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Proceedings of the 1st Annual GSU Undergraduate Research Symposium

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Proceedings of the 1st Annual GSU Undergraduate Research Symposium

Thursday, June 5, 2014
Governors State University

Editor:
Dr. Shelly Kumar
Division of Science
College of Arts and Sciences

**Proceedings of the
1st Annual GSU Undergraduate Research
Symposium**

**Governors State University
University Park, IL 60484**

June 5, 2014

Editor:

**Dr. Shelly Kumar
Division of Science
College of Arts and Sciences**

PARTICIPANTS

**Undergraduate Students of
Governors State University**

College of Arts and Sciences

College of Business and Public Administration

College of Education

College of Health and Human Services

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Dear Student Researcher:

Welcome to the Annual Governors State University Undergraduate Research Symposium. We are proud of the excellence, expertise, and variety of your research presentations. Thank you for sharing your work with the GSU academic community. A university education goes beyond the mastery of information to the creation of new knowledge.

Congratulations to you and to your professors and advisers for participating in the joy of discovery. We are proud to count you as members of the GSU community.

Thank you for participating in this research symposium and for what we hope will be a life-long commitment to new ideas.

Sincerely,



**Elaine P. Maimon, Ph.D.
President**

A MESSAGE FROM THE DIRECTOR

The office of the provost initiated the undergraduate research program (URP) this academic year to enhance research activities among undergraduate students at GSU. The program has several features which help faculty members motivate students to engage in quality research, and encourages undergraduate students directly to build strong foundations through which they can be successful in conducting research. The program has recognized that quite a few undergraduate students yearn for academic excellence and want to satisfy their intellectual curiosity. They seek faculty members to become their mentors and are willing to work very hard to achieve successful results in research. Faculty members on the other hand are also seeking to have such diligent students and are eager to make them excellent scholars. This pursuit of excellence from both sides culminates into a strong bond between the faculty and students. The role of URP is to be a catalyst to strengthen this teacher-disciple bond by creating an environment through which there is a maximum beneficial interaction and collaboration between faculty and students.

Though URP is in its infancy, it has founded several programs which will benefit undergraduate students for years to come. URP has established a research grant for exclusive use for the undergraduate research. This year eight faculty members received the grant and they have engaged several students in the research activities. URP has received seven more grant applications for the next year. Several student workshops directly related to research have been offered. Through these workshops students have enhanced their skills in literature search, writing laboratory notebooks, writing research reports, and presentations of their research work. URP also has travel funds for students to present their research work in professional conferences.

The undergraduate research program has successfully initiated an Undergraduate Research Club to promote camaraderie among undergraduate researchers. It has proved to be quite successful and highly motivating for students to join in research. The club, with highly enthusiastic members, has been quite active in recruiting students and promoting URP's mission of engaging undergraduate students in research and scholarly activities. The club took active part in the Inaugural Meeting of Undergraduate Research Program on November 26, 2013. One of the goals of the club is to attract freshman students



starting in Fall 2014, and actively recruit lower division students throughout the year.

Another mission of URP is to prepare undergraduate students in presenting their research work in professional conferences. Besides the Power Point and oral presentation workshops, URP has established two main events, one in the middle of the year and one at the end of the academic year, where student will have opportunities to present their research work, and hone their presentation skills and get prepared for the professional conferences. All students who benefit from the URP grants are required to present their work at the end of the year research symposium.

Today we are celebrating the very first undergraduate research symposium at GSU. This event represents the culmination of the hard work through which successful research has been achieved. Today you will proudly present your results, through which you have addressed the answers to the mysteries you were seeking. Hopefully, in this process you have discovered more questions which need to be answered, as research is a never-ending pursuit of knowledge and truth. So, enjoy the day, share your excitement, teach others, learn from others, and make friends.



