CREATIVITY IN THE ARTS & SCIENCES EVENT

2014 CASE

Award Winners
Stefanie Anarumo

Stefanie Anarumo is a fourth year BFA Theatre Performance student at the University of Florida. Her 2014 CASE presentation, “Organized Chaos: The Search for Artistic Arcadia,” explored the striking parallels between mathematics’ order and chaos theory and the creation of a theatrical role in performance. Stefanie holds a Certification in Arts in Healthcare and was a 2012-2013 University Scholar who conducted research on Improvisational Therapy. In addition to performing at the Hippodrome State Theatre and the UF School of Theatre and Dance, she has devoted much of her studies to Arts Accessibility, and in particular, its relationship with the Deaf community. She plans to use the award money to assist in covering the funds for travel to her BFA Showcase performance in New York and to California in efforts to collaborate with Deaf West Theatre. She is eternally grateful for the plethora of opportunities made available to her while at UF and looks forward to pursuing both performance and artistic research opportunities post-graduation.

Katie Bosley

Katie Bosley is a fourth year Ceramics major from Clearwater, FL. She focuses primarily in wheel thrown and hand built functional pottery. She will graduate in Fall 2014 and plans to work as an artist in residence, then attend graduate school in hopes of eventually teaching as a university ceramics professor. At the 2014 CASE event she, along with her collaboration partner, presented the piece “CIPN Symptom Cups”. The piece included four ceramic cups that, through her treatment of form and surface, simulated symptoms that are often side effects of chemotherapy treatment. Her passion for the fight against cancer as a committee member of UF’s Relay for Life, an American Cancer Society event, drew her to the research related to this cause. She is using the CASE award to travel to Milwaukee, Wisconsin in March to attend the 2014 NCECA Conference (National Council on Education for the Ceramic Arts) and to travel to Helena, Montana, this summer to intern at the Archie Bray Foundation for the Ceramic Arts.

Alexis Boulter

Alexis Boulter is a sophomore Microbiology and Cell Science major and Dance minor. She has worked in Dr. Connie Mulligan’s lab for over a year, an experience that prompted her interest in health disparities, particularly minority health. Her research focuses on the genetic and environmental risk factors that contribute to hypertension in African-Americans to better understand the outcome of increased cardiovascular disease in this population. She hopes the work will lead to increased awareness of the disparity and will be utilized to create more effective prevention and treatment strategies. Alexis plans to apply her award to fund her travel to the Association of American Physical Anthropologists Annual Meeting in Calgary, Alberta, Canada, where she will be presenting her research this spring. Beyond her work in the lab, Alexis serves as a HIV community outreach counselor and the co-chair of the Student Health Advisory Board. She also sings the National Anthem at many sporting events on campus.
Katelyn Carty

Katelyn Carty is a current freshman majoring in music at the University of Florida. Although a music major, she is additionally pursuing a pre-med track as she aspires to go to medical school. Katelyn became enamored with music at an early age; after taking lessons on various instruments, she eventually joined her middle school band in sixth grade and learned how to play the flute. She has developed her passion ever since, remaining a flautist. In her CASE project, Katelyn composed Melody and Malady: An Aural Presentation of Pompe Disease for flute and piano after meeting several times with her science collaborator, Robin Yoon. As he discussed his research on Pompe disease, together they envisioned a three-movement piece to symbolically represent birth, the effects of disease, and progress towards a cure. Katelyn then brought the abstract vision into the realm of reality by fabricating a piece that characterized the physical and emotional tolls of the disease. This was her first composition, having received neither prior experience nor instruction beforehand. She plans on using the award money to study music abroad in Salzburg, Austria in the summer of 2015.

