

2013

## Inquiro 7 (Front Matter)

Inquiro Staff

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# inquire

Volume 7 • 2013

*Founded and staffed* by undergraduate students at the University of Alabama at Birmingham, *Inquire* is an annual research journal produced as an outlet for the publication of undergraduate scientific research. UAB is an excellent undergraduate research university, and with the addition of a journal such as *Inquire* in which to publish their findings, the package is complete. Any undergraduate student at UAB, as well as any student participating in a summer program at the university, is eligible to submit research. The rights to every paper published in *Inquire* are retained by the author, leaving each individual free to submit to and publish in a larger national journal or magazine. Students are invited to submit research papers, short reports derived from posters or research narratives throughout the year.



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# letter from the editor

**“Research is to see what everybody else has seen, and to think what nobody else has thought.”** These are the words of Albert Szent-Györgi, a Hungarian physiologist who received the Nobel Prize for discovering vitamin C and for elucidating oxidative processes key to the citric acid cycle. Researchers have made immense progress since his time. Today, much of his work is fundamental knowledge for students of biology and chemistry, including the authors published in this journal, many of whom wish to forge their own legacies in science. The essence of this quote is the importance of creativity; however, the capacity for innovation in science is not inherent, but is crafted by one’s education and experiences.

My own path to the decision to become a scientist has been a journey in itself. When I began college, I chose to major in chemistry and knew I had an interest in medicine, but was unsure how it would manifest in my career. Four years later, I look forward to pursuing a Ph.D. in biophysics so that I can contribute to the world of biomedical research. My experiences as a UAB student have prepared me for this future in a multitude of ways, from hands-on lab experience to many other aspects of my chosen profession, including teaching, presenting, writing, collaborating, and—through *Inquire*—publishing. Sharing the same opportunities with other students who may not yet know where they belong is a personal passion of mine and is what has made my years spent working on *Inquire* so rewarding.

Chapin entered UAB with the intention of pursuing a biomedical engineering degree; but, after exposure to the challenges and rewards of scientific research and the incredible devotion of those engaged in it, he realized that his passion lay in gaining understanding at the theoretical level. Chapin’s interest in research has been sustained and refined by the many opportunities offered by this university to gain practical skills critical to a scientific career. Together, we view *Inquire* as another tool available for UAB students to learn and practice the nuanced art of scientific discovery and communication.

During our tenure as editors, Chapin and I have worked to manage *Inquire* more efficiently than ever before and to give our editorial board the opportunity to become more involved in the publication process. We created committees for the board members: the Website Committee, to oversee and update our website; the Publicity Committee, to promote our presence on campus; the Article and Interview Committee, for those with an interest in scientific journalism to help edit and select our science news pieces; and the Faculty Review Committee, who helped us find faculty members and post-doctoral fellows with the expertise to review the submissions we received.

In addition to the committees, we streamlined our submission and review processes by moving them entirely online, which could not have been possible without the help of Nick Bieser, UAB’s Coordinator for Undergraduate Research. Lastly, we wrote specific guidelines for authors to abide by when preparing their manuscripts, with the goal of standardizing our papers and exposing students to the rigorous standards they must meet when submitting to professional journals.

Implementing all of these changes while simultaneously producing Volume VII has not been without its challenges, but Chapin and I welcomed the opportunity to help *Inquire* grow and flourish. As UAB adapts to the current national climate of budgetary restrictions and increased pressure to justify all research endeavors, so must *Inquire* adapt to UAB. Volume VII boasts research papers from various areas of academia, including biology, neurobiology, inorganic chemistry, mathematics,

physics, forensics, and psychology. We continued to attempt to publish material that will be interesting and comprehensible to readers with a general science background. On page 38, you will find an excellent biology paper with important implications for the treatment of Alzheimer's disease. One of our short reports (page 19) describes an interesting application of mathematics to solve problems in medical imaging. In science news, Sadhvi and Harsh share their passion for medical research in their articles on progress toward HIV and tuberculosis treatments (pages 6 and 9, respectively).

*Inquiro* would not exist without continued support and guidance from UAB faculty and administrators. We extend our utmost gratitude to each of our reviewers who volunteer their time to maintain the high quality of the journal. We would also like to especially thank Mike Sloane for his ongoing mentorship and for helping us present *Inquiro* at the 2013 National Collegiate Honors Council Conference as a model to students and faculty from several other universities who wish to found their own undergraduate research journals. Special thanks to Nick Bieser, with whom we hope to continue to partner as he unites various aspects of undergraduate research at UAB. Finally, we sincerely thank Julio Rivera, Robert Palazzo, and Suzanne Austin for recognizing the importance of *Inquiro* and supporting its continued publication.

While it cannot cover everything, Chapin and I hope that this edition of *Inquiro* conveys some of the scope and magnitude of the research in which UAB undergraduates are involved and serves as a harbinger for the great work many of them will surely go on to accomplish. To mentors and supporters, we ask that you continue to encourage these students and foster in them a passion for research. And to students, as you go forward in your educations and careers, often observing what others have seen, use the foundation you build at UAB to think what no one else has thought.

Miranda Collier, Chief Editor 2013-2014

# inquiro

Volume 7 • 2013

## table of contents

Letter from the Editor	2
Science News	4
Program Spotlight: Diane Tucker	14
Short Reports	
White matter hyperintensity load in adults with chronic stroke is related to motor function but not response to CI therapy	15
Tensor singular value decomposition with applications	19
Metabotropic glutamate receptor 4 positive allosteric modulators attenuate LPS-induced inflammation in microglial cells	22
Most prevalent drugs in death cases: a six-year study	25
A novel evaluation of daytime vigilance in patients with Parkinson's disease using a virtual reality street-crossing task	28
Narrative: A new perspective: Treating patients from the laboratory	31
Intact brain volume is related to therapy responses in chronic stroke and real-world arm use in hemiparetic multiple sclerosis patients	32
Testing of United States currency for cocaine and methamphetamine	34
Faculty Spotlight: Dr. John Waterbor	36
Research Papers	
Small peptides as treatments for Alzheimer's disease	38
Optimization of piezoelectric PVDF films for electroactive strain measurements	42
Method for the determination of trajectory angles of directional secretory vesicles in cultured astrocytes	48
Dark matter and the mystery of orbital velocities	53
Comparison of the X-ray Crystal Structures of Two Mo(CO) <sub>5</sub> (Ph <sub>2</sub> PXR) (R = Pri; X = O; R = C <sub>6</sub> H <sub>4</sub> -4-Me) Complexes	59
The effect of speed of processing training on microsaccade amplitude	63
Inquiro Staff	68
Submission Guidelines for 2014	71
Acknowledgments	72