Shelly Kumar

June 5, 2014

1st Annual GSU Undergraduate Research Symposium June 5, 2014

PROGRAM SUMMARY

E-Lounge:

11:00 A.M. – 11:10 A.M.	Registration
11:10 A.M. – 11:15 A.M.	Welcome and Introduction
11:15 A.M. – 11:50 A.M.	Lunch
11:50 A.M. – 12:00 Noon	Greetings: Associate Provost
12:00 Noon – 12:40 P.M.	Podium Presentations
12:40 P.M. – 12:50 P.M.	Synopsis of 2013-14 URPG
12:50 P.M. – 1:15 P.M.	Poster Presentations
1:15 P.M. – 1:20 P.M.	Certificates Presentation
1:20 P.M. – 1:25 P.M.	Future Activities
1:25 P.M. – 1:30 P.M.	Concluding Remarks



SYMPOSIUM PROGRAM

E-Lounge:

- 11:00 A.M. Symposium Registration
- 11:10 A.M. **Welcome and Introduction:**
Dr. Shelly Kumar
Director, Undergraduate Research Program
College of Arts and Sciences
- 11:15 A.M. **Lunch**
- 11:50 A.M. **Greetings**
Dr. Sandra Mayfield
Associate Provost
- 12:00 Noon **Podium Presentations**
Moderator:
Dr. Tywanda Jiles
College of College of Education
- 12:00 P.M. MENTAL HEALTH CARE DISPARITIES AND A DISCUSSION ON RACE AND CLASS, Sheila A. Nesbit and Rashidah Jaami` Muhammad*, English. College of Arts and Sciences, p. 12.
- 12:10 P.M. CMA CONFERENCE PRESENTATION: THE STAFF OF THE NEWSROOM, Kyle Horn and Deborah James*, Human Communication, College of Arts and Sciences, p. 13.
- 12:20 P.M. FREEDOM OF THE PRESS IN COLLEGE NEWSPAPERS: SIX STUDENT NEWSPAPER MODELS AND EDITORIAL CENSORSHIP AT THE GSU PHOENIX, Jonathan M. Bulthuis and Deborah James*, Journalism, College of Arts and Sciences, p. 14.
- 12:30 P.M. EARLY CHILDHOOD EDUCATORS: PERCEPTIONS AND PRACTICES IN THE LANGUAGE AND LITERACY DEVELOPMENT OF CHILDREN, Jill Hedges and Jennifer Armstrong*,

Communication Disorders, College of Health and Human Services, p. 16.

12:40 P.M. Synopsis of 2013-14 Undergraduate Research Program Grants, p. 26.

12:50 P.M. **Poster Presentations**

1. SEEING IS BELIEVING: USING VIDEO CAMERAS TO MEANINGFULLY ENGAGE PRE-SERVICE TEACHERS IN REFLECTIVE THINKING, Samantha Denny, Jessica Jaerowski, Adrianna Dozian, and Tywanda Jiles*, Early Childhood Education, Division of Education, COE, p. 20.
2. INTERMEDIATE SIGN LANGUAGE COMMUNICATION SCIENCES AND DISORDERS, B.H.S., Manar Jaber, Avalon Marciniak, Samantha Goers, and Eileen Truskowski*, Communication Sciences and Disorders, College of Health and Human Sciences, p. 21.
3. QUANTITATIVE ANALYSIS OF ACETAMINPHEN BY QUANTITATIVE NUCLEAR MAGNETIC RESONANCE TECHNIQUE (Q-NMR), Amer Wazwaz¹, Sushane Kumar², and Shailendra Kumar^{1*}, ¹Chemistry, College of Arts and Sciences, ²Hinsdale Central School, Hinsdale, IL, p. 22.
4. FINANCIAL STRESS AND ITS EFFECTS ON FAMILIES, Jessica McCague-Lopez and Crystal Blount*, Psychology, College of Education, p. 23.
5. THERAPIST-CLIENT SEXUAL RELATIONSHIP, Priscilla Amofa and Crystal H. Blount*, Psychology, College of Education, p. 24.
6. EFFECTS OF FINANCIAL STRESS ON PARENTING AND CHILD BEHAVIORS, Elaine Mares and Crystal Blount*, Psychology, College of Education, p. 25.



