



The 57th Annual Meeting of the Arizona-Nevada Academy of Science will take place in Las Vegas, Nevada. Top: The Bellagio Casino Hotel on the Vegas Strip. Above: The Paris Casino Hotel, across from the Bellagio on Las Vegas Boulevard.



## President's Corner

Shafiu Jibrin, ANAS President

Greetings to you, readers and members of the Academy. I would like to start by thanking all participants and organizers of the 56th Annual Meeting, which took place on April 14, 2012 at Glendale Community College near Phoenix, Arizona. Even though the turnout was lower than last year, the meeting was a success. The paper and poster presentations were great, and the talk given by the luncheon speaker was fantastic!

Now that the 56th Annual Meeting is behind us, we must begin to prepare for the 57th. It will be held jointly with the 94th Annual Meeting of the Pacific Division of the American Association for the Advancement of Science (AAAS) on June 16-19, 2013 in Las Vegas, Nevada.

*Let me emphasize that this will be the only meeting for ANAS in 2013 – we will not be holding our usual local meeting in April.*

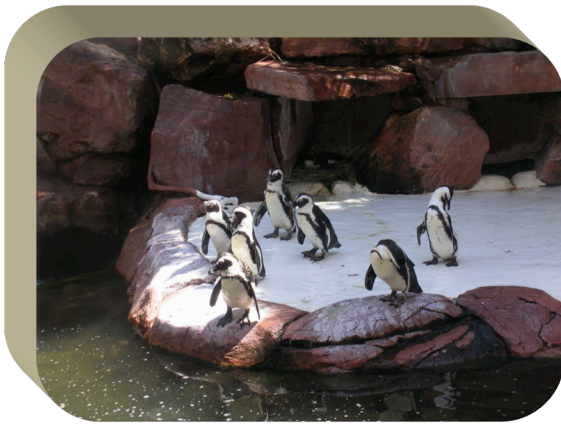
*I call upon all our members and supporters to help us project a good image of ANAS in Las Vegas. We can do this by attending the meeting, presenting papers and posters, and bringing students. We are hoping to use the ANAS-AAASPD joint meeting to rekindle our base in Nevada which has been somewhat dormant for a long time, and to network with members of the AAAS. The Board of Governors is planning to award travel grants to assist those students who will be presenting papers and posters. The details of the grants will be announced in due course, after the summer break.*

*As part of the effort to achieve the*

SUMMER 2012 CONTENTS	
	Special museum exhibits 2
	56th Annual Meeting highlights from Glendale, AZ 3-4
	Outstanding Service Award 5
	A Student's Story 5-6
	Science Olympiad Update 7
Editor, T. G. Manno, Ph.D., <a href="mailto:tgmanno220@yahoo.com">tgmanno220@yahoo.com</a>	

*joint meeting goals, I would like each member to think of what he or she can do to make the meeting a success. For example, one could make a commitment to attend, make a presentation, bring students, and/or donate to the student travel fund. I challenge all of us to make the 2013 ANAS-AAASPD joint meeting a memorable experience. Additional information, including registration and call for abstracts will be posted on our website as it becomes available. I hope you have an enjoyable summer break!*

– Shafiu Jibrin



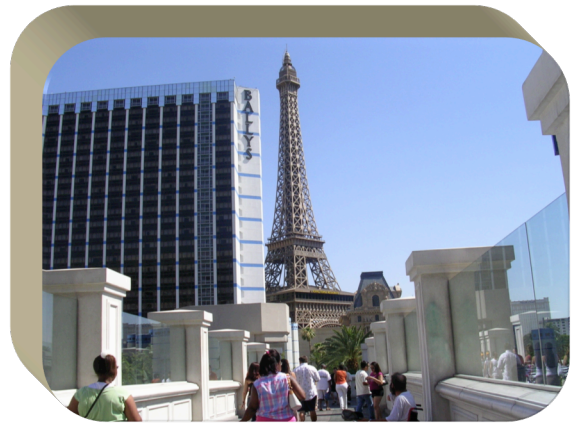
*Penguins at the Flamingo Hotel in Las Vegas, Nevada*



*Montezuma Castle National Monument, Arizona*



*Desert landscape near Apache Junction, Arizona*



*The Catwalk towards the Paris Hotel in Las Vegas, Nevada*

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## ARIZONA-NEVADA MUSEUMS SPECIAL EXHIBITS

