

¤ LUCERNA ¤

L U C E R N A

AN UNDERGRADUATE JOURNAL
PRESENTED BY THE
HONORS PROGRAM

The University of Missouri-Kansas City

xx

V o l u m e F o u r I s s u e O n e

C O N T E N T S

Note from the Editor	6
Editorial Board	7
Biology	
Ariel Green: <i>The Role of High Risk HPV E6 Protein in Cervical Cancer Formation</i>	10
Education	
BethAnn Steinbacher: <i>Are Classrooms Selling our Kids Short?</i>	21
English	
Karen Anton: <i>The Audible in Joyce's Texts</i>	29
Michael Devitt: <i>The Rhetoric of Shell Shock</i>	42
History	
James Comminellis: <i>Reasoned Piety: A Summary and Explication of Discussion of One of al-Ghazālī's Incoherence of the Philosophers</i>	61
Sadia Aslam: <i>A Handup, Not a Handout</i>	76
Mathematics	
Cameron Buie: <i>The Bernoulli Brothers and the Brachistochrone</i>	95
Philosophy	
Magie Hogan: <i>The Great Moral Tragedy</i>	110
Political Science	
Andrea Ridlen: <i>Closing Pandora's Box</i>	118
Spanish	
Maria Iliakova: <i>El sueño de las comedias del Siglo de Oro: El nacionalismo, la religión, y el gobierno</i>	138
Author Biographies	
Honorable Mentions	149
151	

A Note from the Editor

As a child, I remember it being emphatically expressed that hard and gruesome work produces tangible, desired results. I am pleased to say that this year's edition of Lucerna is the product of such work. This year we changed the look of Lucerna, hopefully without marring the honorable traditions left by the previous editors and staff. None of this would have been possible without the dedication of the editorial staff. Their constant support and commitment made this year's journal possible. I would also like to thank Dr. John Herron, the interim Honors Program director, for all of his support and wisdom throughout the year. Our faculty advisor, Dr. Clancy Martin, deserves praise as well for his advice and recommendations. Even in her absence from UMKC, Dr. Gayle Levy was always helpful and influential. Moreover, I would be remiss to forget the College of Arts and Sciences Student Government Association and the SAFC. Thank you for making publication possible. Monumentally important were the submission reviewers. To each of you who volunteered time, thank you. I hope you can see the fruit of your labor.

Confined to the pages of this journal are words of academic excellence. Ranging from biology to Spanish, this journal contains brilliant work from the undergraduates of UMKC. Using our strict evaluation scale, the papers could receive a score ranging from 1 – 25. All of the works presented here missed no more than 3 points. There were many other papers that were worthy of publication, but due to our publishing limitations, they are not included in this volume. It was a pleasure reading all of the unique and well articulated findings of UMKC students from so many different disciplines. I only wish we could have published them all. However, I hope that my peers will be encouraged to continue pursuing academic excellence in their respective fields. This is but a taste of the potential UMKC holds. Enjoy!

Sincerely,
Ariel Green,
2009 Lucerna Editor-In-Chief

E D I T O R I A L B O A R D

Editor-in-Chief

Ariel Green

Ariel is a biology, chemistry, and philosophy major. She chose UMKC because of its six-year medical school program, although she did not end up enrolling in it. She joined the Honors Program because of the relationships she thought would be formed with fellow peers serious about their studies. Getting involved with Lucerna was a by-product of a colloquium make-up, but morphed into an interesting and rewarding challenge. Some of her favorite hobbies include obsessively reading, playing piano and guitar, and spending time with friends and family. After graduation, she plans to obtain a Ph.D. in biophysics or pharmacology and pursue a career in research and bioethics.

Managing Editor

Thomas Nienaber

Thomas is a biology major and chemistry minor. He chose UMKC because they accepted his high school credit. Thomas selected the Honors Program because he thought it a great way to get involved. He chose to become involved in Lucerna because he thought it a great way to “put ideas to work”. Some of his favorite hobbies include reading, music, and international affairs. He plans to attend medical school.

Managing Editor

Jesus Butler

Jesus just received a degree in communications with a minor in business administration. UMKC was an appealing option because of the educational quality and location. He chose to become a member of the Honors Program because of the opportunities to meet dedicated students and get involved on campus. His involvement in Lucerna came from a desire to further his experience in the academic world and have some fun in the process. Some of his favorite hobbies are playing guitar and discussing religion and philosophy. He plans to gain experience in the corporate world before returning to school for a MBA.

E D I T O R I A L B O A R D

Graphic Design Editor

Corey Light

Corey is an aspiring studio artist and art educator. He chose UMKC due to the vibrant urban community surrounding it. The Honors Program has given Corey a chance to develop in a cooperative academic environment while meeting dedicated students and staff. He enjoys designing and laying out Lucerna because he's always excited to present the best of UMKC to the public. He spends his days entrenched in graphic design and photography, hoping to continually enhance the visual landscape in the future.

Treasurer

Sadia Aslam

Sadia is a history and chemistry major. Being a native "Kansas Citian", she chose UMKC for the unique opportunities she felt were offered to UMKC students. Sadia chose the Honors Program because it provided a forum for involvement, contribution to campus life, and opportunities to meet motivated UMKC students from all disciplines. Her interest in Lucerna originally stemmed from her previous experience with a literary magazine. However, she began to further appreciate her role once she realized the importance of Lucerna as the only undergraduate research journal at UMKC. Some of her favorite hobbies include reading historical fiction and spending time with family and friends. She begins her first year of law school this fall.