- 1:20 P.M. **Certificates Presentation**
- 1:25 P.M. **Future Activities**
Dr. David Rhea
Incoming Director, Undergraduate Research Program
- 1:30 P.M. *Concluding Remarks*
Shelly Kumar



ABSTRACTS OF PODIUM PRESENTATIONS

June 5, 2014

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Governors State University
University Park, Illinois



MENTAL HEALTH CARE DISPARITIES AND A DISCUSSION ON RACE AND CLASS

Sheila A. Nesbit and Rashidah Jaami' Muhammad*

English

College of Arts and Sciences

ABSTRACT

The focus of the paper is on the health care disparities related to race and class, especially in regards to mental health care. This venue is the most underserved area for marginalized and impoverished persons, with fewer facilities for treatment options, quality care, and the availability of needed psychotropic medications and ongoing counseling services. About fifty years ago President Lyndon B. Johnson signed landmark legislation for the health care programs, Medicare and Medicaid. The programs' main goal was to create a better life for impoverished persons. Unfortunately there is still a large amount of disparity in health care for racially marginalized people, and the mortality and morbidity rate for these groups is higher and the quality of health care is an "apartheid system" in certain regions of the U.S. The disparities concern current and preventative treatments of acute and chronic mental health illness. Disparities can involve treatment of patients in regards to cultural and language barriers and the need for a more diversified work force. Disparities also involve lack of knowledge in regards to risk factors and using the emergency rooms of hospitals as clinics by numerous impoverished people. Disparities also can be based on class status, difference in socioeconomic status, insurance coverage, cultural, and language barriers. The disparities noted in Illinois are at a high point with a need for improvement in the community by local officials, in regards to community involvement and supporting families through the teachings of NAMI and the Mental Health Alliance. The focus of the papers concentrates on the mental health disparities related to race and class and how the issues are being addressed by the local governments and learned scholars across the U.S. to combat and control the rise in the disparities.

**CMA CONFERENCE PRESENTATION: THE STAFF OF THE
NEWSROOM**

Kyle Horn and Deborah James*
Human Communication
College of Arts and Sciences

ABSTRACT

This presentation will include what I have gleaned from the photography competition and seminars I took part in during the 2014 CMA conference in New York. Topics to be discussed will be time management in the full spectrum of professional (as newsroom staff) and personal life. Also I will touch on the value in concept of a photography contest in terms that are relevant to a non-photographer audience. Finally, I will touch on libel and slander in terms of the newsroom and a news venues audience. Having taken an eclectic mix of seminars during the CMA conference most of my presentation will be based on interpersonal and intrapersonal communication and interaction to keep it relevant and succinct.



**FREEDOM OF THE PRESS IN COLLEGE NEWSPAPERS:
SIX STUDENT NEWSPAPER MODELS AND EDITORIAL
CENSORSHIP AT THE GSU PHOENIX**

Jonathan M. Bulthuis and Deborah James*

Journalism

College of Arts and Sciences

ABSTRACT

Freedom of the press and of speech is integral to the correct function of the student newspaper. Synonymously, the act of publication comes with serious legal consequences in any Democracy. The balance of freedom between administrative censorship and student control has always been at the heart of this issue. Six student newspaper models that comprise this spectrum between censorship and control elucidate the position of the GSU Phoenix as a free press.

