

The national stage awaits



Mohamad Ali Najia
Editor-in-Chief

Correspondence:
Office of Student Media
Georgia Institute of Technology
353 Ferst Drive, Suite 137
Atlanta, GA 30332-0290

Email:
editor@gttower.org

It is with great excitement and honor that I present to you the sixth volume of *The Tower Undergraduate Research Journal*! Over the past three years that I have been with *The Tower*, the journal has evolved into a national venue to showcase Georgia Tech undergraduate research. In the past several months as Editor-in-Chief, my staff and I have created publishing collaborations with peer institutions such as MIT, increased the frequency of our open-access electronic publishing, and developed a mobile application to freely share the journal's content. *The Tower* also has a new home, as it has been selected to reside within the collection of the United States Library of Congress.

It has been incredibly rewarding to witness and lead this growth, which has prompted me to hasten and reflect. As a biomedical engineering student, I consider William Harvey's discovery of a systemic circulatory system one of the most elegant scientific achievements—not just because of the finding itself, but because he fundamentally changed conventional scientific thought. Harvey, perplexed by Galen's teaching of two separate circulatory systems, had dissected all types of vertebrates, with a focus on the blood's precise course through the veins, arteries, heart and lungs. Harvey had proved Galen wrong by building off the work of Padua, Versalius and Fabricus. It is rare even today that we completely discount previous reports in the literature with one "earth shattering" discovery. Rather, experiments are built upon the works of others, each contributing pieces of data that lead us to the pathway of truth...or at least *today's* truth. The purpose of a scientific journal is to bring forth new ideas and new techniques, to illuminate colleagues about the unknown and to foster discussion and controversy. As researchers, we should all be grasping for a better understanding of the questions that remain and the answers unattained.

In this issue of *The Tower*, we feature a paper on one of the most controversial pieces of legisla-

tion of the 21st century: the Patient Protection and Affordable Care Act. From our partners at the MIT Undergraduate Research Journal (MURJ), we host an article on the synthesis of biopolymers for applications in cell and tissue engineering. The depth and breadth of undergraduate research at Georgia Tech is fully reflected in all the works prepared within this issue.

The Tower could not be possible without the tireless work of the Editorial Board—and as such, they deserve special recognition. Chris Harper, Ravi Konjeti, Amrita Banerjee and Jessica Block are the warriors of the Review Team, each equipped with formidable expertise and patience. Andrea Hu and Katie Staples never cease to impress with their creative skills and production of the journal. Reeves Broussard is a gifted leader running the Business Team. And finally, Harsimran Mann is an energetic driver of inspiration, who will truly be missed as he starts his career at SpaceX this spring.

Each volume reflects the dedication and support of several individuals. I want to personally thank all student and faculty reviewers, graphic designers and developers for their roles. As well, I am incredibly indebted for the support and mentorship of Dr. Carole Moore, Dr. Karen Head, Dr. Chris Reaves, Dr. Rafael Bras, Mr. Mac Pitts, Mr. Tyler Kaplan, and Mr. Michael Chen. Of course, we are driven everyday by your readership and loyalty. Thus, I am excited to share with you the sixth volume of *The Tower*. I am hopeful you will find inspiration in its pages.

Sincerely,

Mohamad Ali Najia
Editor-in-Chief, *The Tower*