Michelle Couret

Michelle Couret is a third year biochemistry major at the University of Florida and hopes to pursue a career in medicine. Intrigued by neuroscience and magnetic resonance imaging, she currently works at the McKnight Brain Institute in Dr. Thomas Mareci’s research lab, where she studies brain networks. Specifically, she uses diffusion-weighted magnetic resonance imaging to analyze connectivity between different regions of the brain. Having spent most of her childhood dancing and involved in various artistic pursuits, she is an avid supporter of arts in education. When Michelle and her collaboration partner, David Tonnelier, decided to collaborate for CASE, they wanted to create a three-dimensional representation of the brain that was composed of distinct layers. This idea eventually resulted in using a laser-cutting machine to etch MR images on 36 layers of plexiglass that pivot around one corner. This method produces a transparent view of the head and also allows each brain image to be viewed individually. Michelle hopes that through art, science can become more accessible to people and inspire them the way it inspires her. She plans on using her award to attend the Experimental Nuclear Magnetic Resonance Conference in Boston this March.

Clayton Cozzan

Clayton Cozzan is a senior in the Materials Science and Engineering (MSE) Department at the University of Florida. His CASE poster, titled “Non-Invasive Early Detection of Pulmonary Diseases Using Porous Silicon Nanoparticles,” represents his honors thesis work with Dr. Jennifer Andrew in MSE. This research is a “proof of concept” for a new diagnostic technique that aims to be viable in both developed and developing countries. In completion of his honors thesis for graduation in May 2014, Clayton intends to use the award to collect scanning electron microscopy images at the Nanoscale Research Facility at UF. In his undergraduate career at the UF, Clayton has participated in experiments at the University of Penn, Oak Ridge National Labs, Argonne National Labs, and (his personal favorite) the University of New South Wales. His primary research interests involve functional electroceramics with an emphasis on x-ray diffraction characterization techniques. Clayton plans to pursue his Ph.D. in Materials Science and Engineering starting Fall 2014.
Vassiliki Daskalakis

As a fine artist and entrepreneur, Vassia Daskalakis tries to use her photography to raise awareness of certain issues that should be addressed in society and within suffering people. While this series focuses specifically on those afflicted with tobacco addiction, by surfacing empathy for victims as a whole, she aims to increase society’s tolerance of difference and empower people to help themselves or extend a hand to those in need. She plans to use her award money to expand her professional development as a photographer and continue initiatives like “Bare Portraits Photography” and “SMILE Photography” to service students on campus and those interested in photography. Vassia’s hobbies include pole vaulting, scuba diving, longboarding, and fine art photography.

Benedetto DiCiaccio

Benedetto DiCiaccio is a junior majoring in biochemistry at the University of Florida. He enjoys music and has performed in both the UF Wind Symphony and Clarinet Ensemble. While at UF, he has also participated in the chemistry club and their science outreach program, in which he performed lab experiments for students at local middle schools. Benedetto joined Dr. David Wei’s research group during the start of his sophomore year, working on the photomediated growth of plasmonic nanomaterials. The project seeks to understand the differences in light-induced growth between different elements, such as silver and gold. By understanding these growth processes, particles can better be engineered for a variety of applications (e.g., drug delivery and biological detection). Benedetto wants to use the CASE Award to eventually present his work at a national American Chemical Society conference. In the future, he wants to pursue an M.D./Ph.D. and use his knowledge of materials science and biochemistry to study nanomedicine.

Zachary Fitzpatrick

Zachary Fitzpatrick, currently an undergraduate student studying biochemistry and political science at Louisiana State University, wishes to participate in a Medical Scientist Training Program upon graduation, concentrating his research studies on the development, characterization and clinical translation of gene and cellular therapies to treat inherited and acquired central nervous system disorders. In addition, he also aspires to establish an international aid agency dedicated to implementing potentially life-saving genetic therapies, a cohort of some of the most costly and complex drugs in underrepresented areas of the world. At CASE, Zachary presented his ongoing research from Massachusetts General Hospital and Harvard Medical School, which was executed under the mentorship of Dr. Casey Maguire, on exploring the application of cell membrane-encapsulated viruses for therapeutic gene transfer and on overcoming associated immunological barriers to such therapies. Zachary’s CASE Award will give him the financial means to present his work at The American Society of Gene and Cell Therapy Annual Meeting in Washington, D.C. this coming May.
Katie Green