The following newspaper models display the huge balance of censorship that exists, between private and public universities in the U.S. Model 1: The purpose of the newspaper is public relations. The school expects to approve all copy in advance, and someone in the Public Relations Department censors the paper. Model 2: The purpose of the newspaper is public relations. The Faculty Advisor is the primary censor, and is expected to think with the mind of a Public Relations official. Lots of private schools have this model, even if it isn't academically valid. Model 3: The purpose of the newspaper is educational for the readership and for the journalists. The Faculty Advisor faculty censors all content, but for quality, not content. Model 4: The purpose of the newspaper is educational, and a Journalism Professor participates in the entire process, in consultation with the editors. Editors are the final censors, and often there is a Content Review Board. This is the most common system in private colleges. Model 5: The purpose of the newspaper is educational, and the Journalism Professor is only an advisor. The Editors are the final censor. Model 6: The newspaper is totally independent. Students run it and answer only to the newspaper Publications Review Board.

We can say with confidence at the Phoenix that we fall happily in the spectrum between Model 3 and Model 5, which is, arguably, the best position for an emergent student newspaper like the Phoenix to be. Our Faculty Advisor works closely as a guide with the Editors and Staff, informs us of important or current story concepts, and has final censoring capacity on every issue; but the paper itself is entirely



student run. We generate our own story concepts, gather information independently, solicit our own advertising, and generate independent and representative editorial. Most importantly, we censor ourselves for libel, credibility, conscientiousness, and relevance in every word we write.



EARLY CHILDHOOD EDUCATORS: PERCEPTIONS AND PRACTICES IN THE LANGUAGE AND LITERACY DEVELOPMENT OF CHILDREN

Jill Hedges and Jennifer Armstrong*

Communication Disorders

College of Health and Human Services

ABSTRACT

There are several factors said to be contributors to the future academic success of children from low-income/low-resource areas. The perceptions and practices of early childhood professionals in facilitating language and literacy development are among the most critical. Both current and previous research suggest that children from low-income/low-resource environments may not be receiving the enrichment and support necessary for language and literacy development during the “critical years;” thus, placing them at risk for future academic failure. This study was designed to address a specific need in the literature as it relates to increasing the language and literacy development of this population of children. While there is an overwhelming amount of literature that focuses on the overall development of children from low-income/low-resource environments and the schools that they attend, there is a dearth in the literature that specifically relates to the role of the early childhood teacher as it concerns the ability to facilitate language and literacy activities and strategies with their students.

This research explores the following questions:

- How do early childhood educators perceive their ability to facilitate the development of language and literacy in children at-risk for language/learning difficulties?
- How do perceptions of early childhood educators influence the development and use of specific teaching strategies?
- How do perceptions of early childhood educators influence classroom structure and organization?

Data concerning perceptions and how they influence development and use of specific teaching strategies as well as classroom structure and organization were collected using a questionnaire, observation, and reflection.

The significance of this work, thus far, is that we found the early childhood educators we observed to have met or exceeded the “basic” standard in many areas of the Early Language and Literacy Classroom Observation Tool and to be ranked “strong” in the following areas: Classroom Management, Organization and Contents of the Classroom, Opportunities for Child Choice and Initiative, and Quality of Book Reading. The Research demonstrated a few areas in need of growth among most of the educators such as Efforts to Build Vocabulary and Environmental Print. These findings coincide with the perceptions survey where the early childhood educators’ mean score was 4.19 out of 6 when asked to rank themselves on 22 different areas of language and literacy development where 1 was not confident and 6 was very confident.



ABSTRACTS OF POSTER PRESENTATIONS

June 5, 2014

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Governors State University
University Park, Illinois



SEEING IS BELIEVING: USING VIDEO CAMERAS TO MEANINGFULLY ENGAGE PRE-SERVICE TEACHERS IN REFLECTIVE THINKING

Samantha Denny, Jessica Jaerowski, Adrianna Dozian, and Tywanda Jiles*

Early Childhood Education
Division of Education, COE

ABSTRACT

Reflective practice requires a person to think about their actions and consequences (Dewey, 1910). In assuming, the role of teacher pre-service candidates must begin to engage in the process of reflective thinking early on in their career. Pre-service teachers are urged to think back on a completed lesson and or activity in their head and ask themselves questions like “What happened?” “When did it happen?” and ‘How?’” While, these seem like basic questions to some pre-service teachers will begin to use this information to inform their practice. What begins with questions will lead to more purposeful thinking about details that will help the pre-service teacher candidate develop. Reflective thinking is a skill set that can be cultivated in teachers, and this proposal identifies one way to do so with the use of technology.

