

Society for In Vitro Biology

sivb.org

# SIVB ANNUAL REPORT 2015



FOSTERING THE EXCHANGE OF KNOWLEDGE OF  
IN VITRO BIOLOGY CELLS, TISSUES AND ORGANS

# EXECUTIVE COMMITTEE



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## PRESIDENT'S REPORT

2015 was an exciting year with our return to Tucson for our annual meeting. I was impressed by the excellent sessions and truly great speakers. The comments about how they benefitted from the presentations, how they gained insights into how to address a problem, a novel way of understanding their approach to research, or how to better communicate their findings with others were wonderful to hear. Thanks to the efforts of the Program committee, the 2016 World Congress in San Diego will also prove to be exceptional with presentations by respected international scientists.

I can recall the presentations at our previous meeting in Tucson on 21st century scientific approaches to science. The presenters discussed the development of tools that would be needed, which included: “omics”; software development to facilitate our understanding of the functional impact of agent or gene induced changes on human health; and the development of the overall field of cell culture to facilitate the development of 3D models that would allow us to better understand mechanisms and modes of action for understanding disease. At the 2015 meeting, it was refreshing to hear presentations relating specifically to these topics and to see how the 21st Century goals are evolving.

Advancements by our members have permitted major breakthroughs in human health, e.g., stem cell biology, stem cell therapy, targeted gene delivery, pest resistant crops, higher quality crops that provide beneficial nutrition, drug discovery, predictive toxicology, disease prevention and many others. These in vitro science advancements have led the way in developing novel approaches for predicting



*Participants of the Sonora Desert Museum event got to get up close with these prickly companions.*

both efficacy and toxicity with higher relevance to human health than previous animal based systems. For years, many of our members have predicted that cell cultures could predict human response better than tests done in non-human animals. Their predictions are now coming to fruition with many of the federal and international agencies actively encouraging the use of non-animal tests to replace the previous “gold” standard animal tests.

I look forward to the future of the SIVB with great anticipation. My excitement is the result of the overall enthusiasm of our members. Attendees at our annual meetings have experienced this first hand. The enthusiasm of our students at the meetings, their activities on various committees, and their willingness to commit their energies to support various society activities is contagious. Our students hold the promise of the future. Their enthusiasm for knowledge, willingness to contribute their skills and time, and initiatives to promote scientific development are among the things that will help our Society shape its future. The students are an integral part of our Society.

I LOOK FORWARD TO THE FUTURE OF THE SIVB WITH GREAT ANTICIPATION. MY EXCITEMENT IS THE RESULT OF THE OVERALL ENTHUSIASM OF OUR MEMBERS.

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My participation in the SIVB meetings, committees, and other roles in the Society has provided tremendous benefits in terms of science, funding, and peer relationships. Little did I realize when I attended my first meeting in 1976 that the Society would have such a positive impact on my future. While I have not been able to attend the meetings each year, taking an active role helped me to leverage funding to support travel to the meetings.

I encourage each of you to volunteer. If you have an interest in participating, let the business office, the President, other officer, or committee chair know. Service on committees can benefit both you and the Society.

As my term as President comes to an end, I am encouraged that our society remains vibrant and relevant to meet the scientific challenges we face in the 21st Century. I know that our new President, Dwight Tomes, will provide the insights to help lead us into the future.

**Eugene Elmore**  
*President*  
[eugene.elmore@uci.edu](mailto:eugene.elmore@uci.edu)

## SECRETARY'S REPORT

My term as Secretary on the Board of Directors for the Society for In Vitro Biology (SIVB) is coming to an end at the June 2016 Board meeting in San Diego, CA. The job of Secretary is both challenging and rewarding, as a major responsibility of the Secretary is drafting the minutes for the Board Meetings, and documenting and assigning the actions items. I have enjoyed working with all of the Board members, who work diligently to ensure the future success of our Society. I especially want to thank Marietta Ellis for her guidance and assistance. The responsibility of documenting the Board of Directors Meetings is being passed on to our newly elected Secretary, Harold Trick, and I am confident that Harold will do a great job as Secretary.

If you would like to see firsthand the hard work and dedication demonstrated by the SIVB Board of Directors, please review the approved minutes from the Board

meetings that have been archived on the SIVB website by using the following link: <https://sivb.org/about-sivb/minutes.html>.

**Michael J. Fay**  
*Secretary*  
[mfayxx@midwestern.edu](mailto:mfayxx@midwestern.edu)

IF YOU WOULD LIKE TO  
SEE THE HARD WORK AND  
DEDICATION DEMONSTRATED  
BY THE SIVB BOARD OF  
DIRECTORS, PLEASE  
REVIEW THE APPROVED  
MINUTES FROM THE BOARD  
MEETINGS ON THE  
SIVB WEBSITE

## TREASURER'S REPORT

As we reach the end of 2015 and move forward into our 70th year, I am pleased to again report a positive financial position for our society. We have been able to achieve this due to several factors: the first and currently strongest being one particular income stream, the royalties received for our journals — *In Vitro – Animal* and *In Vitro – Plant*. The second is our investment portfolio which has managed to advance in spite of the tumultuous ups and downs of financial markets worldwide. Also, not to be forgotten, is the constant attention toward cost cutting made by the New Beginnings Management staff and the diligence of our Officers, Board Members, Committee Chairs and Committee Members. However, the cushion we have in place is thinning.

The year ahead will be challenging – major efforts have to be made toward increasing membership and finding creative means of increasing the number of donors willing and able to provide funding support for our society and its goals. Already in

place is a brand new activity for our society which offers the hope of attracting new members and perhaps more. Over the weekend of April 15–17th, the SIVB will be exhibiting at the 4th USA Science and Engineering Festival held in Washington DC. This will provide exposure for the SIVB to thousands of students, teachers, and others who just want to learn more about science.

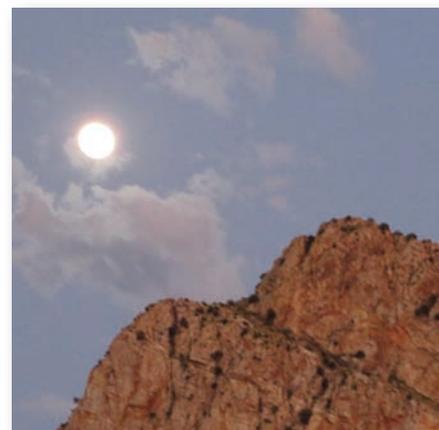
Another area with potential to impact the growth and prestige of the SIVB is how we as members and researchers perceive and interact with our journals. As mentioned above, they play a very important role with respect to our financial health. Increased support for these journals via submission of SIVB member research to *In Vitro – Animal* or *In Vitro – Plant* for publication has a definite potential to positively impact the future of our society.

We are a unique society, bridging a broad range of disciplines and we have good reason to feel proud of the team spirit that

abounds across the society. I am confident that we will apply that spirit successfully as we meet the challenges ahead.

The Treasurer's Summary Report can be found at the end of this Annual Report.

**Barbara B. Doonan**  
*Treasurer*  
[bbdoonan@aol.com](mailto:bbdoonan@aol.com)



*A lovely full moon greeted attendees over the mountains in Tucson.*

# BUSINESS OFFICE REPORT

The Business Office activities focused on the 2015 In Vitro Biology Meeting, 2016 World Congress, preparations for the 2017 and 2018 meetings, publications, and membership.

## 2015 IN VITRO BIOLOGY MEETING

The 2015 In Vitro Biology Meeting was held at the Hilton Tucson El Conquistador Golf and Tennis Resort from May 30 – June 3, 2015 in Tucson, Arizona. Organization for this meeting started in 2013. This year's meeting highlighted a Keynote presentation by Dr. Calvin Kuo of Stanford University School of Medicine on Engineering Gastrointestinal Cancer in Organoid Cultures. After the Keynote presentation, the 2015 Lifetime Achievement Awards were presented to Delia R. Bethell, PhD, and Gertrude Case Buehring, PhD in honor of their years of exemplary research. Also during the Opening Ceremony, SIVB President, Eugene Elmore, PhD, presented Distinguished Service Awards to Wayne A. Parrott, PhD; Michael J. Fay, PhD; Michael E. Kane, PhD; Sylvia A. Mitchell, PhD; Dwight T. Tomes, PhD; Jeffrey Kwak; James J. Sadler; Nguyen H. Hoang; Daniel J. Barnes, PhD; Marten Peterson; and David D. Songstad, PhD for their support of the Society and its activities. During their respective section meetings, the first 2015 Distinguished Scientist Award was presented to Zeng-Yu Wang, PhD and the 2015 Fellow Award was presented to Harold N. Trick, PhD.

Special events held at the meeting included a "Good Teaching is...?" workshop; a Tuesday Evening Dinner Event at Sonora Desert Museum, and the Old Pueblo Silent Auction. The IVACS and PBS Oral Presentation Competitions were held along with a student poster competition.