Katie Green studies in the Art and Technology program in the Fine Arts College at the University of Florida. Katie sees art to be emotion imagined through three-dimensional modeling in the computer via programs like Autodesk Maya and then printed into reality through rapid prototyping machines. She also draws, paints, takes photographs, and does graphic design. For CASE, she collaborated with Andrew Kolarich to create a 3D sculpture focusing on the changing neurodegenerative brain and body. She plans to use her CASE award to purchase art supplies.

Andrew Kolarich

Andrew Kolarich is a junior in the Junior Honors Medical Program at the University of Florida. Andrew joined the UF-HHMI Science for Life Program as a freshman to study under Dr. Coy Heldermon on gene therapy treatments for Sanfilippo Syndrome, a rare lysosomal storage disorder. Andrew was subsequently awarded the UF-HHMI SFL Extramural Research Program, which allowed him to study in the laboratory of Dr. John Hopwood and Dr. Kim Hemsley at the South Australian Health and Medical Research Institute's Lysosomal Diseases Research Unit. There, he created a protocol that utilized a lipophilic crystal to trace neurodegeneration of dendritic spines in the hippocampus under confocal microscopy. Thanks to many of his experiences in the Science for Life Program, he was inspired to create a complex piece on neurodegeneration that utilized three dimensions. For CASE, he collaborated with Katie Green to create a 3D printed sculpture focusing on the changing neurodegenerative brain and body and the limitations that humans have when studying their own diseases. Andrew hopes to use the award to continue his interest in three dimensional technology, art and medicine.

Stepfanie Lam

Stepfanie Lam is a sophomore biology student at the University of Florida. Her mother introduced her to music by taking her to weekly piano lessons while her father introduced her to the world of tennis. The two activities taught her the perfect balance of precision, strength, control, and the importance of combining two very different activities. Later in high school, she attended a science program that introduced her to the field of molecular genetics. Through the UF-HHMI Science for Life Program, Stepfanie has had the rare opportunity of working under Dr. Margaret Wallace in the field of Genetics. She presented her research this year on Neurofibromatosis 1, which is a tumor disorder where the mutation of the gene transforms benign tumors into malignant ones. The CASE has allowed Stepfanie to express her passion for science and art through her collaboration with the talented cellist, Virginia Lane. Together they transcribed the many DNA bands Stepfanie produced in lab into musical notes. Audiences could differentiate between cancerous and benign samples because the cancerous ones exhibited a lack of harmony. Stepfanie hopes further research will enable the development of personalized drug therapies and she plans to use the CASE Award to further fund her current project.
Virginia Lane

Virginia Lane is currently a sophomore majoring in Chemical Engineering and Music Performance for cello at the University of Florida. She is greatly passionate about playing the cello and is very dedicated to the arts, but also has a great love for science. She currently works in the lab of Dr. Brent Sumerlin as an undergraduate research assistant and hopes to attend graduate school in the future for either chemistry or chemical engineering. The work that she presented at the CASE with her partner, Stepfanie Lam, was titled Genetics Meets Music. Virginia took the DNA bands that Stepfanie obtained through her research and transcribed them into sheet music. In addition to this, she also created a musical interpretation of the DNA bands, using the sheet music, that further illustrated the difference between the cancerous and noncancerous DNA samples. Virginia plans to use the CASE Award to further her academic career.