### Las Vegas Natural History Museum

Las Vegas, NV  
<http://www.lvnhm.org/>

Dinosaur Mummy CSI: Cretaceous Science Investigation  
Treasures of Egypt  
Engelstad Family Prehistoric Life Gallery

### Arizona Museum of Natural History

Mesa, AZ  
<http://www.azmnh.org/Home.aspx>

The Primal Desert Next Door: Land of Black Volcanoes and White Sands  
Rulers of the Prehistoric Skies

### Arizona State Museum

Tucson, AZ  
<http://www.statemuseum.arizona.edu/>

Basketry Treasured  
Hopi Quilts: Unique yet Universal



14 April 2012: Arizona-Nevada Academy of Science  
56th Annual Meeting held at Glendale Community College



Left: President-Elect Pamela Marshall  
Center: President Shafiu Jibrin with Jamie Lee  
Right: Northern Arizona Director Aregai Tecele with Brian Patrick and Amber Wilson

The 56th Annual Meeting of the Arizona-Nevada Academy of Science was held in Glendale, AZ on April 14th. Presentations and posters represented a variety of scientific disciplines, including hydrology, geology, biology, and mathematics.

**Highlights**

Best Student Papers:

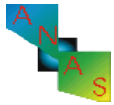
- Brian Patrick, Northern Arizona University, "Water supply and groundwater issues in the Upper Verde Valley of Arizona"
- Jason Goldstein, Arizona State University, "Culture conditions and sample preparation affect quality and reproducibility of spectra obtained from methicillin-resistant *Staphylococcus aureus*"

Best Student Posters:

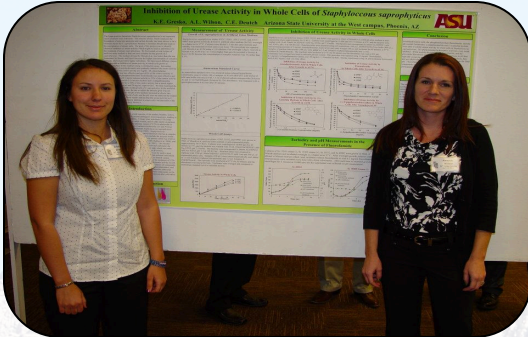
- Jaskaran Bhogal, Arizona State University, "Evaluation of novel RXR agonists with improved efficacy and decreased potential for side effects in the treatment of cutaneous T-cell lymphoma"
- Bentley Hanish, Arizona State University, "Developing the seed beetle *Callosobruchus maculatus* for inquiry genetics labs"

The luncheon speaker was Chad Johnson, assistant professor in the New College Division of Mathematical and Natural Sciences, Arizona State University West. The title of his talk was "Black Widows in an Urban Desert: The Behavior, Ecology, and Evolution of an Urban Pest". In conjunction with the Central Arizona-Phoenix Long Term Ecological Research Project, his most recent research focuses on the study of behavior and population ecology/genetics of desert versus urban populations of black widow spiders native to Arizona, as well as African widow species found in urban habitats of the southeastern US and southern California. Dr. Johnson's research has appeared in top peer-reviewed journals such as Behavioral Ecology and Ethology.





## 56th ANNUAL MEETING HIGHLIGHTS (CONT'D)



Kristen Gresko and Amanda Wilson, students at Arizona State Univ. West



Pedro Chavez with Catherine Kasper, Midwestern University DO student



Pamela Marshall with Dr. Peter Jurutka, Arizona State University



ANAS members at the Poster Session of the 56th Annual Meeting

## *ANAS Does VEGAS!!*

*Save the Date* for the 57th Annual Meeting in Las Vegas, NV:

June 16-19, 2013

Festivities will take place at UNLV.

This is a joint meeting with the American Association for the Advancement of Science, Pacific Division (AAAS-PD) and a great opportunity for members and their students to network and present research. We hope you'll make every effort to attend!

***Outstanding Service Award.*** —Les Landrum, Ph.D., is this year's recipient of the Outstanding Service Award. Dr. Landrum is Senior Research Scientist and Curator of the ASU Vascular Plant Herbarium, and he has been an important force in cataloging Arizona's flora. Many plant families have been documented in seven special issues of the Academy's journal. These floral issues are the most highly requested back issues of the journal. A fellow of the Academy, Landrum was co-editor of the journal (JANAS) from 1991-2003. He continues to serve the Academy by distributing back issues of the journal. For his significant contributions, the Academy honors him with this award.