SIVB offered the mobile app at this year's annual meeting, which included information on the program, abstracts, bios and pictures of the presenters, exhibitors, contributors, program information, a map of the hotel, a way to upload social media and



*Volunteers at the 2015 In Vitro Biology Meeting were essential in helping make the meeting a success.*

send messages to other attendees, and the ability to review and take notes on uploaded presentations (but not to download them out of the app),

At the 2015 In Vitro Biology Meeting, the final number of registrants came to 309. There were 128 members, 5 non-members, 5 research technicians, 14 post docs, 61 student, 5 one-day, 2 accompanying guests, 4 emeritus, 5 guests, 12 volunteer and 46 speaker registrants. There were also 3 staff

registrants and 19 exhibitors. While the meeting was successful, registration was lower in prior years and it was not as financially successful as previous meetings even though we did end the year in the black. Circumstances that can be cited as having contributed to this year's attendance include: 1) SIVB's presence in Arizona is small with fewer than 5 members and no local biotech organization that we were able to contact. However, this was countered by the active solicitation of speakers from local universities by the Program Committee, we were able to reach out to local scientists that may have not heard of us, but participated in the event. There were 29 attendees from Arizona (1 returning member, 13 Invited Speakers, 8 Students, 2 one-day registrations, and 4 post docs) which was 9.45% of the total registration for the meeting. 2) University funds have been limited so that professors are not able to provide coverage of expenses for their students, post docs, or research technicians to attend, let alone be able to cover their own expenses.

The Business Office offers a special thank you to the volunteers who offered their assistance during the 2015 Meeting, many of them working hours beyond what was required. We greatly appreciate all of their efforts on behalf of the SIVB. We couldn't have done it without your help.

THE BUSINESS OFFICE OFFERS  
A SPECIAL THANK YOU TO  
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## 2016 WORLD CONGRESS ON IN VITRO BIOLOGY

The upcoming 2016 World Congress on In Vitro Biology will be held from June 11 – 15, 2016 at the Sheraton San Diego in San Diego, California. Plans for this meeting began in 2014 and in 2015, the Business Office worked with the Program Committee to organize the scientific program, determine the Keynote speaker and make arrangements for the special events happening at the meeting. The 2016 World Congress will highlight a keynote presentation by William E. Moerner, Nobel Prize Winner in Chemistry (2014), Harry S. Mosher Professor of Chemistry and Professor, by courtesy, of Applied Physics. He will be presenting a talk on “Seeing Single Molecules, from Early Spectroscopy in Solids, to Super-resolution Microscopy, to 3D Dynamics of Biomolecules in Cells.” There will also be presentations of the Lifetime Achievement Awards during the meeting to Eugene Elmore, PhD, and Yvonne A. Reid, PhD. At the In Vitro Animal Cell Sciences Section meeting, Guy Smagghe, PhD, will receive the SIVB Distinguished Scientist Award and the Young Scientist Award will be presented to Joshua Gasiorowski, PhD. In addition, there will be Distinguished Service Awards, student awards, student competitions and more presented at the meeting.

The 2016 America’s Finest Silent Auction will begin during the Welcome Reception on Saturday, June 11 and will end on Tuesday morning, June 14, 2016. Attendees will also be invited to enjoy a special evening cruise and dinner event on Tuesday, June 14 on the San Diego Bay. Additionally, attendees will be invited to attend the 14th International Conference on Invertebrate and Fish Cell Culture on Saturday, June 11.

Saturday we are tentatively planning two special workshops. The first, available for all attendees, is a one-day intensive workshop for anyone who desires to improve their English writing skills to communicate on a global scale, whether writing for academia or business. The second workshop is an all-day hands-on plant tissue culture for high school and community college teachers.



*Sheraton San Diego Hotel & Marina – 2016's World Congress venue.*

SIVB is proud of its Student Initiative Program which will be offered to students interested in participating in the meeting. This initiative provides free registration to all student attendees who submit an abstract at this year’s meeting and free student 2017 student membership to those who attend the meeting. The Student Committee has organized a Student Symposium on Science in Short: Communicating Your Work Clearly and Effectively and a Networking Luncheon during the 2016 World Congress to encourage growth and participation of student members, both graduate and undergrad. Both the IVACS and PB sections will offer Oral Presentation Competitions for students and Post Docs. The IVACS section will hold a joint Post doc/Student competition and the PBS section will present separate Student and Post Doc competitions. The SIVB Student Committee will also be holding the third informal Student Poster Competition which students can sign up for when they arrive at the meeting. SIVB will also offer the Sponsor-a-Buddy program where for only \$25, members and attendees of the Annual Meeting can help support the Student Initiative for the meeting. Contributors to the Sponsor-a-Buddy-program will be acknowledged at the 2016 World Congress on In Vitro Biology.

**SIVB IS PROUD OF ITS STUDENT INITIATIVE PROGRAM OFFERED TO STUDENTS INTERESTED IN PARTICIPATING IN THE MEETING.**

## 2017 AND 2018 IN VITRO BIOLOGY MEETINGS

In 2015, the Business Office worked with the SIVB Board of Directors to finalize the contracts for the 2017 In Vitro Biology Meeting. Next year’s Annual Meeting will be held in Raleigh, North Carolina from June 10–14, 2017 at the Raleigh Convention Center with a block of rooms held at the Marriott Raleigh City Center for attendees needs. We have been in discussion on locations for the 2018 In Vitro Biology Meeting and expect to finalize that contracting in 2016.



### MEMBERSHIP

Membership numbers decreased this year, which is due to decreased free student memberships provided to SIVB identified students at the joint 2014 World Forum. While membership dropped 6.55% for overall membership, we showed an increase of 5.05% for regular members. Membership initiatives included the extension of the Member-get-a-Member campaign and a special drawing for members who renewed by December 31st, 2015. The winners of the 2015 “renew before December 31” contest were drawn during the 2015 SIVB Business meeting and included Laura Schramm, William Gordon-Kamm and Robert Redman. The 2016 contest winners will be drawn during the 2016 Business Meeting and prizes include one-year of free membership in the SIVB and free registration to the 2017 In Vitro Biology Meeting in Raleigh, NC. The Business Office has worked to encourage 2015 membership by including monthly renewals distributed through both email and regular mail.

The Business Office regrets to inform the membership that they were notified of the passing of the following members in 2015: Michael Barile, Philip C. Loh, Leroy C. McLaren, Evelyn M. Rivera, and Robert Roosa.

SIVB provides member benefits of free job postings and discounted resume purchase opportunities through our Career Center job bank. These job listings are linked to our Facebook page providing higher visibility for your positions. Don't forget to check it out under Employment on the SIVB website.

SIVB's committees continued with heightened activity in 2015 and the Business Office worked to assist and support their new initiatives. The Business Office worked with the Ad Hoc Website Committee in finalizing a new website design implementation and reviewing new initiatives requested by the Board, the Publications Committee in reviewing the new Springer contracts, the Constitution and Bylaws Committee in reviewing a new mission statement, the Nominating Committee in collecting and preparing the 2016–2018 Election ballots including the implementation of allowing post doc members to vote, the Long-range Planning Committee in preparing and disseminating their Strategic Plan to the various committees, and the Membership Committee in their discussion and implementation of new potential initiatives.

They also worked with Barbara Doonan, Chair of the USA Science and Engineering Festival Ad Hoc Committee in coordinating the SIVB's participation in this event which is being held in Washington DC in April 2016. The Business Office was instrumental in helping prepare the SIVB's exhibit profile and display; organizing and preparing potential activities, materials and handouts; contacting members to receive TC donations; analyzing risk assessments and finalizing exhibit logistics including budgeting the event. It is expected that SIVB will receive anywhere from 8,000–10,000 visitors to our display.

If you wish to support the SIVB and its various funds created to support student and

Post Doc growth and the continued health of the SIVB, visit [www.sivb.org](http://www.sivb.org) and click on the "Donation" button at the bottom of the page. These funds are only available through the continued and generous support of our members. We are still building the funds in the Michael Horn Endowment which will extend offers of support to Post Docs once it reaches its minimum level to become active. Please contribute if you can. Your support can make the difference for the next generation of scientists.



*2015 Student Co-chair Ningning Zhang greets student members at the Welcome Reception.*

## PUBLICATIONS

The Business Office's Publications Department's supports the SIVB's print and online publications and maintains and supports the SIVB Website.

The Business Office finalized and implemented the newly approved SIVB Website design. Pages using the old HTML design were either translated to the new design format or, if the content was self standing (such as old *In Vitro Report* issues or some meeting content), kept in their html code and linked to the new framework. New content on the history of SIVB, a GMO photo depot, live film library links, professional development, current biotech RSS feeds, and links to online protocols were added. The new design is in a Wordpress format and includes a

modernized and streamlined look. All three sections of the site: General, *In Vitro Report*, and Meetings sites have all been completed and the new 2016 World Congress website was designed using the same framework. Quick links to the journals and *In Vitro Report*, member news, and job postings have all been added. We have even included links to our Facebook, twitter and LinkedIn pages and a running list of SIVB's twitter feed available on most pages.

SIVB has also developed a new discussion forum set up for member's use. Create an account, log in and say hello to your fellow members or ask questions. It's your community, so go ahead and take advantage of this new resource.

The final step in the rebuild of the new SIVB.org website was to transition the entirety of the site to an https address. That extra "s" means your connection to SIVB is secure no matter where you are on our site. It's much harder for anyone else to see what you're doing and assures you that any information you share with us will be secure and protected. Since secure pages aren't cached, downloading a page might take an extra moment or two, but the security of our members is worth that very short delay.

