



Forum in Focus

WINTER 2016

President's Letter

Dear Forum Members,

Another holiday season has just ended and giving is on my mind. Giving of our time and our hearts is a concept I work on continuously and discuss frequently with my family. Giving of our dollars is an area of profound importance to so many and the Forum would be remiss if we didn't offer thanks to all those who give.

This is yet another reason why I love being involved with the Texas Biomedical Research Forum. I have the chance to work daily with women who "give" so much of themselves to this cause and for that I am grateful.

Let me explain why giving to the Forum is so important to further the mission of Texas Biomed. Scientists from the Institute apply every year for new and competitive grants to continue and expand their research. Grant awards from the National Institutes of Health and other national funders are highly competitive, and all of these scientists make brilliant proposals.

The Forum is able to play a key role through these grants and their success. Here is how we fit in – each time a Texas Biomed scientist writes a proposal for new research, they must support their ideas with existing data and proof of concept. Our Forum gifted grants have funded these pilot studies over time, giving scientists the needed supporting data and a chance to rise above their peers, as well as others in their field.

The purpose of the Texas Biomedical Forum is to support the Texas Biomedical Research Institute through community relations, volunteer service and fundraising.



Amanda Bezner

In fact, to date, Forum grants has led to more than \$44 million in major scientific awards. Now that's a lot of giving!

As the Forum moves into our next big fundraising push, I ask each of you to consider what any size gift can do for these scientists we support. There is power in numbers and together we can make a difference, no matter the dollar amount.

A big thank you to board members **Courtney Ogle** and **Christine Mayer** for hosting a very well attended Round Table Discussion evening in partnership with the Golden Circle Group in mid October. A huge round of applause for a very successful Fall Lecture Luncheon chaired by **Daniela Serna** and assistant **Ashley Weaver** and their phenomenal speaker, past president and forum member **Catherine Nixon Cooke**. Who knew we would be hunting for diamonds? Last but not least, **Cynthia Kerby** and **Clare Duffin** helped coordinate a wonderful event for past Forum presidents, gala chairs and trustees in early November. A very special thank you to past president, forum member and my advisor, **Walton Gregory**, for opening her beautiful home and hosting this lovely afternoon. What a way to celebrate to those who "give", both in the past and present!

"Giving" my thanks to all of you.

Fondly,

A handwritten signature in black ink that reads "Amanda Bezner".

Amanda Bezner
President 2015-2016
Texas Biomedical Forum

Spring 2016 Lecture Luncheon & Science Education Awards Presentation

Genes, Tanning, Skin Cancer, Vitamin D Deficiency . . . Oh My!

Read on, as you are in for an interactive lecture luncheon this Spring.

The Texas Biomedical Forum invites you to join us for the final and very exciting Lecture Luncheon of the year on Wednesday, March 23, 2016 at 11:00 a.m. at The Argyle. We will also be presenting the Science Education Awards at this event.

For the lecture, we are thrilled to welcome Texas Biomedical Research Institute scientist Ellen Quillen, Ph.D. to share her talk, “Shining Light on the Genetics of Tanning.” Dr. Quillen will discuss how the evolutionary history of genes related to tanning impacts our risk of skin cancer and vitamin D deficiency today. This understanding is fundamental to the development of personalized medicine, which will allow us to understand why individuals and populations may be at increased genetic risk of disease and how they will respond to treatment. She will also bring a piece of equipment recently purchased with donor funds for those in attendance to measure their own skin color and see how they compare to populations around the world.

You won’t want to miss this interactive opportunity to learn about the genetics of tanning. Check for your invitations in February . . . reserva-

tions for tables of eight or individual tickets will be available for purchase on our website, <http://tx-biomed.org/forum/lecture-luncheons>. Reserve your seats quickly! Feel free to email daniela1129@hotmail.com with any questions or to express your interest in attending.



Ellen Quillen developed an interest in genetics during middle school in Wichita, Kansas. She received her Bachelor’s degree in Genetics from the University of Kansas before pursuing her Ph.D. in Anthropology at Pennsylvania State University, where she focused on the evolution of genes related to pigmentation. She was a Postdoctoral Scientist at Texas Biomed for four years before her current appointment as a Staff Scientist. Dr. Quillen runs the “Skin and Bones” Lab, which focuses on human pigmentation and tanning, as well as osteoporosis and osteoarthritis using the baboon model.