Weier Liu

Weier Liu is a third year Biology major at the University of Florida who first started undergraduate research in the summer following his freshman year. Although his first exposure to research began with the principles of microbiology and neurogenetics, he became attracted to another aspect of neuroscience that was mysterious, yet in many ways very familiar: the study of pain. Under the guidance of Dr. Andrew Ahn, Weier was awarded a scholarship from HHMI that allowed him to explore the painful side effects of chemotherapy induced peripheral neuropathy (CIPN) in Dr. Ahn’s lab. His collaborative project at the CASE with Katie Bosley, “Symptom Cups,” aims to simulate four symptoms of CIPN with a set of four aesthetically distinct ceramic cups: stabbing pains, loss of manual dexterity, loss of balance, and sensitivity to temperature. Participants are encouraged to get a glimpse into the lives of patients suffering from CIPN by manipulating the cups with their hands. Weier plans to use his CASE Award to finance future trips related to his research.

Kyle Mosler

Kyle Mosler is a senior BFA Dance major who has also studied Spanish and Education in his three-year career at the University of Florida. As a 2013-2014 University Scholar, Kyle spent six weeks in Senegal studying traditional and contemporary dance this past summer and is finishing a dance documentary from his experiences abroad. His most recent accomplishments include receiving the Dean’s Award in Dance through the Student Juried exhibition for his choreography titled “Eight Hours”. This work was also chosen by his faculty to represent the University of Florida School of Theatre and Dance at the American College Dance Festival (ACDF) this March. At the CASE, Kyle presented a “semi-solo” version of his original senior thesis trio choreography, “Pack”. The work was developed as a coping mechanism in response to a death in his family brought on from smoking. It was created as a multi-purpose creation that worked as a grieving process and also a public service announcement to re-amplify the gravity of health concerns related to smoking. Kyle believes the people who participate in the addictive habit underestimate cigarette smoking on an anatomical level.
Shelby Pursley

Shelby Pursley was born and raised in Winter Springs, Florida, as the only child of David and Annette Pursley. She was recruited to Louisiana State University for Women's Volleyball, but has since left the team to focus on research, academics, and other campus activities. At LSU, Shelby works in both a computational fluid dynamics group and an experimental microfluidics group. Her CASE presentation focuses on a collaboration with Ph.D. candidate Thomas Scherr (LSU Chemical Engineering), which models cryoprotectant loading into cells using a microfluidic device, and highlights how the results of those simulations will inform the operation of a tangible microfluidic device to aid in cryopreservation. Shelby plans to use her award to fund the fabrication and testing of the proposed microfluidic device. In May, Shelby will graduate with a B.S. in Biological Engineering with a minor in Chemistry, and this fall she will begin pursuit of a Ph.D. in Biological Engineering. In her spare time, she enjoys running, cooking, yoga, traveling, and photography. The photograph shown is a 2013 self-portrait taken in Budapest. The photograph shows a woman in red, Shelby's late grandmother, who was a close friend and inspired Shelby to pursue advanced degree programs.

Jacob Renuart

Jacob Renuart joined Dr. Alex Angerhofer's research group in the Spring 2013 as a first-year student, and took an interest in a theoretical approach to the oxalate decarboxylase enzyme, the focus of the group's work. He has used tools such as Visualization of Molecular Dynamics, MATLAB, and HARLEM to evaluate a hypothetical mechanism for this enzyme involving long-range electron transfer between manganese sites on adjacent sub-units on the enzyme. Since joining the Science for Life program in the fall of 2013, he has attended academic conferences such as the Southeastern Magnetic Resonance Conference and the Florida Inorganic and Materials Symposium, both in October 2013. He plans to use the CASE Award to attend future conferences, such as a regional meeting of the American Chemical Society, in addition to licenses for programs and software to advance with his theoretical work. The CASE Award will also go toward costs for materials as he expands his work into an experimental domain.