In 2015, both journals continue to deal with issues of catching plagiarism and other fraudulent activities. The Publications Committee addressed some of these issues in at the June 2015 meeting. They have implemented new rules that note that no new authors maybe added after submission unless new research is requested by the review process and then only at the revision stage. No new authors are allowed after the paper is accepted. Additionally, SIVB, with the help of Springer, continues its use of software that reviews each manuscript and analyzes how much of the text is repeated in other published materials. These activities catch most of the questionable materials submitted and protects the reputation of the journal.

*In Vitro–Animal* has continued to receive greater and greater numbers of submissions in 2015. Even with a rise to our rejection rate, all issues publishing above their page budget. The 2014 impact factor

has gone up to 1.145 which is slightly higher than last year and at a good level. Editor-in-Chief, Tetsuji Okamoto continues to encourage active participation from the Associate Editors and members of the Society to publish in our journal as well as looking for way to offer new special issues.

*In Vitro – Plant* journal’s impact factor rose to .981 in 2014. Incoming Editor, David Duncan has been working on a proposal to overcome difficulties in receiving sufficient paper submissions to the SIVB portion of the *Plant* journal. The Business Office has worked with him to contact SIVB members and remind them to publish in the *In Vitro Cellular and Developmental Biology* journals whenever possible to support the publications and share your research directly with your fellow members. SIVB member access to the *Plant* journal includes free online access to *Plant Cell Tissue and Organ Culture*.

In the summer of 2015, SIVB began the process of renewing contracts for both journals with Springer. The Business Office worked with a publications consultant to determine any concerns or weaknesses in the new proposed draft agreements and provided their questions and concerns to Springer for their review. Those items are currently being addressed with Springer and the Publications Committee and SIVB is looking forward to finalizing the agreements for their journals before the end of 2016 when the current contract expires.



*Plant Biotechnology Student and Post Doctoral Oral Presentation Competition Winners: (Top row L to R) Rajesh Manoharan, Dhiraj R. Thakare, Kerri Neugebauer and (Bottom row) Steven Samuels. Bottom Right: Marten Petersen (L) with Poster Competition Winners Paulina Quijia-Lamiña and Duane V. Mykleford.*

The *In Vitro Report* requests that members provide their news each quarter for inclusion in the SciNews and Explants sections of the issues. This is your opportunity to get the word out. Have a new publication, a new job, a baby or other information you want to share? Send it to the Editors and let your fellow members know. The publication’s Member’s Corner includes Membership Profiles, new members, and Membership Matters which are articles from members who have benefitted from their participation in our organization. While the newsletter continues to publish content of interest to our members, it requires your support to make the issues effective. Please forward your news, article suggestions and information to either of the Co-Editors-in-Chief, Michael Fay or Sylvia Mitchell. Information for submissions can also be forwarded to [sivb@sivb.org](mailto:sivb@sivb.org).

Social media has become part of the framework for SIVB’s message as we use many methods to reach out to you including broadcast emails and postings through Facebook, LinkedIn and Twitter. This has allowed our members to keep up with information without limitations on websites viewability. If you haven’t friended us on Facebook, joined the SIVB group on LinkedIn, or started following us on Twitter (@SIVBiology), please do so. We provide quick and timely reminders about upcoming deadlines, member benefits, and other information of interest throughout the year.

Also, you can spread the word, use our name and hashtags at the beginning of your relevant posts: @SIVBiology for the organization, #SIVBiology2016 for the 2016 World Congress; #SIVBIVAN for *In Vitro – Animal*, and #SIVBIVPL for *In Vitro – Plant*). We encourage our members to use these hashtags when posting in Facebook, LinkedIn Twitter or other social media outlets to help us get the word out.

New Beginnings Management, Inc. (NBM) manages the day-to-day operations of the Society as its Business Office. The staff of NBM consists of Michele Schultz and myself. We greatly appreciate the efforts of all those who volunteer their time on behalf of the SIVB with a special thank you to both the incoming and outgoing Executive Committees, Board of Directors, Committee Chairs and Section Officers whose efforts have provided essential support for the continuing health of the Society and its mission. We are grateful for your support and recognition of NBM and its endeavors on behalf of the Society. We look forward to continuing in these achievements on behalf of SIVB in the upcoming years.

The Business Office welcomes your thoughts and ideas on advancing and encouraging continued growth of the Society for in Vitro Biology. Please contact us with your suggestions at [sivb@sivb.org](mailto:sivb@sivb.org).

**Marietta Wheaton Ellis**  
*SIVB Managing Director*  
[sivb@sivb.org](mailto:sivb@sivb.org)

SOCIAL MEDIA HAS BECOME PART OF THE FRAMEWORK FOR SIVB’S MESSAGE AS WE USE MANY METHODS TO REACH OUT TO YOU INCLUDING BROADCAST EMAILS AND POSTINGS THROUGH FACEBOOK, LINKEDIN AND TWITTER.

# IN VITRO ANIMAL CELL SCIENCES

The 2015 annual meeting of the Society for In Vitro Biology (SIVB) was held between May 30 and June 3 at the Hilton El Conquistador Golf and Tennis Resort in Tucson, Arizona. The IVACS Annual Business Meeting was well attended and took place on Tuesday, June 2 between 5:00 pm – 5:30 pm, prior to the evening event at the Sonora Desert Museum. The Business Meeting started with the presentation of the elected officers for the 2015–2016 SIVB conferences:

- *Addy Alt-Holland* – IVACS Chair
- *Michael K. Dame* – IVACS Vice Chair Meeting Program
- *Magnolia Ariza-Nieto* – IVACS Vice Chair Membership
- *Patrick McNutt* – IVACS Secretary
- *Brad L. Upham* – IVACS Fundraising Officer
- *Joshua Z. Gasiorowski* – IVACS Junior Co-chair Fundraising
- *Kolla Kristijansdottir* – IVACS Junior Co-Chair Membership

The Business Meeting continued with the recognition of the conference Program Chair, current and past SIVB Presidents and the SIVB Business Office, who through their fruitful leadership and dedication have made outstanding contributions to the success of the 2015 conference. The following people were recognized:

- *John W. Harbell* – SIVB Program Chair, JHarbell Consulting LLC
- *Eugene Elmore* – SIVB President
- *David Songstad* – SIVB Past President
- *Marietta Ellis* – SIVB Managing Director and Meeting Secretariat
- *Michele Schultz* – Publications Manager, SIVB Business Office

We then welcomed *Harold N. Trick* to his position as the Program Chair of the 2016 SIVB World Congress on In Vitro Biology. We recognized the hard work and commitment of the following individuals at the SIVB Board of Directors:

- *Eugene Elmore* – SIVB President
- *Barbara B. Doonan* – SIVB Treasurer
- *Michael J. Fay* – SIVB Secretary
- *J. Denry Sato* – SIVB Member-at-Large



*IVACS members, Eugene Elmore, SIVB President, and John Harbell, 2015 Program Chair, with 2015 Lifetime Achievement Award Winners (L to R) Gertude Buehring and Delia Bethell.*

- *Liz Roemer* – SIVB Member-at-Large
- *John W. Harbell* – 2015 Program Chair

We next thanked the Program Planning Leaders of the 2015 In Vitro Biology Meeting Program Committee from both IVACS and PBS sections:

- *John W. Harbell* – 2015 SIVB Program Chair
- *Addy Alt-Holland* – IVACS Section Chair
- *Michael K. Dame* – IVACS Program Chair
- *Vivian Dayeh* – Education Committee Chair
- *Sukhpreet Sandhu* – PBS Chair
- *Hong Luo and Pon Samuel* – PBS Jr. Co-Chair
- *Shaimar Gonzales and Ningning Zhang* – IVACS and PBS Student Co-Chairs, respectively

Beyond the hard work and leadership of many individuals from IVACS and PBS sections as well as the SIVB Business Office, the success of the conference depends on sponsorships by distinguished and committed supporters. We thanked the following sponsors for their generous financial support of the 2015 SIVB conference:

- *Barbara Doonan*
- *J. Denry Sato*
- *Procter and Gamble*
- *National Anti-Vivisection Society and the International Foundation for Ethical Research*
- *Midwestern University*
- *MatTek*

- *Laura Schramm*
- *JV Biolabs LLC*
- *JHarbell Consulting LLC*
- *Michael J. Fay*
- *Colgate-Palmolive Company*

We thanked the following sponsors for their special contributions to the 2015 Lifetime Achievement Award:

- *Sandra L. Schneider*
- *J. Denry Sato*
- *Colette J. Rudd*
- *Elizabeth J. Roemer*
- *American Type Culture Collection (ATCC)*

