

APS Teachers Merge Student Research and Teaching

As part of the year-long 2008 Frontiers in Physiology Fellowship program, 11 science teachers from across the nation took a week-long break from their summer research experience in APS members' research laboratories at the end of July. The research teachers (RTs) convened for an intensive workshop week known as the "APS Science Teaching Forum" at the Airlie Center in Warrenton, VA.

Three APS members served as Physiologists-in-Residence, and included 2008 K-12 Outreach Fellows, Keisa Mathis (Louisiana State University Health Sciences Center, New Orleans) and TanYa Gwathmey (Wake Forest University School of Medicine), and APS Careers Committee member, Thomas Schmidt (University of Iowa Carver College of Medicine). Additionally, three past RTs led the instruction as Mentor/Instructors, and included Tonya Smith from Mayewood Middle School in Sumter, SC, Isabelle Camille from Coral Reef High School in Miami, FL, and Robert Manriquez from Stanley High School in Shreveport, LA. Martin Frank, APS Executive Director, welcomed and congratulated the research teachers for participating in the APS fellowship program.



Mentor/Instructors (far left), Physiologists-in-Residence (far right), and Research Teachers from across the country participated in the 2008 Science Teaching Forum as part of the year-long Frontiers in Physiology Fellowship program.

The teaching team facilitated sessions using APS curriculum units for middle and high school students. Additionally, the RTs explored inquiry-based teaching strategies, integrating technology, and addressing equity, diversity, and learning styles in the classroom. The RTs participated in

numerous hands-on laboratory and web-based activities, shared their summer research experiences, evaluated their current teaching techniques, and collaboratively developed strategies to implement teaching methods promoted both by the National Science Education Standards and each of their own respective state standards.

As part of the fellowship this fall, the RTs are developing, refining, and field testing their own inquiry-based lab activity that can be used in the science classroom. They continue to be mentored by their Mentor/Instructors. Some RTs will also be inviting their research host into their classroom sometime during the first week in November for a Physiology Understanding (PhUn) Week 2008 event (visit: <http://www.PhUnWeek.org>). The fellowship concludes with the RTs attending and participating in EB 2009 this coming April. Follow the progress of the 2008 fellowship year at: <http://www.the-aps.org/education/2008rts/index.shtml>.

The Frontiers in Physiology fellowship program has been sponsored by the APS over the last 18 years, impacting more than 400 teachers and APS members who have volunteered as research hosts and/or Physiologists-in-Residence. The program has received funding from the National Center for Research Resources (NCRR) Science



Darrell Coston (North Carolina) representing the heart pushes Jennifer Reis (Pennsylvania) as blood carrying oxygen molecules through a narrow vessel represented by two chairs controlled by Monica Erwin (Pennsylvania) and Regan Lawson (Colorado).



Karen Walton (South Carolina), Mike Griffin (North Carolina), and Jonathon Tuttle (Utah) designed and performed an experiment on the relationship between the radius of a tube and flow rate.

Education Partnership Award (SEPA), and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health.

For additional information about the fellowship, visit the program's new website at: <http://www.frontiersinphys.org>, and consider hosting and mentoring a teacher fellow next summer for the Frontiers in Physiology Professional Development Fellowship for science teachers. ❖



It's time to talk to middle and high school teachers in your community about...

Frontiers in Physiology
Professional Development Fellowship for Teachers
Six Star Science for Student-Centered Learning
Application Deadline: January 8, 2009

Teachers are seeking Research Hosts for Summer 2009

Applications are available online:

<http://www.frontiersinphys.org>

For more information, contact Mel Limson in the APS Education Office at: mlimson@the-aps.org