING MAGAZINE

Venturing Plays Role in Global Achievement - iGEM

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One of the great rewards of being a scout leader is learning about the success of a young adult you have watched grow into adulthood. In one special case for me, the young adult was my nephew, Lucas Murray, who grew up in Scouting from Cub Scouts all the way to Eagle and ultimately to Venturing Silver. Lucas was recently part of a student team composed of some of the best and brightest young minds from the University of California, Davis. On November 3, 2014, the team took the Grand Prize in the finals of the global iGEM (**International Genetically Engineered Machines**) competition in Boston. The team also won the Best Policy and Practices Advanced Presentation Award, competing with university student teams from all over the world. I am confident (and proud) that Venturing played a key role in giving Lucas the foundations for such an achievement.



Lucas' Eagle project

Lucas had been a Boy Scout but got disenchanted with his inactive troop and had been searching for a more engaged scout troop. During this time, I had been very involved in Venturing beginning with its inception in 1998 and in 2007, I was selected to be one of the Associate Advisors for the World Jamboree, so I encouraged Lucas to join our World Jamboree Crew with me. That same year, Lucas joined the Annual Kodiak Whitewater Trek that Joe Garrett and I had been running since 2005. Lucas thoroughly enjoyed both the youth-led and co-ed aspects of Venturing so much so that he decided to start his own crew. And the following summer, he came with his crew to his second Kodiak whitewater trek, this time as a contributing staff member.



Whitewater Guide

In 2008, we began to see a change in Lucas. That year he went through whitewater guide training and helped with the Kodiak training. Lucas began developing and demonstrating stronger leadership skills every year through 2011 when he served as Head Guide for a 100 mile trip on Oregon's Deschutes River.

In his high school years, Lucas began to learn how to sail. When he went to UC Davis, he joined the Davis Sailing Team. The team is affiliated with the Inter-Collegiate Sailing Association and races in a competitive circuit against other universities on the West Coast. Within a few years of

joining the team and because of his leadership skills from Venturing, Lucas was elected as president of the team.

This year, as a senior, Lucas was a major contributor to the **iGEM** prize-winning project team from UC Davis. This team engineered a biosensor capable of quickly and cheaply evaluating rancidity defects in the chemical profile of olive oil, providing both consumers and retailers with a means of ensuring product quality. In a report conducted by the UC Davis Olive Oil Center, it was found that more than 65% of the extra virgin olive oil on shelves around the US is defective due to poor handling or deliberate adulteration with extraneous, non-beneficial oils. The most prevalent and identifying defect in olive oil is rancidity, indicating the absence of expected health benefits such as antioxidants and polyunsaturated fats. This summer, the team engineered a biosensor capable of quickly and cheaply evaluating rancidity defects providing both consumers and retailers with a means of ensuring product quality.



iGEM team that took the Grand Prize

The project consisted of four components: Protein Engineering, Electrochemistry, Development of a user friendly potentiostat and signal processing. The team was able to provide proof of concept for each component of their device. With all of the components combined, they had a fully functional electrochemical biosensor that could distinguish rancid olive oil from fresh.

To see any young adult achieve such a level of accomplishment makes those around him very proud. Lucas' mom, Carol Murray, was his Venturing Advisor and Joe Garrett was the scouter who made the Kodiak whitewater treks possible and all of us are very proud of Lucas' accomplishment.

We can only speculate on the success of the hundreds of other Venturing young adults who have participated in the various Kodiak High Adventure treks during the past dozen years. There are undoubtedly many, many success stories like this that may never be shared with the Scouting community or the public at large, but those of us who have been involved with providing the Venturing leadership opportunities to young leaders such as Lucas Murray know that our world has been made all the better because of it.

Craig Murray
Venturing Advisor Emeritus