The 2015 annual conference of the SIVB in Tucson, Arizona, was a successful event on many levels. All the sessions were well attended throughout the conference and the presentations incited lively discussions between the presenters, conveners and attendees. SIVB members, students and post-docs had plenty networking opportunities during the coffee-breaks and poster sessions to meet and interact with guest lecturers, presenters, individuals from academia and industry as well as colleagues and SIVB leaders, in a friendly and supportive environment. The social events that included the evening at the Sonora Desert Museum and the afternoon tour of Biosphere 2 provided additional opportunities to network, explore fascinating sites, and learn more about the local environment. The success of the 2015 SIVB conference was a result of the dedication of the Program Chair, *John W. Harbell*, as well as the hard work of the entire Program Planning Committee and the SIVB Business Office. We recognized the following individuals at the SIVB Program Planning Committee for their participation and commitment to the success of the Scientific Program – *Addy Alt-Holland, Magnolia Ariza-Nieto, Lia H. Campbell, Mae Ciancio, Ian S. Curtis, Michael K. Dame, Vivian Dayeh, Barbara B. Doonan, Eugene Elmore, Michael J. Fay, Joshua Z. Gasiorowski, Shaimar Gonzales, Cindy L. Goodman, John W. Harbell, Kathryn M. Houk, Yan Jiang, Kolla Kristijansdottir, Prakash P. Kumar, Lucy E. J. Lee, Hong Luo, Patrick M. McNutt,*

*Tetsuji Okamoto, Valerie C. Pence, Marten Peterson, Joseph F. Petolino, Paul J. Price, Yvonne A. Reid, Sukhpreet Sandhu, J. Denry Sato, Pon Samuel, Laura Schramm, David D. Songstad, Dwight T. Tomes, Brad L. Upham, Allan R. Wenck, Chunyan Wu, and Ningning Zhang.*

At the Opening Ceremony of the 2015 SIVB conference that was held on Sunday, May 31, the SIVB President, Eugene Elmore, presented the SIVB's highest honor, the "Lifetime Achievement Award", to the IVACS members *Dr. Gertrude C. Buehring* and *Dr. Delia R. Bethell*. These distinguished individuals were honored for their years of exemplary research, achievements, and pioneering contributions to the field of cell culture. Distinguished Service Awards were also granted to the following IVACS Members that were selected by the SIVB President: *Dr. Michael J. Fay, Jeffrey Kwak* and *Marten Peterson* for demonstrating and giving extra effort in support of the SIVB programs and endeavors.

As in every year, the In Vitro Animal Cell Sciences (IVACS) section and the Plant Biotechnology section (PBS) worked collaboratively to co-convene Plenary Symposia and a Joint Session during the conference. In this year's meeting the Plenary Sessions and their conveners were as follows: The stem cell state – implications for growth and disease — *Michael K. Dame* and *William Gordon-Kamm*; Epigenetic control of phenotypic gene expression — *Brad L. Upham* and *Sukhpreet Sandhu*; Bridging the great divide: new methods to

communicate science to non-scientists — *Patrick McNutt* and *Todd J. Jones*; and From small cells to big data: challenges and solutions for effective data management — *Addy Alt-Holland, Kathryn M. Houk, Patrick McNutt* and *Sukhpreet Sandhu*. The IVACS and PBS Joint Symposium Medicinal plants, propagation and nutraceuticals, was co-convened by *Sylvia Mitchell* and *Addy Alt-Holland*. IVACS symposia, sessions, educational workshop and their conveners were: Complex tissue structures: insights and applications of human organoid cultures — *Yan Jiang* and *Michael K. Dame*; Bioengineering, microfluidics and in vitro imaging — *Joshua Z. Gasiorowski* and *Chunyan Wu*; Cellular models in toxicology and disease – *Vivian Dayeh* and *Lucy E. J. Lee*; MicroRNA and cancer — *Michael J. Fay, Mae Ciancio* and *Kolla Kristjansdottir*; The effect of extracellular matrix properties on cell behaviors — *Joshua Z. Gasiorowski*; Conquering chaos in the age of networked science: organizing, storing and securing your data – *Addy Alt-Holland* and *Kathryn M. Houk*. IVACS Education Workshop Good teaching is...? — *Vivian Dayeh*, IVACS education contributed papers session — *Mae Ciancio, Vivian Dayeh* and *Kolla Kristjansdottir*; IVACS contributed papers session — *Addy Alt-Holland* and *Marten Petersen*; IVACS interactive poster session — *John Harbell* and *Marten Petersen*.

Students and Post-Docs are a fundamental and integral constituent of the SIVB. As such, they are continuously encouraged to take an active part in the preparations of the meeting, participate and present their research work in poster or oral presentation formats. Once again, we have seen a significant increase in the application to the IVACS Student and Post-Doctoral Oral Presentation Competition session. We thank all the students and post-docs who applied for the competition and congratulate them for the quality of their abstracts and research work; we sincerely hope to see these talented individuals applying for this competition in future SIVB conferences. The session was moderated by *Addy Alt-Holland* and *Kolla Kristjansdottir* and the panel of IVACS experts that evaluated the

contestants included: *Addy Alt-Holland, Mae Ciancio, Barbara Doonan, Michael J. Fay, John W. Harbell, Kolla Kristjansdottir* and *Brad Upham*. The following three contestants presented their research and received a certificate and a cash award during the IVACS Business Meeting. *Allison Songstad*, from the University of Iowa, won the 1st place award on her presentation "Generation of induced pluripotent stem cell-derived choroidal endothelial cells for the treatment of AMD." *Alexandra J. Cho*, from Cornell University, won the 2nd place award on her presentation "Development of tools to understand the inverse association between total plasma adiponectin and liver NTMT1." And last but not least, *Razi Ahmad*, from Jamia Millia Islamia India, won the 3rd place award for his presentation "Evaluation of green synthesis TiO2 nanoparticles as antibacterial agents." Other SIVB Student Awards were presented to the following IVACS students: the 2015 SIVB Student Travel Award to *Ning Yuan* from Clemson University, the 2015 Honor B. Fell Award to *Allison Songstad* from the University of Iowa, and the 2015 Cellular toxicology Award to *Matt Desrosiers* from Worcester Polytechnic Institute.

As part of their activities, the Student and Education Committees organized the following stimulating sessions: Student symposium and interview Student luncheon: networking platform, both of which were successfully co-convened by *Shaimar Gonzalez* and *Ningning Zhang*. Additionally, as in previous years, the students conducted a Student Poster Competition. Beyond these sessions that offered both ample information and networking opportunities *Shaimar Gonzalez* and *Ningning Zhang* also moderated the Non-Competitive Student Oral Presentation Session. This session serves as a unique platform for students to practice public speaking in a supportive environment by presenting their research work in an oral presentation format in front of their peers and SIVB members.

In the last several years, the Society's leadership has encouraged students and post-docs to co-convene sessions with more experienced SIVB members. We sincerely

THE IN VITRO ANIMAL CELL SCIENCES SECTION AND THE PLANT BIOTECHNOLOGY SECTION WORKED COLLABORATIVELY TO CO-CONVENE PLENARY SYMPOSIA AND A JOINT SESSION DURING THE CONFERENCE

hope that more students will continue to take advantage of this important initiative as a significant stepping stone to become active SIVB members and to increase the strength of their resume. I encourage students, post-docs and SIVB members to reach out to each other and find opportunities to design stimulating symposia on current and state-of-the-art research topics in the upcoming SIVB conferences.

As in the previous year, two main concerns, finances and membership, were raised at the IVACS Business Meeting. Finances: IVACS senior leadership, specifically *John W. Harbell*, have made tremendous fundraising efforts to support and enhance the Society's activities, conferences and programs from on hand, and increase its visibility and influence in the Animal and Plant in vitro biology fields from the other hand. Since their election in the 2014 SIVB's World Forum on Biology, and with continuous assistance and guidance of our senior leadership, the IVACS Fundraising Officer, *Brad L. Upham* from Michigan State University and the IVACS Junior Co-chair for Fundraising, *Joshua Z. Gasirowski* from Midwestern University have focused on the mission of fundraising. Together with the PBS section, the SIVB's Business Office and IVACS members, *Brad Upham* has established a more formal mechanism to address the Society's fundraising challenges. I encourage all the SIVB members to contact Brad and Joshua and assist in the critical necessity of fundraising efforts to support the Society activities; please see this as a personal invitation to get involved!

**Membership:** Whereas we are pleased to see that the number of SIVB's Regular Members has increased from 2014 to 2015, we are very concerned about the fact that the overall membership of our Society, including that of the IVACS section, continues to slowly decline. We should all be mindful of this issue and as IVACS members we all need to personally participate in the recruitment of new members, including students and post-docs who are the next generation of scientists. The long term success of our Society as a scientific organization and leader in the in vitro

biology fields requires the recruitment of young, committed researchers. As in the previous year, I have mentioned at the IVACS Business Meeting that if each and every one of us would recruit only one new IVACS member, the membership of our section would be doubled. It may be easier said than done, but we should all do our best in that aspect; please encourage your students and colleagues to join the SIVB and become active IVACS members. The SIVB's membership committee, including *Magnolia Ariza-Nieto*, the elected IVACS Vice Chair for Membership, and *Kolla Kristjansdottir* from Midwestern University, as the IVACS Junior Co-Chair for Membership, is working diligently to increase membership recruitment. However, it is the responsibility of all of us, the SIVB members in general and the IVACS section in specific, to assist them in this important undertaking.