Texas Biomedical Science Education Awards

For the past 22 years, the Texas Biomedical Forum and the V.H. McNutt Memorial Foundation have joined forces for the Science Education Awards. Each year, local public and private high school teachers are invited to participate. The awards are given to the top six teachers whose proposals demonstrate the strongest commitment to the scientific process and the further development of progressive science education programs.

Annually, over \$20,000 is awarded jointly by the Texas Biomedical Forum, V.H. McNutt Memorial Foundation and L.D. Ormsby Foundation. Applications are currently being accepted for the 2016 Science Education Awards. For more information, visit <http://www.txbiomed.org/forum/science-education-awards>.

Feedback from 2015 Applicants and Winners:

“We greatly appreciated the funds we received last year. It has been used in the purchase of some of the dissection materials that enhance our aquatic science curriculum.” — *Sarah J. Thompson, IPC/Aquatic Science Teacher, Science Department at Earl Warren High School*

“The funds from last year were for a project titled “Infrared Spectroscopy” and have been used to enhance student understanding of chemical bonding, side groups, and polyatomic ions. The funding through the Texas Biomedical Forum has provided a great opportunity to challenge and engage students thinking in a way I would not have been able to provide otherwise.” — *John W. Cordier, Science Teacher at KIPP University Prep*

STUDENT TOURS



Keystone School Student Tour 9/15/15

Student Tours are a fantastic opportunity for area high school students and are always a rewarding experience for Forum volunteers! Each year, the Forum facilitates an in-depth tour of the Texas Biomedical Research Institute for several advanced placement Biology and Chemistry classes in San Antonio and the surrounding areas. The Spring 2016 school tours are already completely booked!

Students and Forum tour volunteers are treated to lectures from scientists in the Department of Virology and Immunology and the Department of Genetics, as well as to staff-guided tours of the AT&T Genomics Computing Center, the suit room of the Biosafety Level 4 Containment Laboratory, and the Southwest National Primate Research Center.

All Forum members are encouraged to attend one student tour. Spring 2016 tours will be given Tuesdays from 9:30-11:30 am on the following dates:

January 26th
Stevens High School

February 2nd
La Vernia High School

February 9th
Southside High School

February 16th
Health Career High School

Please contact **Jessica Berg** at JessicaB@lmfj.com or **Julie Dorbandt** at jdorbandt@gmail.com if you would like to volunteer for one of these school tours or if you know of a school interested in attending a tour during the 2016-2017 school year.

Past President's Luncheon a Success!

The Luncheon honoring the Past Presidents was held on Wednesday, November 18th at the home of **Mrs. Walton Gregory**. Walton hosted over 45 guests in her beautiful home in Alamo Heights on what turned out to be a beautiful Fall day. Lunch was fabulous and the shopping a special treat. Guests were greeted by wine and shopping courtesy of Lee Michaels Fine Jewelry. Lee Michaels generously donated a fantastic door prize as well as a portion of proceeds to the Forum. On behalf of the Forum, **Amanda Bezner, Cynthia Kerby and Clare Duffin**, the special events chairs, we would like to extend a formal thank you to our gracious hostess Mrs. Walton Gregory and Ryan Berg and team from Lee Michaels Fine Jewelry for a fantastic afternoon. Additionally, thank you to all in attendance who were there to honor the past presidents.



Fall 2015 Lecture Luncheon A HUGE Success!

Forum members and guests were in for quite an adventure on November 11th at the 2015 Fall Lecture Luncheon, as we welcomed author **Catherine Cooke Nixon** to share with us her story about Texas Biomedical Research Institute's founder, Tom Slick.

Ms. Nixon shared historic photographs, personal anecdotes, and readings from her



2005 biography "Tom Slick Mystery Hunter." A story of the remarkable oilman, adventurer and philanthropist who founded not only Texas Biomed, but also the Southwest Research Institute and the Mind Science Foundation. She provided the latest update on the major motion picture now in production, based on exciting stories of yeti hunts, espionage, and international peace initiatives undertaken by Mr. Slick.