Billy Schap

Billy Schap is a senior astronomy and physics double major at the University of Florida. From an early age he became interested in space, and how the various objects within our solar system and galaxy formed. For the past year, he has worked with Dr. Peter Barnes on a star formation project, studying the physics of dense molecular clouds in the Milky Way. During this research and within his classes, he saw how much of our knowledge is reliant on the quality of data that can be obtained and how new data can completely change the current model of an astronomical concept. This idea of uncertainty inspired his collaboration with Zac Thompson on their project, “Uncertain Space”, where they explored this idea through three drawings. The project depicted how planetary classification, the model of the solar system, and the understanding of black holes have all changed over time. With the CASE Award, he hopes to further his knowledge of the galaxy with a more advanced telescope.
Juan Serrano

Juan Serrano is an undergraduate researcher working in Dr. Alan R. Katritzky's lab studying novel ways to modify antibacterial and antimalarial drugs to make them safer and more potent. He also conducts health disparities research in Dr. Carolyn M. Tucker's Behavioral Medicine Research Team. He has been the team captain for the UF Speech and Debate Society's Intramural Team and the Volunteer Coordinator for the No One Dies Alone program since last Fall, while also dedicating his time volunteering in various departments within Shands Hospital. Juan enjoys participating in many activities outside of research such as playing tennis with his roommates, working out at the gym, and cooking. He will be applying to an M.D./Ph.D. program by the end of this semester and plans to use the funds from the CASE Award to travel to scientific conferences and seminars to present his work and network with other scientists.

Jennifer Squires

Jennifer Squires is an undergraduate senior pursuing her Bachelor of Arts in Dance with a certificate in Dance in Healthcare. Jennifer applied to be a University Scholar representative for the College of Fine Arts, and she decided to propose a research project dedicated to her mother who was diagnosed with lymphedema. Her project, “Dance for Lymphedema,” was an eight-week program that impacted the lives of two female patients physically and emotionally through dance. Gaga, an Israeli technique created by Ohad Naharin, was the initial foundation for the dance program in combination with original visual aids that catalyzed the patients’ movements. Through improvisation, partner work, and tangible tasks, the patients were motivated to keep moving fluidly and consistently. By the end of every class, Jennifer witnessed a decrease in swelling and pain and an increase in well-being from both patients. Her documentary, “Lymphedance,” reflects the experience and conclusions drawn from the program. Her future goals are to become a physical therapist for professional dancers and incorporate dance into her daily practice with all patients. The CASE Award will be going towards physical therapy school tuition and travel expenses to Tallahassee for Arts Advocacy Day at the State Legislature.

Shelby Sullivan

Shelby Sullivan is a senior BFA Dance Major at the University of Florida School of Theatre and Dance. She is also studying for a Minor in Environmental Studies. After learning to walk, she began to dance. Little did she know, however, of the wonderful opportunities she would partake within the dancing community. “To blow out the candle, or kindle the fire” was created to fulfill Composition 4 of the BFA Dance degree program, and explored the physical and emotional pained endured by those who suffer from the wide variety of anxiety disorders. Shelby’s research and artistic expression serve as an attempt to aid the affected population, as well as inform the surrounding general population. Her original interest of the subject was influenced by personal events linked to anxiety, and later she transformed the combination of her memories with a newfound wealth of medical research to share with others into a complete dance composition. “To blow out the candle, or kindle the fire” embodies the scientifically identifiable symptoms associated with anxiety, treatment and care solutions, lifestyle changes for relapse prevention, and most importantly the choice one must make: accepting their flaws in order to get the proper help. Shelby is beyond thankful to receive an award in the Performing and Visual Arts category of the CASE competition. Although she is not exactly certain how she plans to use the CASE Award, she wishes to expand her research and opportunities within the field of dance. Wherever she may go, she is thrilled to expand her horizons by means she was not capable of before this very generous award.
Zac Thompson

Zac Thompson is a senior majoring in drawing at the School of Art and Art History at the University of Florida. Zac's collaboration focused on the idea of uncertainty in science through three astronomical examples, geocentrism vs. heliocentrism, Pluto, and black holes. He and Billy Schap used different astronomical sources to gather information to provide evidence of how science is a field that is ever changing. The feeling of flux that surrounds astronomy was conveyed in a series of three drawings that captured the fragile nature of historical scientific theories once believed, and now reconsidered. Zac Thompson will use his CASE Award to purchase materials needed for art projects that will be in his solo senior show at the end of April.