Finally, we raised the idea that in future SIVB conferences, all submitted abstracts will have the choice to be presented in a poster format, regardless if they were selected for oral presentations in IVACS Contributed Papers Sessions or Student and Post-doc Oral Presentation Competition. This would increase the opportunities for presenters to directly interact with SIVB members, develop deeper discussions about their research work, learn from each other as well as generate new networks and potential collaborations. This is done routinely in many professional, scientific conferences and we sought the input of the audience at the IVACS Business Meeting regarding this suggestion. The idea was well received specifically because opting to present a poster in addition to an oral presentation would be optional, and would depend on the preference of the presenter. We will raise this to further discussions at the appropriate committee and at the SIVB Board of Directors.

The following individuals from IVACS section and the Plant Biotechnology Section (PBS) have all been working hard to organize an outstanding 2016 World Congress on In Vitro Biology in San Diego, CA. The meeting organizers are: *Harold N. Trick*, Program Chair, *Michael K. Dame*, IVACS Program Chair, *Hong Luo*, PBS

Program Chair, *Vivian Dayeh*, Education Chair, *Matt Desrosiers*, IVACS Student Co-Chair, *Jordan Brungardt*, PBS Student Co-Chair, and *Marietta Wheaton Ellis*, Congress Secretariat. The local organizing committee includes the following individuals: *David D. Songstad*, Chair, *Delia Bethell*, *John Chen*, *Kasturi Dasgupta*, *Kathryn M. Houk*, *Javier Narvaez-Vasquez*, *Martha L. Orozco-Cardenas*, *Sukhpreet Sandhu*, *Indra Vasil* and *Cecilia Zapata*.

The success of the Society, and the IVACS section as part of it, depends on the dedication and hard work of the SIVB's leaders, committee chairs, conveners, members and, importantly, the SIVB's Business Office at New Beginnings Management, Inc. As the Chair of the IVACS section, I would like to thank everyone in both the IVACS and the PBS sections who have contributed to the success of the 2015 SIVB conference, and convey my sincere thanks thank Marietta Wheaton Ellis (Managing Director), Michele Schultz (Publications Manager) and the entire staff of New Beginnings Management, Inc. for their dedicated service to the SIVB. We look forward to seeing all of you, as well as new members, in the 2016 World Congress on In Vitro Biology that will be held at the Sheraton San Diego Hotel and Marina, San Diego, CA on June 11–June 15.

**Addy Alt-Holland**  
*In Vitro Animal Cell Sciences*  
**Section Chair**  
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*Plant Biotechnology Section members appreciate sharing both knowledge and friendship with their colleagues at SIVB Annual Meetings.*

# PLANT BIOTECHNOLOGY

The 2015 In Vitro Biology Meeting was held in Tucson, AZ at the El Conquistador Golf and Tennis Resort. Nestled in the famous Sonoran Desert surrounded by the majestic Catalina Mountains, the many hiking trails, with their endless variety of plant and animal life, along with the warm temperatures and low humidity (not to mention the swimming pool and outdoor dining options) created a comfortable environment for both formal and informal discussions. As usual, the annual gathering was a great opportunity for making new contacts, renewing old acquaintances and visiting with good friends.

An exceptionally strong scientific program was organized by the Plant Program Committee of Sukhpreet Sandhu (Program Chair), Hong Luo (Sr. Co-Chair) and Pon Samuel (Jr. Co-Chair). Provocative Plenary Symposia on ‘The Stem Cell State’, ‘Epigenetic Control of Phenotypic Gene Expression’, ‘New Methods to Communicate Science to Non-Scientists’ and ‘Challenges and Solutions for Effective Data Management’ highlighted each day. Plant Symposia on timely topics such as ‘Genome Editing’, ‘Megatrends’, ‘Mutagenesis’, ‘High Throughput Systems’, ‘Cell-Based Assays’, ‘Haploids’, ‘Statistical Approaches’, ‘Gene Banks’ and ‘Reproductive Development’ - not to mention Joint Symposia on ‘Medicinal Plants’ and ‘Organizing, Storing and Securing Data’ - provided ample opportunity to catch up on new developments and technical advances in the field. The very informative keynote address, entitled ‘Engineering Gastrointestinal Cancer in Organoid Cultures’ was given by Dr. Calvin Kuo of the Stanford University School of Medicine.

Student and Post-Doctoral Oral Competitions, coordinated by Cecilia Zapata and Sadanand Dhekney, respectively, and a Poster Competition moderated by Marten Peterson, were also held. For the Student Oral Competition, judged by Valerie Pence, Michael Kane and Randall Niedz, Steven Samuels (Tuskegee University) was awarded first place, Jose Tovar (Arkansas State University) second place, and Kerri Neugebauer (Kansas State University) third place. For the Post-Doctoral Oral Competition, judged by Dennis Gray, Prakash Kumar and Daniel Bergey, Rajesh

Manorahan (International Institute of Tropical Agriculture in Nairobi) was awarded first place, Dhiraj Thakare (University of Arizona) second place, and Yonghua He (University of Arizona) third place. The Poster Competition, judged by over a dozen members, was won by Hoang Nguyen (University of Florida) with Duane Myklejord (Midwestern University) and Paulina Quifla-Lamina (University of Florida) taking second and third place, respectively. A Non-competitive Student Oral session was moderated by Ningning Zhang and Shaimar Gonzalez as were a Student Symposium on Interviewing and a Student Networking Luncheon.

The Student Award Committee, chaired by Pam Weathers, selected the following 2015 awardees: Saroj Parjuli (University of Florida) for the Wilton R. Earle Award; Jessica Rupp (Kansas State University) for the John S. Song Award; Allison Songstad (University of Iowa) for the Honor B. Fell Award; Yang Zhao (University of Florida) for the Hope E. Hopps Award; and Ningning Zhang (Arkansas State University) for the Philip R. White Award. Student Travel Awards were given to: Saroj Parajuli (University of Florida), Yang Zhao (University of Florida), Ning Yuan (Clemson University), Dotun Awosika (University of Ibadan) and Kerri Neugebauer (Kansas State University).

One of the highlights of the Plant Biotechnology Business Meeting was the presentation to Harold Trick of the Fellow Award. Harold was recognized not only for his outstanding contributions to the SIVB, but also for a track record of significant technical and educational accomplishments including, a novel approach to *Agrobacterium* transformation and the mentoring of numerous students, post-docs and visiting scientists. There were also several Distinguished Service Awards bestowed on deserving members including Wayne Parrott, Michael Fay, Michael Kane, Sylvia Mitchell, Dwight Tomes, Jeffrey Kwak, James Sadler, Nguyen Hoang and Daniel Barnes. Also, not insignificantly, Dave Songstad and Marten Peterson were recognized for their commitment to, and support of, the society’s mission.

Also at the Business Meeting, Pon Samuel reported that the SIVB received over \$86,000 in grants and contributions in 2015 with significant contributions coming from BASF Plant Science, Bayer Crop Science, Dow AgroSciences, DuPont-Pioneer, Monsanto, Scotts and Syngenta. This was an extremely impressive feat—given the challenges faced by the biotechnology industry in 2015. Contributions from individuals were too numerous to mention, although special thanks need to go out to Gale and Robert Lawrence who continue to generously support the SIVB.

The journal *In Vitro – Plant* continues to attract and publish high quality research. Dave Duncan has assumed the role of Editor replacing John Finer who served ably in that role for several years. Last year, the journal received a total of 388 manuscripts of which 66 (18%) were accepted and has a 5-year impact factor of 1.383. Author feedback has been overwhelmingly positive and SIVB members are encouraged to consider submitting their manuscripts to *In Vitro – Plant* for publication.

The 2016 World Congress on In Vitro Biology will be held June 11–15 in beautiful San Diego, CA at the Sheraton San Diego Hotel and Marina. The Plant Biotechnology Section Planning Committee consisting of Hong Luo (Program Chair), Pon Samuel (Sr. Co-Chair) and Sadanand Dhekney (Jr. Co-Chair) has organized another exciting scientific program including sessions on *Cannabis sativa*, automation, genome editing, woody plants, germplasm storage, resistance management, precision breeding, novel product development, epigenetic, model systems, functional food and algal biotechnology. It should be a great program and the entire SIVB membership is encouraged to attend.

On behalf of the officers of the Plant Biotechnology Section, Ian Curtis (Vice Chair) and Prakash Kumar (Secretary), I would like thank the membership for giving us the opportunity to serve you over these last two years and for making 2015 a success.

**Joseph F. Petolino**  
*Plant Biotechnology Section Chair*  
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# HISTORY AND RECORDS

The History Society was established in 1979 at the Seattle Washington Tissue Culture Association (TCA) meeting as the Records and Historical Committee. The charge of the committee is to preserve historical information concerning the growth, maintenance and *in vitro* experimental use of cells, tissues and organs. The History Society, in conjunction with the Records and Historical Committee oversees contributions to the SIVB archives located in the main library of the University of Maryland, Baltimore, MD. This archived material is available to all that would like to acquaint themselves with the history of tissue culture and scientific application to *in vitro* biology.