Forum members and guests enjoyed the opportunity to peer inside the mind of a 20th century "mystery hunter" who did so much to push our beloved San Antonio into becoming a one of a kind "Science City." There was a large attendance for the luncheon and we want to thank each of you for coming, sponsoring tables and bringing your guests.



Special thanks to our Fall 2015 Lecture Luncheon Table Sponsors: Amanda Bezner/Susan Loyd, Karen Bryant/Clare Duffin, Emily Buescher/Hannah Hudson Beard, Adrienne Frost/Melissa Morgan, Peggy Gracy, Kelly Kruger, Amelita Mauze/Mallory Moorman, Laura Moorman, Denise Mosser, Courtney Percy and Daniela Serna/Ashley Weaver.

An exciting addition to this year's lecture luncheon was the "Diamond Hunt" presented by Shetler Wade Jewelers. In the spirit of Tom Slick and his diamond hunting adventure in Brazil, one centerpiece had a hidden loose diamond inside. Twenty-five centerpieces were scattered around The Argyle and were sold out before the luncheon even began. Guests hunted for their choice of centerpiece and one lucky purchaser, Sarah Trampota won the amazing diamond! A big thank you to Danny Cuellar of Trinity Flowers for his donation of the gorgeous orchid center-pieces!

All the proceeds from ticket, table and centerpiece sales benefit Texas Biomed... so we thank you immensely for your continued support!

The Black and White Masquerade Ball

Grab your mask and join us for a spectacular evening at the glamorous Black and White Masquerade Ball! We invite you to step back in time and experience the grandeur and ambiance of Truman Capote's famed black and white ball held at New York City's Plaza Hotel in 1966. Come and be a part of our very own "Party of the Century" and enjoy delightful cocktails and indulge in fine cuisine, all while raising funds for the pilot studies at the Texas Biomedical Research Institute!

This year's theme was unveiled at a gathering held at the home of Jody & Howard Lutz on Monday, September 14, 2015.



Everyone in attendance was thrilled about the theme and provided great feedback on how to make this year's Gala yet another success! **Sara Stumberg Walker**, Gala Chair and **Jody Lutz**, Gala Co-Chair and **Elizabeth Cox**, Gala Assistant, are truly grateful for all of the hard work already put into this very special event in

our community. Thank you volunteers!

We are very excited to announce that table sales are progressing rapidly! **Fabiola Kaase**, Table Sales Chair, is managing the seating arrangements wonderfully as she is a marvelous new addition to our trustee roster and the gala team. It's not too late to experience The Black and White Masquerade Ball. Whether you join us for dinner or for the After-Party, secure your tickets today! Please contact Fabiola directly with any Table Sales questions at 210.363.8056 or Fabiola.Kaase@iCloud.com.

One of the most important elements of this event is our Forum Grants campaign. Our first round of letters has gone out and we hope you will help us in our efforts. Heather de Rojas, Forum Grants Chair, has been diligently working to update our materials and the website. Forum Grant donations may now be made online! Please contact Heather directly for any questions concerning Forum Grants at 210.215.0177 or hderojas@me.com.

As the party grows closer, we want to remind everyone that our party is for a purpose. Gala proceeds directly impact and fund the pilot studies for the dedicated scientists at the Texas Biomedical Research Institute. The Institute is a world-class facility that calls San Antonio home. We hope you too will consider making a donation that directly supports the Institute's research efforts.



For more information on the 2016 Gala, please visit www.txbiomed.org/forum.

Special Events Coming this Spring!

Julian Gold will host a black and white masquerade fashion show and luncheon. The date is still to be determined but you won't want to miss! The event will encompass a complete fashion show with a featured segment devoted to all black and white gowns for the Gala.

10% of Proceeds will go towards Texas Biomedical Research.

Texas Biomed Updates

Texas Biomed receives \$5 million grant to study possible functional cure for babies born with HIV

Combined Rubella and anti-HIV vaccine under development

According to the World Health Organization, of the nearly 37 million people living with AIDS worldwide in 2014 nearly 2.6 million were children and about 220,000 children became newly infected last year.