This project proposes that students enrolled in EDEC 4451- Pre-primary methods (ECE Lab 2) are provided the opportunity to engage in reflective thinking skills with the use of technology. Students in this course use LiveText which is a web-based software application where all course documents and reflections are submitted. Feedback to students is primarily provided in this same application. Currently, students are required to develop and present a pre-primary lesson plan at the. This research project proposes that the pre-primary lesson plan be video-taped with the use of the Sony Bloggie. The faculty member will take notes and use the video camera clips to offer comments, feedback and suggestions during the student-faculty member lesson follow-up discussion. The faculty member and the student will then go through the video clips together to help the student see what specific actions were strengths or areas identified for improvement. Then the student would complete a final reflection on the entire experience to help them in understanding the actual application of reflecting.

**INTERMEDIATE SIGN LANGUAGE COMMUNICATION
SCIENCES AND DISORDERS, B.H.S.**
Manar Jaber, Avalon Marciniak, Samantha Goers, and Eileen
Truszkowski*
Communication Sciences and Disorders
College of Health and Human Sciences

ABSTRACT

On April 11-13th, we attended an event named Beyond the Books – Silent Weekend 2014. This event was hosted by the Department of ASL-English Interpretation at Columbia College Chicago. This event was held at the Camp Manitoqua and Retreat Center in Frankfort, Illinois. The event is targeted at students that are studying Deaf Studies or ASL Interpreting, however, the event welcomes all that have some sort of background with Sign Language. We were challenged to only use Sign Language for all three days. As a result, we picked up new signs, practiced our receptive and expressive skills in real life situations, and best of all, we got to see how much we really know. In addition, we had the opportunity to choose from a number of different workshops that covered important topics related to Deaf Studies and Interpreting. Such as, Everything but Language, Jump into ASL Sports, ASL games, ASL Discourse in Action, Creativity and ASL, Medical Vocabulary for Interpreters, Bridges of Creativity, Working with a Deaf Interpreter, Mouth Morphemes in ASL, Medical Interpreting: The RID Code of Professional Conduct and beyond, Don't be shy...Sexual Signs in ASL, Working with a Deaf Interpreter, Incorporating Signs from around the World, Sports Themed Books, ASL Semantics: Know the Difference, Classifiers – Storytelling and Conversation Strategies, and etc. Our presentation will cover a great deal of information that we learned from the workshops listed above. We will also highlight how this gained knowledge will benefit the Governors State University Sign Language Club members, in our Sign Language courses, and beyond.



QUANTITATIVE ANALYSIS OF ACETAMINPHEN BY QUANTITATIVE NUCLEAR MAGNETIC RESONANCE TECHNIQUE (Q-NMR)

Amer Wazwaz¹, Sushane Kumar², and Shailendra Kumar^{*}

¹Chemistry, College of Arts and Sciences

²Hinsdale Central School, Hinsdale, IL

ABSTRACT

The pharmaceutical industry mainly uses chromatographic techniques such as High Performance Liquid Chromatography (HPLC) and Gas Chromatography (GC), to determine the quantity of the active ingredient and other material in the drugs. A large effort goes into developing methods using chromatography techniques. The method development and running HPLC and GC are time consuming. Methods need to be updated as the chromatographic columns and the instruments wear out. On the other hand, Nuclear Magnetic Resonance (NMR) technique is mainly used for qualitative analysis to determine the identity of compounds. However, Proton-NMR technique does provide quantitative information of compounds. In order to develop a method for quantitative analysis by NMR (q-NMR), an internal standard of known concentration is utilized. A method was developed successfully to quantify acetaminophen in our laboratory by q-NMR. Calibration curves of the areas of NMR signals and the concentrations were drawn which showed linear relationships from 1mM – 100 mM concentrations. The robustness of the method was shown by analyzing samples in quintuple with very low percent standard deviation.

