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CODY LOCKE

before graduation, says the journal now receives enough submissions to publish multiple times a year. The articles, authored equally by male and female students, primarily describe research methods, present literature reviews, or offer perspectives on controversial issues like human embryonic stem cell research and teaching evolution. Locke says, “The journal lets the public see what students are really thinking about science.”

Alabama college students aren’t the only ones getting involved. Cornell University senior Kevin Hwang started *The Triple Helix (TTH)* in 2005 as a forum for interdisciplinary ideas that intersect science, society, and law. As soon as it appeared at Cornell, Hwang says, students at other universities wanted in. So he created more than a dozen chapters in the United States and Europe (with a handful more under way) that publish local versions of the national publication.

The Journal for Young Investigators (JYI), the brainchild of five students, posts peer-reviewed research and feature articles by undergraduates, regardless of institutional affiliation. Faculty advisers critique the research articles while professional writers edit the feature stories.

Even as these student journals flourish, some observers question their value. With

The Spring 2006 issue of The Triple Helix features articles on several hot-button topics, including “the birth of the artificial womb” (from a student at Hopkins), “pot and politics” (UC Berkeley), and “homosexuals and the national blood supply” (U. Penn).

Scientific Publishing 101

UNDERGRADUATES OCCASIONALLY MANAGE TO PUBLISH THEIR RESEARCH IN PROFESSIONAL JOURNALS, BUT NOW THEY HAVE A SET OF OUTLETS ALL THEIR OWN.

WHEN ALABAMA NATIVE CODY LOCKE headed to Tuscaloosa for college, he had never heard of molecular biology or even read a scientific paper. Four years later, Locke was finishing a major in biology and editing a research journal.

Locke, an HHMI undergraduate research intern, served as the editor-in-chief of the undergraduate *Journal of Science & Health at the University of Alabama (JOSHUA)* for two years and created the online version. As a sophomore, Locke jumped at the chance to get involved. “Professional journals really help further science, and I thought an undergraduate one could do the same by allowing students to learn more about different fields.” Plus, he jokes, “I had papers I wanted to publish!”

Thanks to the enterprise of students like Locke, undergraduates have several opportunities to share their research in journals created by and for their peers. Students are involved at every step: writing, designing, fundraising, and even delivering.

By their very nature, these journals face unique challenges—deadlines scheduled around exams, staff turnover as students graduate, and competition with other campus activities. Locke, doing the bulk of the work, usually solicited submissions in late spring and reviewed, edited, and published the 50-page annual journal during the summer.

Despite the challenges, the journals thrive. UA undergraduates outside the biological sciences expressed interest in contributing, so *JOSHUA* started accepting articles from computer-science, physics, and engineering majors. Locke, who relinquished the editing reins

New Awards Help Launch Research Careers

HHMI named 13 winners of its first Physician-Scientist Early Career Award Program. The grants provide \$150,000 over three years to promising physician-scientists in their early years as tenure-track faculty members at academic medical centers.

These awards are designed to encourage alumni of HHMI's two physician-scientist training programs to continue to pursue their interest in research after they receive their M.D. or M.D.-Ph.D. degrees. One of these programs, the HHMI-National Institutes of Health (NIH) Research Scholars Program, enables medical or dental students to spend a year doing research in laboratories at NIH. The other program, the HHMI Research Training Fellowships for Medical Students Program, allows medical or dental students to conduct full-time research at any academic institution in the United States, except NIH.

Only alumni of these HHMI programs are eligible to apply for the Early Career Awards, which will be given annually.

The awards support individuals who have obtained full-time, tenure-track faculty positions. The money must be used for direct research expenses. The grants may not be used to replace or supplement salaries, start-up costs, or research expenses that would otherwise be supported by the institution. Also, the awardees' institutions must agree to let them spend at least 70 percent of their time doing research.

THE INAUGURAL CLASS OF THE EARLY CAREER AWARD PROGRAM:

- Atul J. Butte, M.D., Ph.D. *Stanford University School of Medicine*
- Jayanta Debnath, M.D. *University of California, San Francisco, School of Medicine*
- Emad N. Eskandar, M.D. *Massachusetts General Hospital*
- John L. Hartman, M.D. *University of Alabama School of Medicine*
- Siavash Kurdistani, M.D. *David Geffen School of Medicine at UCLA*
- David Martin, M.D. *University of Washington School of Medicine*
- Vamsi K. Mootha, M.D. *Massachusetts General Hospital*
- Scott A. Oakes, M.D. *University of California, San Francisco, School of Medicine*
- Alfredo Quiñones-Hinojosa, M.D. *The Johns Hopkins University School of Medicine*
- Stelios M. Smimakis, M.D., Ph.D. *Brigham and Women's Hospital*
- Kimberly Stegmaier, M.D. *Dana-Farber Cancer Institute*
- Jennifer F. Tseng, M.D. *University of Massachusetts Medical School*
- Catherine J. Wu, M.D. *Dana-Farber Cancer Institute*

the high caliber of student research at universities today, argues Jim Austin, editor of *ScienceCareers.org* (a career-resource project of the American Association for the Advancement of Science, AAAS), undergraduates should strive to publish in professional journals with more rigorous standards. "Students can practice by playing the real game," he says.

But, proponents counter, when major-league journals such as *Nature* publish only about 10 percent of the papers they receive, students can benefit from the "preseason training" of publishing in student journals. Biologist Guy A. Caldwell, who coordinates the HHMI Undergraduate Research Intern Program at UA and serves as faculty adviser for *JOSHUA*, argues that student journals serve a more fundamental role: "Seeing something like *JOSHUA* makes the act of doing and thinking about science real."

Taking part in the student journals also gives contributors the opportunity to explore career interests and the self-assurance to pursue them. Mary Patyten, who created and managed *JYI*'s features section as an undergraduate and now writes full-time for the California Department of Fish and Game, says, "I would have been less confident going into this field without my *JYI* experience."

Hwang's and Locke's publishing know-how also has influenced their career plans. Hwang, whose *TTH* title includes "CEO," intends to continue down the entrepreneurial path by starting a biotechnology company. Locke hopes to be a researcher and, of course, edit a professional journal. ■ — EMILY CARLSON

STUDENT MAGAZINES AT A GLANCE

Journal of Science & Health at the University of Alabama

Debut: November 2002

Founders: Nabeel Ahmed Memon and Sarah Adair (UA '03)

URL: www.bama.ua.edu/~joshua/

Circulation: 1,000 copies annually

Funding: HHMI, National Science Foundation (NSF), UA

The Journal of Young Investigators

Debut: December 1998

Founders: Andrew Medina-Marino and Tim Sibley

(Swarthmore College '98),

George Lui and Brian Su

(Duke University '98), Neal

Freedman (Brown University '98)

URL: www.jyi.org

Circulation: Available

only online; new research and feature articles appear monthly

Funding: AAAS, NSF,

Burroughs Wellcome Fund,

universities, other organizations

The Triple Helix

Debut: March 2005 at

Cornell University

Founder: Kevin Hwang

(Cornell University '07)

URL: www.thetriplehelix.org

Circulation: Each chapter publishes about 1,000 copies

twice a year with some chapters also publishing online

Funding: Host universities, corporate and private sponsors

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GUY CALDWELL