The National Institutes of Health have awarded scientists at Texas Biomedical Research Institute and collaborators at the Food and Drug Administration, UCLA and the University of Pennsylvania a \$5 million grant over the next 4 years to study a combination antiviral drugs and investigative AIDS vaccines aimed at treating infants and children affected by HIV. Dr. Ruth Ruprecht, Scientist & Director of the Texas Biomed AIDS Research Program, is leading this study.

“Our goal is to determine whether these candidate vaccines, partnered with antiviral drugs, will not only completely suppress HIV replication in babies infected with HIV at birth, but will also induce such strong antiviral cellular immune defenses that the virus will not reemerge after all treatment is stopped,” Ruprecht said. “We will test our concepts in infant and neonatal rhesus monkeys. These primate models will allow us to assess whether the virus can be cleared from tissue reservoirs and whether long-lasting protective immunity has been generated by the combined treatment.”

A vaccine against HIV has still not been found. And, while current HIV therapies, called highly active anti-retroviral therapy (HAART), can suppress the virus, HAART is not a cure. HAART has proven effective at inhibiting and suppressing the replication of the virus, but once an HIV-infected person stops taking the drugs, the virus comes back.

Ruprecht explained, “We will provide HAART to infant monkeys to suppress the virus so the animals will no longer be viremic (show virus in the blood). Once the virus is shown to be suppressed, we will give them a combination rubella vaccine that has pieces of the SHIV (simian human immunodeficiency virus) inserted into the vaccine. This vaccine vector is so potent it induces a very strong immune response.

Once HAART is stopped, our hope is that the vaccine-induced immune cells take over.”

Due to the prior vaccination, the immune system will be able to recognize viral proteins displayed on cells still infected with HIV that tell it the cell is infected. T cells in the body then recognize the infected cells and kill them.

“We are planning to induce strong killer cell activity,” Ruprecht said, “These cells will patrol the body and take out AIDS virus-infected cells that become activated once HAART has been stopped. We hope over time this patrolling and cell killing will shrink the virus reservoir and there will be fewer cells left in the body able to activate the virus.”

Ruprecht is coordinating this study with Ira Berkower, MD, PhD, U.S. Food and Drug Administration, who has performed the initial testing of the rubella vector-based vaccine, along with Yvonne J. Bryson, MD, Chief of Pediatric Infectious Diseases at UCLA, and Sarah J. Ratcliffe, Ph.D., Associate Professor of Biostatistics at the Perelman School of Medicine, University of Pennsylvania who will provide biostatistical input to the study.



(Continued on Page 7)

\$5 Million Grant

(Continued from Page 6)

Ruprecht and her collaborators aim for this combined therapy approach to generate a functional cure, meaning it would rid the blood of the virus and eliminate the negative effects of HIV – without the need of continued HAART. At the same time, the combined approach could provide immunity against future HIV exposure.

“We are excited to launch this study and develop an attack plan against HIV that could both cure and provide a solid defense against further infection,” Ruprecht said.

This study is currently being funded by the National Institutes of Health National Institute of Allergy and Infectious Diseases.

Texas Biomed helps test possible drug against Ebola virus

Dr. Wendy Maury, a virologist at the University of Iowa, worked with Dr. Robert Davey, Scientist and Ewing Halsell Scholar in the Texas Biomed Department of Virology and Immunology, to test whether gamma interferon, which is an FDA-approved drug, has potential as an antiviral therapy to prevent Ebola infection.

She first ran her study using a surrogate virus and then joined forces with Dr. Davey to test the potential drug candidate in Texas Biomed’s Biosafety Level 4 laboratory against actual Ebola virus.

The study found that this drug can inhibit Ebola infection in mice and completely protect the animals from death if given up to 24 hours after exposure.



Hepatitis B drug candidate tested at Texas Biomed shows promise



Dr. Robert Lanford, Director of the Southwest National Primate Research Center, attended the 66th Annual Meeting of the American Association for the Study of Liver Disease as part of a collaborative group presenting study findings on a potential Hepatitis B therapeutic candidate from Arrowhead Research Corporation (NASDAQ: ARWR), a biopharmaceutical company.

