OUTSIDE THE TOWER

More than a science camp

Campers at Expedición Ciencia perform astronomical observations.

Daniel, a smart and even-tempered boy of 15, lives in a humble neighborhood in the metropolitan area of Buenos Aires without access to Internet or even a phone in his home. He has just completed a hands-on activity in which he retraced the steps leading Lavoisier to the discovery of oxygen. He looks at me amazed, and exclaims, "I understood things differently! I felt like there was a strong wind inside my head!" Iván, a shy but brilliant 17-year-old, goes to one of the best public schools of Argentina and participates regularly in a range of science-related activities. He turns to me after taking part in a spirited stem cell debate and marvels, "I had the chance to hear good arguments for ideas that contradict my own. I've never had that opportunity before." Despite Daniel and Iván's disparate experiences, the pleasure they felt when they found answers on their own was the same.

Daniel, Iván, and another 38 boys and girls from Argentina and other Latin American countries were attending a science camp held every February by "Expedición Ciencia," a nongovernmental organization of scientists, educators, and students devoted to promoting science education for children in middle and high school (*1*). When I was 16 years old, this science camp changed my life. There, I learned how to think scientifically, realized I wanted to pursue a scientific career, and above all forged unconditional friendships. Today, as a passionate Ph.D. student in immunology, I actively participate in this NGO by helping to organize the camp and serving as a junior counselor.

At Expedición Ciencia, we challenge 14- to 17-year-olds to ask questions about nature as if they were the first ones in history to do so. Through observation and experiments, they follow the crucial steps that lead to scientific breakthroughs and learn the scientific method firsthand. But something else happens in the meantime: They become very close friends, breaking down social barriers and establishing relationships that persist through time and distance.

Science not only allows us to see and comprehend the world; it's also a bridge between people coming from different backgrounds who share the same curiosity and passion to understand the beautiful world that surrounds us.

Luciano Gastón Morosi

Instituto de Biología y Medicina Experimental (IBYME-CONICET), C1428ADN Buenos Aires, Argentina. E-mail: luciano.morosi@gmail.com

Outside the Tower is an occasional feature highlighting science advocacy projects led by scientists and citizen scientists. How do you advocate for science? Tell us at submit2science.org.

REFERENCE

1. www.expedicionciencia.org.ar

PHOTO: EXPEDICIÓN CIENCIA

community was largely blindsided by the 2014 Ebola outbreak in West Africa. A similar situation could arise in the MENA region, but could be averted through innovative and sustained programs of vaccine science diplomacy and global health security.

Peter J. Hotez

U.S. Science Envoy Program, Department of State and White House, Washington, DC 20520, USA; Sabin Vaccine Institute and Texas Children's Hospital Center for Vaccine Development, National School of Tropical Medicine, Baylor College of Medicine, Houston, TX 77030, USA; Department of Biology, Baylor University, Waco, TX 76706, USA; James A. Baker III Institute of Public Policy, Rice University, Houston, TX 77005, USA. E-mail: hotez@bcm.edu

REFERENCES AND NOTES

1. N. Salam, W. M. Al-Shaqha, A. Azzi, *PLOS Negl. Trop. Dis.* **8**, e3208 (2014).
2. S. Cousins, *Lancet* **385**, 931 (2015).
3. P. J. Hotez, L. Savioli, A. Fenwick, *PLOS Negl. Trop. Dis.* **6**, e1475 (2012).
4. M. Gwida *et al.*, *Croat. Med. J.* **51**, 289 (2010).
5. UNICEF, Humanitarian Action for Children, Syrian Refugees (www.unicef.org/appeals/syrianrefugees.html).
6. GlobalHealth.gov, Global Health Topics, The Global Health Security Agenda (www.globalhealth.gov/global-health-topics/global-health-security/ghsagenda.html).
7. DCVMN (www.dcvmn.org).
8. P. J. Hotez, *PLOS Negl. Trop. Dis.* **8**, e2808 (2014).
9. The views presented herein are those of the author and not necessarily those of the U.S. Department of State, White House, or U.S. Government.

TECHNICAL COMMENT ABSTRACTS

Comment on "Local reorganization of xanthophores fine-tunes and colors the striped pattern of zebrafish"

Masakatsu Watanabe and Shigeru Kondo

Mahalwar *et al.* (Reports, 12 September 2014, p. 1362) observed the onset of pigment pattern formation in zebrafish. They concluded that their data do not support our Turing mechanism–based model and presented an essentially different mechanism. Here, we clarify their misunderstanding that may have caused their conclusion and explain past experimental data that do not support their proposed mechanism.

Full text at http://dx.doi.org/10.1126/science.1261947

Response to Comment on "Local reorganization of xanthophores fine-tunes and colors the striped pattern of zebrafish"

Ajeet Pratap Singh, Hans-Georg Frohnhöfer, Uwe Irion, Christiane Nüsslein-Volhard

Watanabe and Kondo question our conclusion that the current Turing-type model of color patterning in zebrafish requires modification. In addition to xanthophores and melanophores, iridophores are essential for stripe formation in the body, although not in the fins. A model of predictive value should accommodate the in vivo dynamics and interactions of all three chromatophore types in body stripe formation.

Full text at http://dx.doi.org/10.1126/science.aaa2804