Members of the History Society and Records and Historical Committee include: *Sandra L. Schneider* (Chair), Research & Clinical Laboratory Systems; *Gertrude C. Buehring* (Co-Chair), University of California, Berkeley; *Barbara B. Doonan*, New York Medical College; *Ian Freshney*, University of Glasgow; *Cynthia L. Goodman*, U.S. Department of Agriculture, ARC, Biological Control of Insects Research Laboratory; *Leonard Hayflick*, University of California, San Francisco; *Wallace L. McKeehan*, Center for Cancer & Stem Cell Biology Institute of Biosciences and Technology (IBT) Texas A&M Health Science Center, Houston, TX; *Tetsuji Okamoto*, Department of Molecular Oral Medicine and Maxillofacial Surgery, Graduate School of Biomedical Sciences, Hiroshima University, Japan; *Jon Ryan*, Consultant Wheaton; *Yvonne Reid*, American Type Culture Collection; *Denry Sato*, Manzanar Project Foundation, and *Just Vlak*, Wageningen University Plantenwetenschappen.

The History Society and Records and Historical Committee nominated and supported the 2016 Lifetime Achievement Award for Yvonne A Reid, PhD, Manager and Scientist, American Type Culture Collection (ATCC), Manassas VA. Dr. Reid holds a doctoral degree in Zoology, Howard University and is an SIVB Vertebrate Fellow. Her scientific and major seminal contributions include >41 peer-reviewed publications, reviews, chapters, patent on immortalized neonatal human hepatocytes,

## THE COMMITTEE NOMINATED AND SUPPORTED THE 2016 LIFETIME ACHIEVEMENT AWARD FOR YVONNE A REID, PHD, MANAGER AND SCIENTIST

numerous media and platform presentations to the study and pioneering of *in vitro* and molecular investigations using advanced DNA technology to identify and authenticate cell lines. Dr. Reid has been recognized with numerous awards for her cell culture contributions to include the prestigious Eddie Award, USP recognition, Distinguished George S Bascom Memorial lecturer and SIVB Service Award.

Dr. Reid pioneered the development of a cell line identification and authentication procedure using DNA hyper-variable regions for intra-species identification coupled with advanced molecular biology technology using Short Tandem Repeats (STR). This pioneering effort led her to standardize methods and protocols to characterize, propagate and track validated animal cell lines and strains. These methods and validation protocols, used by the ATCC, have been adopted by cell banks worldwide.

As a national and international recognized expert and champion of cell line authentication in the scientific community, Dr. Reid serves as a member of the Comparative Medicine Review committee for the National Center of Research Resources and advisor to the NICHD and FDA USP Advisory Panel. She co-chaired the committee developing guidelines for species identification using DNA technology and has contributed much of the text for the American Standard ASN-002 used by the government, pharmaceutical industry and academia. Dr. Reid serves as a thought leader and stakeholder to the Global Biological Standards Institute (GBSI), providing critical scientific and technical testimony for adoption of life sciences laboratory and biological standards development.

In addition to Dr. Reid's pivotal pioneering role for *in vitro* biology, since becoming a member in 1980 she has actively contributed to the TCA/SIVB as World Congress Scientific Advisory Board, Program Committee, symposium speaker, continuing education and cell line authentication training programs presenter, member of the Vertebrate and Cellular Toxicology Sections. She has served on the SIVB Board of Directors and is valued member of the History & Records Committee. Dr Reid's major contributions to the scientific community, as well as the SIVB, has been her role as a national and internationally recognized expert and teaching faculty in cell culture authentication, cell banking and best laboratory practices that has ensured the industry-wide reproducibility and reliability of interspecies cell culture data.

The History Committee was notified of the December 23, 2015 passing of Alfred Gilman, MD, PhD, 1994 Nobel Prize in Physiology or Medicine with Martin Rodbell, PhD (1925–1998) for discovery of the G protein, a key component of cellular biochemical signaling and transduction. The discovery and critical function of G proteins had an impact on the entire domain of medicine, to include biochemical responses of the nervous system, cancer and infectious disease. Dr. Gilman, co-founder of Regeneron pharmaceuticals, served as University of Texas Southwestern Medical School Chair of Pharmacology, Dean and Executive Vice President of Academic Affairs. In 2009, Gilman served as chief scientific officer for the Cancer Prevention and Research Institute of Texas (CPRIT), resigning in 2012 over the growing emphasis on awarding commercial interests over science. Dr. Michael Brown, a fellow Nobel laureate and former colleague of Gilman's, said "of all the scientists I have known, Al had the most unrelenting commitment to scientific integrity. He could not abide sloppy or phony science, and he said so openly, even when it would have been much safer to stay silent. We may never see the likes of him again."

**Sandra L. Schneider**  
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# STANDING COMMITTEES

## AWARDS

### **New SIVB Awards and Criteria**

The Awards Committee, comprised of Addy Alt-Holland, Magnolia Ariza-Nieto, Ian Curtis, Joseph Petolino, and Kan Wang (Chair), has worked tirelessly during this year reviewing categories and criteria of SIVB awards. After active discussion and careful consideration, the committee submitted an awards revision proposal to the SIVB Board in November of 2014. The committee proposed a new category of Distinguished Scientist Award and a revised awards criteria to all existing award categories. This new category adds an opportunity to recognize and celebrate SIVB members with mid-career achievements. This proposal was approved by the Board and the new awards were announced to the society in December of 2014.

### **Lifetime Achievement Awards**

Two outstanding long-time SIVB members, Dr. Delia Bethell (Plant Biotechnology) and Dr. Gertrude Buehring (IVACS), were nominated and won the 2015 Lifetime Achievement Awards. Both scientists devoted their life-long careers in in vitro cell and developmental biology and led exemplary research, management and mentoring careers. They were presented with the awards and gave brief acceptances during the Opening Ceremony.

Dr. Bethell is one of a few members at SIVB who have a distinguished career in both plant and animal biology. In addition to her many scientific achievements, she has contributed significantly to SIVB with service on the Executive Board (1990–2000) and as Treasurer (1998–2000). Dr. Bethell committed a significant amount of effort over an extended period of time during her tenure as Treasurer and played critical roles in overcoming the financial hardship during the period and ensured the continuation of the Society.

The scientific and major seminal contributions of Dr. Buehring include >200 peer-reviewed publications, reviews, chapters,

THE AWARDS COMMITTEE  
HAS WORKED TIRELESSLY  
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REVIEWING CATEGORIES  
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SIVB AWARDS.

media and platform presentations to the study and pioneering in vitro and molecular investigations of bovine leukemia virus (BLV) as a causative agent of human breast cancer. In addition to Dr. Buehring's pivotal pioneering role for in vitro biology, since becoming a member in 1978 she has actively contributed to the TCA/SIVB as a Reviewing Editor for In Vitro Cell and Developmental Biology – Animal, World Congress Scientific Advisory Board, Program Committee and symposium presentations, member Vertebrate and Cellular Toxicology Sections, Vertebrate Section Officer and serving on the SIVB Board of Directors. One of Dr. Buehring's major contributions to the Society was her role from 1986–2008 with the Education and Student Affairs Committees where she was an outstanding mentor and scientific role model for SIVB students.

### **Fellow Award**

Dr. Harold Trick (Plant Biotechnology) won the 2015 Fellow Award. This award recognizes members who have made outstanding contributions to in vitro science research, teaching, or administration. The fellow is presented to SIVB members who have been active for at least 10 years and who have made contributions to the Society. Dr. Trick is recognized widely in the Society as outstanding member who has made significant contributions to the field of in vitro biology and demonstrated service to the Society. Dr. Trick authored and co-authored over 59 peer-reviewed papers, 7 patents, many talks and invited presentations. In

addition, Dr. Trick served as Plant Biotech Program Co-Chair for 2000 and 2002; Plant Planning Committee from 2000 to 2004; Plant Program Chair for 2003; Planning Committee member for 2007, 2011 and 2012; and Plant Biotech Section Chair from 2012–2014. He was reviewing editor for *In Vitro Cellular and Developmental Biology–Plant* from 1998–2007 and has been Associate Editor since 2011. Dr. Trick was recognized during the Opening Ceremony on Sunday and his award was presented during the Plant Biotechnology Section Business Meeting.

### **Distinguished Scientist Award**

The 2015 inaugural Distinguished Scientist Award was presented to Dr. Zengyu Wang, an active SIVB member in Plant Biotechnology who is internationally recognized for his contribution in plant tissue culture and genetic transformation. This award is newly established in 2015 to recognize outstanding mid-career professionals who have made significant contributions to the field of in vitro biology and/or in the development of novel technologies that have advanced in vitro biology. Dr. Wang has authored and co-authored 80 peer-reviewed publications and some of them on high-impact journals such as Nature Biotechnology, PNAS and the Plant Cell and highly cited by the researchers in the field. He serves as associate editors for a number of international journals including *In Vitro Cellular and Developmental Biology–Plant*. He also served as SIVB session convener in 2007, 2008 and 2011, the Plant Biotechnology Section Program Chair for 2013. Dr. Wang was recognized during the Opening Ceremony and his award was presented during the Plant Biotechnology Section Meeting.

### **Young Scientist Award**

There were no nominations for the Young Scientist Award in 2015.