There are an estimated 1.4 million cases of chronic Hepatitis B in the U.S, with the worldwide estimate

exceeding 240 million people. More than 780,000 people die every year due to complications of hepatitis B. A vaccine is highly effective at preventing infection and most of the U.S. population under 30 received the vaccine as children. Antiviral therapies are available that can suppress the virus in those with chronic infection, but must be taken for life. The goal of current research is to find a cure that eliminates the virus with a reasonable duration of therapy.

In a news release issued by Arrowhead, Dr. Lanford stated, “I have been extremely impressed by the potency of ARC-520 and its ability to reduce multiple viral proteins. The results from the study in chimpanzees have revealed some important new insights about HBV biology and have introduced new ideas about effective ways to intervene in the HBV lifecycle.” More on the study can be found

Xenex Germ-Zapping Robot™ Destroys Ebola Virus & Anthrax Spores in New Study Performed at Texas Biomed Biosafety Level 4 Lab

The Ebola virus epidemic in 2014 demonstrated that deadly pathogens can and do cross borders, creating challenges of preparedness for hospitals and healthcare workers. It is critical that healthcare facilities have tools at their disposal that can help combat high risk pathogens. And while the risk of a patient contracting Ebola at a U.S. hospital is low, hundreds of people die every day from hospital acquired infections (HAIs) from microorganisms that are rampant in healthcare facilities, such as *Clostridium difficile* and methicillin-resistant *Staphylococcus aureus* (MRSA). Xenex Germ-Zapping Robots™ have been credited for helping healthcare facilities in the U.S. decrease their MRSA, C.diff and Surgical Site infection rates by more than 50, 70 and 100 percent respectively, according to peer-reviewed published studies.

“Xenex is an evidence-based company and this testing further validates that the Xenex Germ-Zapping Robot™ can be a critically important ally in the battle to stop the spread of high risk pathogens, especially as antibiotic resistance continues to mount”

To validate how the Xenex Germ-Zapping Robot™ can be used for the decontamination of facilities, vehicles and equipment affected by a natural or intentional outbreak, Xenex Disinfection Services recently tested its Full-Spectrum™

pulsed xenon ultraviolet (UV) disinfection device against live (not surrogate) Ebola virus and *Bacillus anthracis* (anthrax) spores in collaboration with the biosafety level 4 (BSL-4) containment laboratory at Texas Biomedical Research Institute.

The study validates the efficacy of pulsed xenon UV light disinfection technology on two of the world’s deadliest pathogens. In Texas Biomed’s BSL-4 lab, the Xenex robot easily destroyed both Ebola and anthrax spores on surfaces, achieving a greater than four-log reduction of Ebola in one minute and a greater than three-log reduction in anthrax spores in 15 minutes. In none of the time/distance combinations was either anthrax or Ebola detected after the Xenex device was utilized.

“Xenex is an evidence-based company and this testing further validates that the Xenex Germ-Zapping Robot™ can be a critically important ally in the battle to stop the spread of high risk pathogens, especially as antibiotic resistance continues to mount,” said Dr. Mark Stibich, Chief Scientific Officer, Xenex. “Thousands of people around the world die every day from an infection they acquired during their hospital stay, and we’ve proven repeatedly that these infection rates can be significantly reduced. Much more can and should be done to protect patients

and healthcare workers from the threat of emerging infectious diseases and antibiotic-resistant bacteria, and our pulsed xenon UV technology has proven to be an effective tool in the infection prevention battle because we destroy pathogens on surfaces before they pose a threat to humans.”

Many healthcare facilities, including three Department of Defense facilities, have incorporated Xenex robots into their disease containment plans, disaster preparedness, and risk mitigation strategies. Designed for speed, effectiveness and ease of use, hospital cleaning staff operate the robot without disrupting hospital operations. The robot pulses intense UV light covering the entire UV spectrum, destroying viruses, bacteria and bacterial spores in a five-minute disinfection cycle. Without contact or chemicals, the robot destroys harmful microorganisms safely and effectively. The robot can disinfect 30-62 hospital rooms per day (according to Xenex customers), including: patient rooms, operating rooms, equipment rooms, emergency rooms, intensive care units and public areas. More than 300 hospitals, Veterans Affairs, Department of Defense, skilled nursing facilities, ambulatory surgery centers and long-term acute care facilities in the U.S., Europe, Canada and Africa use Xenex robots.