In this project, the method developed earlier is repeated to show the robustness of the method with the second operator. Solutions of acetaminophen with concentration range of 10 mM – 100 mM were prepared in a solvent system in which methyl methoxyacetate as internal standard was dissolved in deuterated dimethylsulfoxide (DMSO-d₆). NMR of these solutions were taken in quintuplicates. Averages of peak areas of NMR spectra of these solutions were plotted against the concentrations of the solutions. The results are very similar to the ones obtained by the first operator. The plots with linear with excellent regression and very low percent standard deviations, indicating that this NMR method is a robust alternative method for quantification of acetaminophen.

FINANCIAL STRESS AND ITS EFFECTS ON FAMILIES

Jessica McCague-Lopez and Crystal Blount*

Psychology
College of Education

ABSTRACT

There are many families who experience financial hardship and as a result the entire family is affected by this issue. The goal of this research study is to see how financial stress affects many aspects of the family dynamic. This study researches the level of stress due to financial difficulties. It is important to note that the research also looks at how much individuals disclose financial hardship with their family. This study aims to examine if families with higher levels of income communicate financial stress more than families who earn less money. The results of this sample will be compiled into a spreadsheet to uncover any correlations with financial hardship relating to stressful situations.



THERAPIST-CLIENT SEXUAL RELATIONSHIP

Priscilla Amofa and Crystal H. Blount*

Professional Standards in Human Service and Research
Division of Psychology, COE

ABSTRACT

Sexual relationships with clients are unethical and all of the major professional ethics codes have specific prohibitions against them. It is considered part of the therapeutic process for a therapist to develop some type of connection in order to help clients, but a problem occurs when the therapist begins to reciprocate the patient's feelings in a way which violates the ethical code of the profession. Sexual overtones can distort the therapeutic relationship and therapists need to be aware of the effects of sex-related socialization patterns and how they may influence transference and countertransference reactions. Therapists who enter into sexual relationship with clients can also do considerable damage to them. After the therapist-client sexual relationship, negative psychological repercussions for clients include pain, fear, and mistrust. Sexual relationships with clients have been declared to be a violation of the law in most states. It is considered one of the more serious of all ethical violations and the most damaging boundary violation. Legal and disciplinary actions for therapists who engage in sexual relationships with clients include lawsuits, fines, and felony charges. If therapists follow the code of ethics the welfare of clients will be safeguarded, and the therapist will have guidance in his or her work so that he or she can provide the best service possible.



EFFECTS OF FINANCIAL STRESS ON PARENTING AND CHILD BEHAVIORS

Elaine Mares and Crystal Blount*

Psychology
College of Education

ABSTRACT

The current study explored the relationship between the effects of financial stress on parenting and child behaviors. Many studies suggest that children who live in poverty are more likely to experience behavioral problems, such as low self-esteem, aggression, hyperactivity and depression. However, the primary focus of this study was to evaluate the level of financial stress for individuals, who may be living above the poverty level, and currently enrolled in an undergraduate and/or graduate program at a University. It seems likely that adult college students with families and other financial obligations may be experiencing financial stress, which may alter the family dynamics and result in ineffective parenting skills and negative child behaviors. The results indicated that there was a slightly higher correlation between financial stress and children's behaviors than between financial stress and parenting style. The preliminary findings indicate the importance of considering parenting distress and the potential impact on children's behavior when addressing issues and interventions related to financial stress.