David Tonnelier

David Tonnelier's project for the 2014 CASE, "Neural Network," is a fantastic example of the potential for collaboration in the Arts and Sciences. He and Michelle Couret utilized data harvested through magnetic resonance images of the brain, which were used to identify networks of white matter. The medical software is able to synthesize a 3D virtual model from the cross-sectional images, but they wanted to employ a technique that could display 2D and 3D renderings simultaneously. They created a life sized model from stacked sheets of transparent acrylic, each etched with the image of the corresponding MRI with a computer controlled laser. This construction method allows the viewer to see the form of the head, the cerebellum, the hemispheres, and the eyes, for example, and their relative position and densities, while also allowing them to isolate particular cross sections. This has been an amazing opportunity to design and present a beautiful sculpture with serious potential as a teaching tool.

Madeleine Turcotte

Madeleine Turcotte is a junior at the University of Florida majoring in Microbiology and Cell Science with a minor in Health Disparities. When she's not cheering on the Gators from the front row at the O'Connell Center, she is working in Dr. David Oppenheimer's lab engaging her curiosity and passion for the field of genetics. Over the past two years, she has worked on various projects studying actin cytoskeleton dynamics – the complex ways by which the cell coordinates its internal structural system. Through the UF-HHMI Science for Life Intramural research program, she worked on a project to study the ITB3L protein family's role in regulating other proteins that break down actin filaments. Madeleine is grateful to her research mentors and the Science for Life program for the opportunities she has acquired through research, including upcoming presentations at the 2014 Florida Undergraduate Research Conference and the 2014 Emory STEM Research and Career Symposium. She is looking forward to using her CASE Award for supplies to continue her research, and to continue traveling to present her results on a national level. She plans to continue her involvement in research as she pursues a career in medicine.
Alexa Udermann

A drawing senior at the University of Florida, Alexa Udermann utilizes nontraditional, synthetic materials to convey curious landscapes unlike our natural world in her work, “Other Spaces.” Pinned like scientific specimen, mica-like glitter sparkles within the peeled form – contrasting muddied charcoal/ink just as fresh snow powder turns to disgusting slush. Such dichotomies embody Alexa’s work, but she embraces connections between geological and artistic processes. Alexa’s visual aesthetic was sparked by personally living in Alaska and being fascinated with its glacial landscape, but glistening ice is not her only inspiration. Intrigued by uncountable natural wonders, Alexa makes work that visually references aerial typographies, foreign skins, galactic explosions, and so forth. Just as a sense of wonder is connected to such phenomena, Alexa’s eccentric materials and process strike the same marvel within the viewer – fluxing the impact of the unknown. The CASE Award will fund a professional camera, the rights to her own artist website domain, and additional art supplies. These will greatly help further Alexa’s work and artist branding, making her more competitive to graduate programs and an upcoming career.

Robin Yoon

Robin Yoon is a junior majoring in Microbiology and Cell Science at the University of Florida. He has been doing research at Dr. Darin Falk’s lab, studying a rare form of muscular dystrophy called Pompe Disease. In this research, Robin and his colleagues are using a new form of adeno-associated virus, AAV-9, to conduct gene therapy on Pompe disease patients. Earlier trials showed that another vector, AAV-1, produced positive results when used to transport corrective genes into patients but because AAV-1 could not penetrate the CNS, the therapy only affected the targeted areas. AAV-9, on the other hand, can reach into the more difficult-to-reach areas of CNS. This research will hopefully provide patients with a single-dose treatment that corrects the disease throughout the body. CASE allowed Robin to raise awareness for Pompe Disease through collaboration project “Melody and Malady: An Aural Presentation of Pompe Disease,” with his partner Katelyn Carty. Robin is honored to have won an award at the CASE, and he plans to use his CASE Award to fund his trip to South Korea in the summer, where he will be furthering his knowledge in genetically-inherited diseases and doing Duchenne Muscular Dystrophy research at the Yonsei University College of Medicine.