A LETTER FROM BEST STUDENT PAPER WINNER JASON GOLDSTEIN

*My name is Jason Goldstein. I have what some might call a "colorful" history. I am currently a full time Biochemistry student at Arizona State University, and I recently graduated from Glendale Community College with both an Associate of Science, and an Associate of Applied Science in Biotechnology and Molecular Biosciences. I achieved both of these degrees as a member of the honor society Phi Theta Kappa, and graduated with "High Distinction".*

*So what about this colorful past? Well, a little over four years ago, I was living a very difficult life on the streets where direction and hope were nonexistent. Right around this time, I decided to take my placement tests and find out about enrolling at Glendale Community College (GCC). Once enrolled, at the age of 28, I was a little embarrassed to be among so many younger students who had not made the same mistakes that I did. I had a difficult time adjusting to college life, and after three "unfavorable" academic semesters, I was placed on academic suspension.*

*I returned to life on the streets because of my inability to appreciate the opportunity to attend college. After just a few short months, I was consumed by the need to seek some direction again. I searched for a job, and ended up being employed as a custodian at GCC. After paying for my own 6+ credit hours, and passing with a semester GPA of 3.5, my status was raised from suspension to academic probation. Just two semesters later, I was in good academic standing! In fact, I was not only in good standing, I made the President's Honor List three times in a row while taking Calculus, Organic Chemistry I and II, and several other highly demanding classes. Indeed, my grade school teacher's comments on my report cards rang true. Countless times I remember the phrase "intelligent, but does not apply himself" written in the comment's section next to my sorry excuse for a letter grade.*

*On a lighter note, I am an Arizona native, was born at home by midwife, and raised in a small town just north of Phoenix called New River. Growing up in the boondocks meant you watched a lot of television, or you played with the scorpions, centipedes, horny toads, tarantulas, rattlesnakes, or any other native wildlife that you could find. As a child, I opted to watch TV most of the time.*

*There is a catch here I did not mention—we had to watch what my mother was watching. I am fairly sure this was where I was indoctrinated with science. The only programs my mother watched were PBS programs such as “Cosmos: A personal Voyage”, “Nature”, “NOVA”, “Wild America” and a few other boring news programs. These programs were the first memories I have about topics such as embryo development, our solar system and exotic animals from faraway places. My passion for chemistry and biology come from a revelation I had years after high school (where I did not apply myself either). I generally squeaked by all my classes with barely passing C’s. However, for some strange reason I remember getting an A in Chemistry and a B in Biology. When it came time for me to choose an academic direction to pursue, I gambled that there was something about those two subjects that hit closer to home than any of the others. This is how I found myself enrolled in the Biotechnology program at GCC.*



Karen Conzelman presents Jason with an award for Best Student Paper

*While pursuing my AAS, I realized that, even though it was a great degree, it would never provide me with all the tools I would need to achieve the goals that filled my head when I dared to dream—developing medicinal compounds to treat AIDS, Hepatitis C, and Cancer using compounds with no adverse side effects. I would also ponder if we would ever be able to seamlessly interface mechanical appendages with the human nervous system. This would be a small miracle to, say, a young father who lost his legs defending our country.*

*I currently dream of enzymes and proteins that are engineered and designed for highly specific roles in medicine. It is because of these dreams I am pursuing a Bachelor of Science in Biochemistry with an emphasis in Medicinal Chemistry, a Bachelor of Applied Science in Applied Science with a Concentration in Cell and Molecular Biology Research, and a minor in computational mathematics. Included in my dreams would be some of the places I would like to visit along my life long journey of discovering knowledge and wisdom. Ultimately, I will obtain a PhD. in Biochemistry and continue researching and thinking until the lights go out.*

*Cordially,*

*Jason Edward Goldstein*





## FIVE-PEAT FOR FOOTHILLS:

### Tucson Area High School Gets One "For the Thumb" Brophy Prep Takes Regional Science Bowl

For the fifth year out of the last six, Catalina Foothills High School (CFHS) in Tucson, AZ was the top-ranked team in the Arizona Science Olympiad competition. They went on to represent the state in the national competition, which was held this summer at the University of Central Florida.

"It was a great year," said CFHS senior James Xu, "we were able to come up with a lot of strategy for the competition the night before in the hotel. There were some new events this year, so we had to think of some new approaches for this competition."