2013-14 Undergraduate Research Program Grant Recipients

- **Jennifer Armstrong**, CHHS — *Early Childhood Educators' Perceptions and Practices in the Language and Literacy Development of Young Children*
- **Crystal Blount**, COE — *The Psychological Cost of Procrastination during Financial Stress*
- **Mary Carrington**, CAS — *Effect of Plant Root Morphology on Arbuscular Mycorrhizal Fungi Colonization*
- **Timothy Gsell**, CAS — *Comparison of Microbial Diversity and Potential Pathogen Levels in Seeps and GSU Campus Runoff Zones in Thorn Creek in Fall and Winter*
- **Walter Henne**, CAS — *Synthesis and Analysis of Folate Targeted Podophyllotoxin for use in Ovarian Cancer Combination Therapy*
- **Caron Jacobson**, CAS — *Crossing the Dualistic Divide: Involving Criminal Justice Students in Active Learning*
- **Shelly Kumar**, CAS — *Quantitative Analysis of Analgesic Drugs, Acetaminophen and Acetylsalicylic Acid, by Quantitative Nuclear Magnetic Resonance (q-NMR)*
- **Steve Shih**, CAS — *Laboratory Safety System*



2014-15 Undergraduate Research Program Grant Applicants

- **Daniel Cortese, CAS** — *Same As It Ever Was: Similarities Between E-Cigarette and Conventional Cigarettes Advertising*
- **Crystal Bount, COE** — *The Psychological Cost of Financial Stress Among Families*
- **Shelly Kumar, CAS** — *Quantitative Analysis of Antihistamine Drug, Fexofenidine Dihydrochloride, by Quantitative Nuclear Magnetic Resonance (q-NMR)*
- **Sang Hoon Lee, CAS** — *Banana Season (Independent Feature Film Project)*
- **Mazna Patka, COE** — *Cultural Competence among School Psychologists*
- **Robin Thompson, CAS** — *The Six Degrees of Separation: Bridging the Gap Between Our American Literary Past and Our Present Lives*
- **John Yunger, CAS** — *The Interaction of Landscape Diversity and Reservoir Diversity on the Distribution of Cryptosporidium and Giardia*



STUDENT PARTICIPANTS

<u>Student</u>	<u>Major & College</u>
Priscilla Amofa	Psychology, COE, p. 24
Jonathan M. Bulthius	Journalism, CAS, p. 14
Samantha Denny	Early Childhood Education, COE, p. 20
Adrianna Dozian	Early Childhood Education, COE, p. 20
Samantha Goers	Communication Disorders, CHHP, p. 21
Kyle Horn	Human Communication, CAS, p. 13
Jill Hedges	Communication Disorders, CHHP, p. 16
Manar Jaber	Communication Disorders, CHHP, p. 21
Jessica Jaerowski	Early Childhood Education, COE, p. 20
Sushane Kumar	Chemistry, Hinsdale Central School, p. 22
Avalon Marciniak	Communication Disorders, CHHP, p. 21
Elaine Mares	Psychology, COE, p. 25
Jessica McCague-Lopez	Psychology, COE, p. 23
Sheila A. Nesbit	English, CAS, p. 12
Amer Wazwaz	Chemistry, CAS, p. 22

FACULTY SPONSORS

<u>Faculty</u>	<u>College</u>
Jennifer Armstrong	CHHS, p. 16
Crystal Blount	COE, p. 23, 24, 25
Deborah James	CAS, p. 13, 14
Tywanda Jiles	COE, p. 20
Shailendra Kumar	CAS, p. 22
Rashidah Jaami` Muhammad	CAS, p. 12
Eileen Truszkowski	CHHS, p. 21



UNDERGRADUATE RESEARCH PROGRAM

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Director, Undergraduate Research Program and
Symposium Organizer

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Dr. Judy Burgland
Dr. David Golland
Dr. Tywanda Jiles
Dr. Shelly Kumar (Chairperson)
Dr. David Rhea
Dr. Colleen Sexton
Dr. Jun Zhan

UNDERGRADUATE RESEARCH CLUB (STUDENT ORGANIZATION)

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Enrique Camacho — Vice-president
Yuri Lopez — Secretary
Joseph Zuklic — Treasurer

Members

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