North Bay Science Discovery Day – Santa Rosa, CA – May 15th, 2022

By Alex Madonik

We had another opportunity to meet the public at North Bay Science Discovery Day in at the Sonoma County Fairgrounds in Santa Rosa on Sunday, May 15th. Jerry Taylor and I presented activities that didn't require any wet chemistry (or safety glasses): UV Color-Changing Beads and the Chemistry of Insects and Plants (with molecular models and illustrations of key scent compounds). We were assisted by several helpful volunteers from the NBSDD team.

Kids of all ages love making a bracelet that changes color in sunlight, and plenty of future of scientists were willing to try building molecular models:

Formic acid is named for ants (formica in Latin) who protect themselves with this acid.

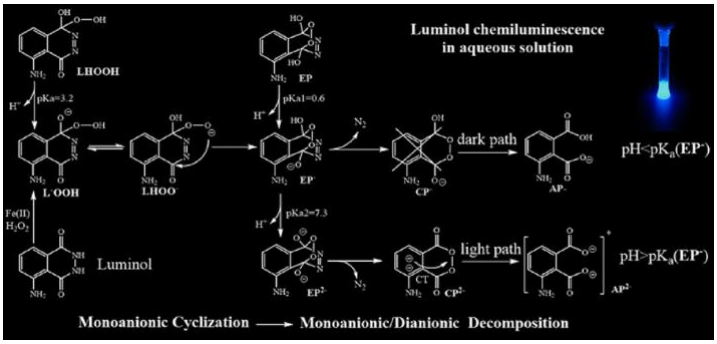
Jerry Taylor with the Cal ACS booth at North Bay Science Discovery Day – 15 May 2022

We also distributed activity kits with materials for two Earth Week theme activities activities, "Bugs to Dye For" and "Cool Blue Light Experiment – Luminol:"

Bugs to Dye For – Cochineal

Cochineal dye (carminic acid) is derived from dried scale insects that live on prickly pear cactus. The Spanish learned about it from the Aztecs when Cortez invaded Mexico.

Cool Blue Light Experiment - Luminol



The luminol reaction is an example of chemiluminescence, the chemical production of light without the generation of heat. It's the process that allows fireflies to glow (as well as many undersea creatures). The Buzz About Bugs banner features the chemical structure of luciferin, the substances in fireflies that emits light when it reacts with oxygen.

The Buzz About Bugs Activity Kit – Cal ACS

We distributed several activity kits to visitors and Jerry took more back to Petaluma for teachers and students there.