### **Distinguished Service Awards**

2015 Distinguished Service Awards were presented to the following members: Wayne



2016 Award Winners include: (Top row, L to R) Lifetime Achievement Award Winners, Delia Bethell and Gertrude Buehring; Harold Trick (C) receives the Fellow Award by presenters Kerri Neugebauer (L) and Jessica Rupp (R); and the 2015 Student Award Winners: Matt Desrosiers, Ningning Zhang, Kerri Neugebauer, Saroj Parajuli, Jessica Rupp, Ning Yuan, and Alison Songstad; (Middle Row, L to R) Zeng-Yu Wang (C) receives the first Distinguished Scientist Award from Zhangyuan Zhang (L) and Joe Petolino (R); Distinguished Service Award Recipients Michael Kane, Dwight Tomes and David Songstad; (Bottom row, L to R) Distinguished Service Award Recipients Michael J. Fay, Sylvia Mitchell, Nguyen Hoang (pictured with President Eugene Elmore), and Marten Peterson.

A. Parrott; Michael J. Fay; Michael E. Kane; Sylvia A. Mitchell; Dwight T. Tomes; Jeffrey Kwak; James J. Sadler; Nguyen H. Hoang; Daniel J. Barnes; Marten Peterson; and David D. Songstad. These awards recognize those specially selected by the SIVB President who have demonstrated and given extra effort in support of the SIVB programs and endeavors. The recipients were presented with the awards during the Opening Ceremony.

### Student Awards

The evaluating committee this year consisted of Pamela Weathers (Chair), Craig Meyers, Greg Phillips, Sylvia Mitchell, and Cindy Goodman. The following awards were presented at the 2015 Meeting. *Saroj Parajuli*, University of Florida, Gainesville, FL was presented with The Wilton R. Earle Award and an SIVB Travel Award for “Elevating the Lipid Content in Vegetative

Sugarcane Biomass by Metabolic Engineering.” *Yang Zhao*, also from University of Florida, Gainesville, FL, won the Hope E. Hopps Award and an SIVB Travel Award for “Towards Targeting Multiple Expression Cassettes into a Pre-characterized Genomic Locus of Sugarcane for Predictable Transgene Performance.” The John S. Song Award was won by Jessica Rupp, Kansas State University, Manhattan, KS for “RNAi Mediated Silencing of *Triticum mosaic* virus coat protein gene induces resistance to virus in transgenic wheat.” The Honor B. Fell Award was presented to *Allison Songstad*, University of Iowa, Iowa City, IA for “Generation of Induced Pluripotent Stem Cell-derived Choroidal Endothelial Cells for the Treatment of AMD.” *Matt Desrosiers* from Worcester Polytechnic Institute, Worcester, MA won The Cellular Toxicology Award for “Investigating the Effect of Flavonoids and

Phenolic Acids on Bioavailability of Artemisinin from Dried Leaves of *Artemisia annua* Using Simulated Digestion and Caco-2 Intestinal Epithelial Cells.” *Ningning Zhang* from Arkansas State University, Jonesboro, AR won the The Philip R. White Award for “In Vitro and in Planta Expression of Thermostable Endo-arabinase for Generating Functional Oligosaccharides from Plant Cell Wall for Colon-specific Health Benefits.” SIVB Travel Awards were also presented: to *Ning Yuan* of Clemson University Clemson, SC for “Expression Pattern and Activity Analysis of A Novel Tissue Specific Promoter”; to *Dotun Awosika*, University of Ibadan, Oyo State, Nigeria for “Development of Efficient Protocols for Somatic Embryogenesis and Regeneration of Fluted Pumpkin (*Telfairia occidentalis* Hook F.)”; and to *Kerri Neugebauer* of Kansas State University, Manhattan, KS for “Wheat Gene Expression

Differences Induced by Six Races of *Puccinia triticina*.” No Morgan Award was presented this year; this award can only be granted to a Canadian student.

**Kan Wang**  
*Awards Committee Chair*  
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**Pamela J. Weathers**  
*Student Awards and Affairs Committee Chair*  
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## CONSTITUTION AND BYLAWS

The Constitution and Bylaws Committee was busy this year working with the Long-Range Planning Committee on the new Strategic Plan for SIVB. Our role was to ensure that the new Strategic Plan was consistent with the existing constitution and bylaws. After edits suggested by our committee were incorporated into the Strategic Plan we accepted the plan unanimously. The new Strategic Plan suggested changes be made to SIVB’s mission statement; these changes were included in the 2016–2018 SIVB ballot. We also decided that any changes required to the Constitution and Bylaws because of the new Strategic Plan will be made after receiving feedback from other committees within SIVB.

I would like to thank the SIVB Constitution and By-laws committee members for their involvement with this committee during the year. Our contributing members include: Eugene Elmore (UC, Irvine), Addy Alt-Holland (Tufts U), Lisa Lee (Scotts), Kathy Kamo (USDA) and Marten Peterson.

**Stephanie DeWitte-Orr**  
*Constitution and Bylaws Committee Chair*  
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## DEVELOPMENT

The 2015 Development Committee consisted of the following members: Michael Dame, Eugene Elmore, Josh Gasiorowski, John Harbell, Ted Klein, Hong Luo, Joe Petolino, Pon Samuel, David Songstad, Brad Upham, Mary Welter and Allan Wenck (Chair). Carrying on the work from that committee and looking forward to

the 2016 meeting are: Michael Dame, Sadanand Dhekney, Eugene Elmore, Josh Gasiorowski, John Harbell, Ted Klein, Hong Luo, Joe Petolino, Pon Samuel, David Songstad, Brad Upham, Mary Welter and Allan Wenck (Chair).

Fundraising for the 2015 meeting generated \$88,280 in contributions, including IVACS and PBS sections and Awards. This was an approximately \$18K increase from the previous year! Part of this increase was due to new sources of funding discovered by the IVACS team via a grant. Great job! Additionally, many individuals contributed separately. This is something that everyone member should consider! We continue to urge all members to help in this pursuit and to contact the committee with ideas on alternate sources of funding. The development committee needs your help to make sure that we generate sufficient funds to support our great speakers, great students and great programs! 2016 already is looking to be a challenging year with many companies showing a slowdown in growth, consolidation and severe cuts.

The companies, organizations and individuals that contributed to the 2015 In Vitro Biology Meeting include: BASF Plant Science, Bayer CropScience, Bayer CropScience Vegetable Seeds, Biogen, Colgate-Palmolive, Dow AgroSciences, Driscoll’s, DuPont Pioneer, JV Biolabs, Laura Schramm, MatTek, Michael Fay, Midwestern University, MK Dame Services, Monsanto, National Anti-Vivisection Society/ International Foundation for Ethical Research, Procter and Gamble, Robert and Gale Lawrence, The Samuel Noble Roberts Foundation, Syngenta and The Scotts Miracle-Gro Company.

The following organizations and individuals contributed to the 2015 Lifetime Achievement Awards: ATCC, Colette Rudd, Dwight Tomes, Elizabeth Roemer, Eugene Elmore, Greg Philips, Gretchen Darlington, Denry Sato, JHarbell Consulting, Robert Lawrence, Sandra Schneider, Wayne Parrott and several anonymous donors. The amount listed above does not include the "in kind" contributions from invited speakers, award winners and others who were able to obtain funds to pay for their expenses while at the 2015 annual meeting.

The Development Committee would like to express special thanks to all of these donors because their contributions allow us to help fund the program and our many initiatives during our annual meeting. We could not do it without our generous donors!

**Allan Wenck**  
*Development Committee Chair*  
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## EDUCATION

The Education Committee has the task to further the educational goals of the Society for In Vitro Biology (SIVB). Over the years, the committee has worked together with the Student Affairs Committee to provide a number of engaging events at the SIVB annual meeting. The following is a highlight of events from 2015 and upcoming events at the 2016 Annual Meeting.

The Education Committee offered a teaching-based workshop during the 2015 annual meeting entitled “Good Teaching Is...?”. This very successful event brought together participants, from all over the world, with various levels of teaching experience. The workshop explored lesson planning, formative and summative assessment, as well as feedback mechanisms. Workshop participants determined their own learning style and examined their personal teaching perspective.

For the 2016 Annual Meeting, the Education committee, along with the Student Affairs Committee, is pleased to offer a Kitchen Culture workshop that focuses on plant tissue culture. We are excited to have Carol Stiff offer this essential workshop aimed at biotechnology instructors at the high school and college levels. Participants will be able to enhance their courses upon completion of this one-day workshop.



*Students use the meeting to network with colleagues and ensure their continued professional development.*

IT IS ESTIMATED THAT \$115 BILLION IS SPENT ANNUALLY IN THE UNITED STATES ON LIFE SCIENCE RESEARCH APPROXIMATELY HALF OF WHICH IS FOR PRECLINICAL RESEARCH.

The student events at the 2015 SIVB conference were well attended. The Education Committee and Student Affairs Committee would like to thank Shaimar Gonzalez and Ningning Zhang for organizing the student symposium, networking luncheon, and non-competitive student oral presentations. The student symposium and luncheon focused on professional development of SIVB students by practicing and giving insight on essential interview skills as well as giving students the chance to network with professionals. The Committees would also like to congratulate the 2015 student award winners.

Student events for the 2016 SIVB World Congress will consist of the same three events, student symposium, student luncheon, and non-competitive student oral presentations. They will be co-convened by student committee co-chairs Matthew Desrosiers and Jordan Brungardt. For the student symposium, Wayne Parrott will lead discussions on how to communicate science clearly and effectively to different types of audiences.