Executive Secretary

Tiffanie Fowlkes

Tiffanie just completed her Bachelor of Science in biology this spring. She chose UMKC because of the small biology department and a desire to stay in Kansas City. The Honors Program was appealing to her due to the tight-knit relationships with fellow peers that develops in such an environment. She chose Lucerna because of a belief in the importance of undergraduates publishing their work. Some of her favorite hobbies include reading, dancing, and going out to eat. In the fall, she will begin attending Washington University to obtain her Ph.D. in cell and molecular biology.

E D I T O R I A L B O A R D

Public Relations Coordinator

Maria Iliakova

Maria is a biology, chemistry, and Spanish major. She chose to become involved with Lucerna because of a belief in the importance of publishing undergraduate research. Some of her favorite hobbies include the following: traveling around the city and beyond, playing outside in nice weather, enjoying music, reading, drawing, and raising STD awareness amongst youth in our community. Her post-graduation plans include conducting research abroad for the spring of 2010 and becoming a physician scientist.

Events Coordinator

Kathryn Hembree

Kathryn just completed her degree in philosophy and chemistry. After attending the University of San Diego, she transferred to UMKC to be with family and for the educational opportunities it presented. She chose to get involved with the Honors Program because of the opportunities amongst professors and peers it provided. Her interest in Lucerna came from a desire to be involved in the publication of undergraduate research. Some of her favorite hobbies include reading, writing, traveling, and spending time with friends and family. She will begin working at Sullivan and Cromwell LLP in July of this year. In the future, she plans to obtain her law degree.

Dr. John Herron - Interim Honors Program Director

Dr. Clancy Martin - Honors Faculty Fellow, Faculty Advisor

Dr. Gayle Levy - Honors Program Director

Paper Review Board

Amy Kucharo	Elizabeth Black	Rachel Waldemer
Ariel Green	James Comminellis	Reid Brenner
BethAnn Steinbacher	Jesus Butler	Dr. Richard Delaware
Constance Quirk	Julliette Bates	Sadia Aslam
Corey Light	Kathryn Hembree	Salvatore Scavuzzo
David Collier	Maria Iliakova	Thomas Nienaber
Diego Chi	Matt Varon	Tiffanie Fowlkes

A B O U T
T H E
A U T H O R S

Karen Anton just completed a degree in clarinet performance, philosophy, and English. She enjoys music, playing the clarinet, visiting the opera, and beautifully-printed books. She will begin attending the Jacobs School of Music at Indiana-Bloomington in the fall. After graduation, she wants to teach at the college level and continue her research.

Sadia Aslam will begin her first year in the 90+ program this coming fall, after completing the degree requirements for history and chemistry. She enjoys reading historical fiction and hanging out with family and friends. Her plans after graduation from law school include becoming a public interest lawyer and aiding families within the city and beyond.

Cameron Buie just completed his degree in Mathematics earning Departmental Honors. He is entering graduate school in the Department of Mathematics and Statistics this Fall to pursue a Ph.D. in Mathematics, and has been awarded a Graduate Teaching Assistantship. On April 17, Cam gave a 30-minute talk in the department Expository Talks Series titled, “The 1906 Erdos-Renyi-Sos Proof of the Friendship Theorem: ‘Suppose in a group of people we have the situation that any pair of persons has precisely one common friend. Then there is always a person (the ‘politician’) who is everybody’s friend.’”

James Comminellis is a senior in Medieval and Early Modern History. He enjoys playing violin, boxing, reading both fiction and non-fiction, playing video games, watching films, and engaging in coffee shop conversations. He plans to apply for the Rhodes scholarship to continue

his education in Medieval history at Oxford. Ultimately, he would like to teach at the college level and continue his research in Christian doctrine and the treatment of heresy.

Michael Devitt finished a degree in English this semester. He enjoys reading, writing, and watching sports. He plans to take a year off to travel in Europe or the Far East and finish his book. After this sabbatical, he plans to attend graduate school.

Ariel Green is a senior biology, chemistry, and philosophy major. She enjoys reading, writing, playing music, and discovering things. Her plans after graduation include obtaining her Ph.D. in biophysics or pharmacology and pursuing a career in bioethics and public health.

Magie Hogan is a philosophy major. She enjoys reading, acting, improv comedy, and writing hip songs. Her plans after graduation could possibly include the Peace Corps, graduate school, law school, entrepreneurship, and/or the performance lifestyle.

Maria Iliakova is a senior biology, chemistry, and Spanish major. She enjoys traveling around the city and beyond, playing outside in nice weather, and raising awareness of STDs/HIV to youth in our community. Her plans after graduation include obtaining a M.D./Ph.D. to become a physician scientist as well as a public health and community service advocate.

Andrea Ridlen just finished a degree in political science. She enjoys volleyball, tennis, reading, and traveling. Currently, she is enrolled in the 90+ program at UMKC. She plans to practice law in real estate, product liability, and consumer protection.

BethAnn Steinbacher is an elementary education major. She enjoys keeping up with her children's activities, reading, and running. Her plans after graduation include becoming a first grade teacher.

HONORABLE MENTIONS

¤

David Camerlinck and his paper, “The Lie of Remembrance”

David Collier and his paper, “Morality and Class Structure in Charles Dickens’ Hard Times”

Ryan Lane and his paper, “The Rwandan Genocide: Our Failed Duty Against Anarchy”

Tiffanie Fowlkes and her paper, “Assembly of Cytoskeletal Filaments, Associated Proteins, and Neurodegenerative Disease in Eukaryotes”

SPECIAL THANKS TO

¤

Kira Mayo, Dr. Gayle Levy, and Sally Mason for copy editing and proofreading.