Press release courtesy of Xenex, distributed Nov. 17, 2015

Texas Biomed scientist collaborates on study providing insight into genetics of Polycystic Ovary Syndrome Paper published in Nature Communications

Dr. Michael Olivier, Scientist and Chair of the Department of Genetics at Texas Biomedical Research Institute, is a contributing author on a study led and coordinated by scientists at Northwestern University Feinberg School of Medicine that was published this month in Nature Communications describing a detailed analysis of the genetic factors contributing to Polycystic Ovary Syndrome (PCOS).



PCOS causes hormonal imbalance in women that can affect ovulation and fertility and lead to an increased risk of heart disease, high blood pressure and diabetes as well as other disorders. The disease affects about one in every 10 to 15 women of reproductive age, according to statistics from the National Institutes of Health.

“As part of our research on the genetic basis of obesity and related disorders, we were able to provide samples from our Metabolic Risk Complications of Obesity Genes (MRC-OB) for this exciting project, as part of the ongoing research work at the TOPS Center for Obesity and Metabolic Research,” Olivier said.

Study investigators identified two new regions of genetic susceptibility in women of European ancestry, as well as a region where they are hopeful that studies, such as this, that help identify basic biological mechanisms for the disease can help lead to new therapies and potential cures.

While working at the Medical College of Wisconsin in Milwaukee, Olivier partnered with an international non-profit weight-loss organization called Take Off Pounds Sensibly (TOPS).

This study used DNA from thousands of women, including samples and data from TOPS members and their families. With Olivier’s relocation to Texas Biomed, this type of research is now continuing at the recently established the new TOPS® Nutrition and Obesity Research Center to help facilitate studies looking at the role of genetic predisposition to metabolic changes, nutritional preferences, appetite regulation, food intake and choice and incidence of obesity-related illnesses.





TEXAS BIOMEDICAL FORUM 2015-2016 BOARD OFFICERS

Amanda Bezner
President

Daniela Serna
First Vice-President, Lecture Luncheon

Sara Walker
Second Vice-President, Gala Chair

Jody Lutz
Third Vice-President, Gala Co-Chair

Lisa Westmoreland
Fourth Vice-President, Membership

Carla Nelson
Treasurer

Sara McCamish
Assistant Treasurer

Jordan Arriaga
Corresponding Secretary

Courtney Percy
Recording Secretary

Melissa Morgan
Past President



TEXAS BIOMEDICAL FORUM 2015-2016 BOARD OF TRUSTEES

Denise Mosser
Archivist/Digitizer

Lindsay Archer
Archivist/Digitizer

Amy Garcia
Directory

Emily Jones
Directory

Elizabeth Cox
Gala Assistant

Ashley Weaver
Luncheon Assistant

Adrienne Frost
Membership Assistant

Shalimar Wallis
Newsletter

Karen Bryant
Newsletter

Fabiola Kaase
Parliamentarian

Courtney Ogle
Roundtable Discussion

Christine Mayer
Roundtable Discussion

Lynnette Embrey
Science Education Awards

Whitney Miller
Science Education Awards

Molly Drought
Social Media / PR / Photographer

Amy Swaney
Social Media / PR / Photographer

Holly Rabinowitz
Social Media / PR / Photographer

Clare Duffin
Special Events

Cynthia Kerby
Special Events

Julie Dorbandt
Student Tours

Jessica Berg
Student Tours

Kati Smith
Volunteers

Edie Wright
Website Liaison

Corbett Christie
Texas BioMed Liaison

Advisors

Julie Zacher
Allison Zeller
Jane Satel
Walton Gregory
Laura Moorman

Honory Trustee
Peggy Gracy

TEXAS BIOMEDICAL FORUM

P.O. Box 6648

San Antonio, Texas 78209

Non-Profit Org.
U.S. Postage
PAID
San Antonio, Texas
Permit No. 2193