Science Olympiad is a national non-profit organization dedicated to improving the quality of K-12 science education. During the tournaments, students use teamwork, creativity, critical thinking, and investigative strategies to apply scientific concepts and solve problems. Science Olympiad 2012 brought together 40 teams from 26 schools—over 600 students and teachers, as teams are made of 15 students each.

The Arizona-Nevada Academy of Science (ANAS) is a sponsor of the Arizona Science Olympiad, and ANAS Treasurer Karen Conzelman is the Site Director for the high school tournament. Several ANAS members, including Rob Bowker, Pedro Chavez, Shafiu Jibrin, Pamela Marshall, Florence Slater, and Don Young were instrumental in helping to run this year's tournament.

Among this year's twenty-five different events were ones in which students were challenged to build the lightest tower possible to hold a certain amount of weight at a given height; to make musical instruments and perform a specified melody with them; to design and conduct an experiment on site to address a specified question; to engineer and construct a solar oven to cook a marshmallow; to collect and analyze chemical and physical data in a variety of contexts including laboratory applications, evaluation of crime scene evidence, and technical calculations; and to build an accurate three-dimensional model of a protein. Clearly, the Science Olympiad spans a broad range of scientific disciplines much like the Academy and its membership.

CFHS students knew what the events were months before and met during once weekly meetings at school to problem-solve. They also spent a good amount of time after school and on their own developing a plan for these events. It is in these weeks and months of preparation that the real learning happens and where the group actually coalesces as a team.

While the CFHS team has won the state championship numerous times, they are still seeking to place in the top tier at nationals. They placed 43rd out of 60 teams this year in Florida.

"That's something we're hungry for next year," said Xu, "I think we can get there."

All the participants at the state competition received tournament t-shirts; medals and ribbons were awarded to the top seven finishers in each event. ANAS awarded a total of \$1000 to the club accounts of school competing in Gravity Vehicle and Protein Modeling, and \$100 to the top finishing schools in the "Dynamic Planet" and "Forestry" categories in memory of Bud Ellis' role in organizing the state tournament during the early years.

The Science Olympiad was also featured in the first annual Arizona Science Tech Festival, and took place on the same day, at the same location (GCC), and with the same sponsor (ANAS) as the Arizona Regional Science Bowl (ARSB). The ARSB winning team was from Brophy Preparatory High School and the 2011 winner, Desert Vista High School, came in second. Brophy went on to compete with all the other state winners at the National Science Bowl, which was held April 26-30 in Washington, DC.



The Catalina Foothills Science Olympiad Teams (Blue and White), coached by Sara Monroe and Steve Casper.

## Posting: ANAS Officers Needed

1. Director at Large
2. Editor of the Journal
3. Recording Secretary

## IMPORTANT!

ANAS is now on Facebook



Check it out on the ANAS webpage, or at:

<http://www.facebook.com/pages/Arizona-Nevada-Academy-of-Science/163999350323773>

57th meeting info, more photos from the 56th annual meeting, ASU's new top 10 species, and more!!

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ANAS COMMITTEE ROSTER (for 2012-2013)

Membership—Boyd Campbell  
Bud Ellis Scholarship—Stephen Shuster  
Grants-in-aid—Erik Gergus  
Necrology—Boyd Campbell  
Budget—Karen Conzelman  
Best Student Paper—Robert McCord  
Best Student Poster—Pamela Marshall  
Outstanding Science Teacher—William Perry Baker  
Outstanding Service Award—Anthony Brazel, Karen Conzelman,  
Florence Slater, Aregai Tecle, and Steve Williams



Students from Morenci High School compete in the Towers event at the Arizona Science Olympiad

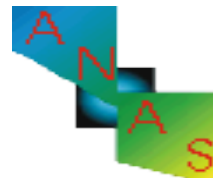


Research is what I'm doing when I don't know what I'm doing.—Wernher Von Braun  
That theory is worthless. It isn't even wrong!—Wolfgang Pauli

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[Invitation for submissions to ANAS newsletter](#)

ANAS members are encouraged to submit materials for publication in the newsletter, including but not limited to the following: articles for a 'Where are they now?' column, ANAS announcements, digital photographs, shout-outs, and special event notifications.

[Note from the editor](#)

*Please feel free to send comments or questions about the ANAS newsletter!—Theo Manno (tgmanno220@yahoo.com)*

Thanks to Pedro Chavez, Karen Conzelman, Theo Manno, and Florence Slater for the pictures and other materials appearing in this issue.