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**Jordan Brungardt**  
*PBS Student Committee Co-chair*  
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## LABORATORY MATERIALS AND BIOSAFETY

The Laboratory Materials and Biosafety Committee (LMBC) provides a mechanism within the Society for In Vitro Biology (SIVB) to promote laboratory standards, biotechnology practices, laboratory materials, safety equipment, and facilities that constitute biosafety levels 1–4 associated with in vitro and biotechnology methodology. The goals of the LMBC are: 1) to provide an educational process and format to distribute information regarding potential hazards and risk assessment associated with: the cell culture process, the use and handling of biological agents, quality control of biomaterials, and updates on federal regulation pertinent to research, industry and clinical biotechnology

applications; 2) to recommend laboratory practice, operation, or materials based on risk assessment of the agent/or material and the laboratory activity involved; and 3) to promote the interaction of committee members with national and international scientists, professional groups, and manufacturers regarding the design, processing, and use of material for in vitro and biotechnology methodology.

The LMBC committee members represent government, university/academia, private industry and include: *Linda B. Jacobsen* (chair); *Sandra L. Schneider* (co-chair), Research and Clinical Laboratory Systems; *Walter Finkbeiner*, University of California San Francisco; *Thomas Goodwin*, Johnson Space Center, NASA; *John Harbell*, JHarbell Consulting, LLC.; *John Masters*, University College London, Institute of Urology–UK; *Tohru Masui*, JCRB Cell Bank, Division of Bioresources, National Institute of Biomedical Innovation, Osaka, Japan; *Colette J. Rudd*, Rudd & Associates; *Lynn Rutsky*, The University of Texas Health Science Center Houston; *Glyn N. Stacey*, National Institute for Biological Standards and Control-UK; and *Alda Vidrich*, University of Virginia Health Sciences Center.

The SIVB Laboratory Materials and Biosafety Committee is a forum to lead the discussion on setting industry standards and guidelines for world-wide compliance of cell line authentication, tissue engineered and cell-derived products.

The Global Biological Standards Institute (GBSI) advances life science standards through policy initiatives, thought leadership and education to expand and accelerate the development and adoption of credible, reproducible and translatable research outcomes. In April 2015, GBSI, a non-profit organization, launched *#authenticate* a multi-faceted campaign to raise awareness in the life science community about the role cell authentication can play in improving research reproducibility and validity. This campaign serves to mitigate use of misidentified and contaminated cell lines in research that ultimately leads to failed clinical trials, delays and increased costs for the development of pharmaceuticals and life-saving therapies.

It is estimated that \$115 billion is spent annually in the United States on life science research, approximately half of which is for preclinical research. A conservative estimate is that \$28 billion each year is spent on research that cannot be reproduced, the common contributor of which is the continued and widespread use of misidentified or contaminated cell lines.

The GSBI campaign is a platform by which members of the life sciences community can collectively advance best laboratory practices and a cultural shift in how biomedical research is conducted. This platform asks stakeholders and key influencers to:

- Use authentic, contaminant-free cell lines
- Establish dedicated funding to address cell authentication
- Require documentation of cell authentication for journal submissions and publications
- Commit to educate and train graduate students and postdoctoral fellows on the importance of cell authentication in research
- Invest in the development of innovative tools for cell authentication

In addition to asking scientists and organizations to pledge support to raise awareness in the life science community about the role cell authentication plays in improving research reproducibility and validity, GSBI promotes the use of the simple, accurate and inexpensive short-tandem repeat (STR) analysis, pioneered by Dr. Yvonne Reid and used by some researchers and credible cell banks to authenticate cell lines.

**Sandra L. Schneider**  
*Laboratory Materials and Biosafety Committee Co-chair*  
drsandra@stic.net

## LONG-RANGE PLANNING

The LRPC is a standing committee of the SIVB charged with discussing and developing strategic ideas for the long-term benefit of our membership. The Constitution and Bylaws Committee (C&BC) considered the draft Strategic Plan and suggested revisions at the SIVB annual meeting in Tucson in June 2015. The revised Strategic Plan was sent to the board after the meeting via e-mail and approved by the board. In addition to these revisions the C&BC indicated that the Long Range Planning Committee should work with various other Committees in the Society to implement the Strategic Plan. Additional suggestions included (1) broadening participation of all voting members of the society wherever possible in the activities of SIVB, (2) to encourage and promote submission and publication of scientific articles in In Vitro journals from all classifications of our members, (3) maintain sound financial practices, (4) improve succession planning, (5) potentially develop a bequest program and (6) lastly confirm that the revised Strategic Plan does not financially obligate the society in any way. The LRPC thanks the C&BC, the Board of Directors, and Marietta for their assistance in 2015.

**Dwight Tomes**

*Long-Range Planning Committee Chair*

*Editor.invplt@me.com*



*Lucy Lee and Richelle Monaghan reconnect at the Opening Ceremony Reception.*

## MEMBERSHIP

Membership in the Society continues to decline slowly. Membership in 2015 was 442, compared to 473 in 2014 and 497 in 2013. Membership for 2016 appear stable compared with 2015 numbers, but we are not showing the growth we would like.

While the continuing discussions on how to expand SIVB's membership through social media, marketing opportunities and personalized contacts have been paused temporarily, the Business Office has assisted in the 2016 membership renewal campaign by sending out monthly reminders by both email and hard copy each month. This doubles the contact to members from prior years and will hopefully encourage more response from members from both 2014 and 2015 to renew. In addition, they have continued to offer the Member-Get-a-Member program and prize drawings for members who renew before

December 31. The winners of the 2014 Renewal program were announced at the 2015 In Vitro Biology Meeting. The first prize winner was Laura Schramm who received a Samsung tablet; second prize was William Gordon-Kamm who received free membership in 2016; and third prize, a \$50 gift card, was won by Robert Redman.

The SIVB urges all members to share the benefits they receive from the organization with their colleagues and encourage their participation in our annual meetings and their membership in the organization. For more information on the Member-get-a-Member campaign, please visit [sivb.org/membership/membership-opportunities.html](http://sivb.org/membership/membership-opportunities.html).

*Submitted by the SIVB Business Office*

## NOMINATING

A full slate of candidates was assembled and new officers were chosen following the 2016 election. Leading the election results are John Harbell as President Elect, Sukhpreet Sandhu as Vice President, Harold Trick as Secretary and Barbara Doonan as Treasurer. Members-At-Large are John Finer (PBS) and Brad Upham (IVACS). Publications Chair is Michael Fay, Public Policy Chair is Thomas Flynn, Awards Chair is Maria Jenderek, Constitutions and Bylaws Chair is Ted Klein and Education Chair is Albert Kausch. For the IVACS, the new Chair is Michael Dame, Vice Chair for Meeting is Joshua Gasiorowski, Vice Chair for Membership is Kolla Kristjansdottir and Secretary is Stephanie DeWitte-Orr. For PBS, the Chair is Mary Welter, Vice Chair is Ming Cheng and Secretary is Annie Saltarikos.

Let's support our newly elected officers as they assume positions at the Board meeting in San Diego.

**David D. Songstad**

*Nominating Committee Chair*

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## PROGRAM

For the 2015 annual meeting, the SIVB returned to Tucson, Arizona and the El Conquistador Resort. The meeting was a rousing success and there are many people to recognize for their contributions. The section program chairs, Sukhpreet Sandhu (PBS Program Chair), Michael Dame (IVACS Program Chair), Vivian Dayeh (Education



*The Last Territory was the hot spot for this year's Joint Sections' Social.*

Chair), Ningning Zhang (PBS Student Co-Chair) and Shaimar Gozalez (IVACS Student Co-Chair) with their respective committees did an outstanding job of preparing and executing the scientific program.

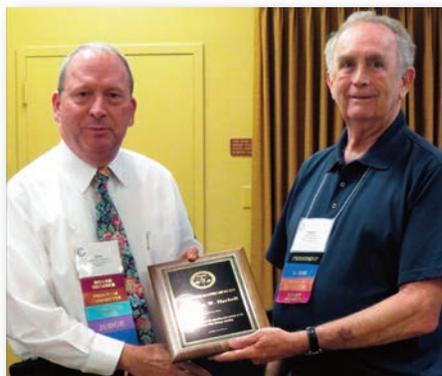
This year, the program was designed to appeal to all sections over the full three and a half days of the meeting. There was also the bonus of a hand-on education workshop “Good Teaching is...?” (Vivian Dayeh convener), that was held on Saturday afternoon. This workshop was fully subscribed and very well received.

Four plenary sessions were organized and included some topics with a different focus from our traditional plenary science. The titles were “The Stem Cell State – Implications for Growth and Disease” (Michael Dame and William Gordon conveners), “Epigenetic Control of Phenotypic Gene Expression” (Brad Upham and Sukhpreet Sandhu conveners), “Bridging the Great Divide: New Methods to Communicate Science to Non-Scientists” (Todd Jones and Patrick McNutt conveners) and “From Small Cells to Big Data: Challenges and Solutions for Effective Data Management” (Addy Alt-Holland, Kathryn Houk, Patrick McNutt, and Sukhpreet Sandhu conveners).

Symposia, workshops, contributed paper sessions and posters are always a mainstay of the annual meeting and this year was no exception. The Plant Biotechnology Section had eight symposia (and one joint with the animal cell section), multiple contributed paper oral sessions (both competitive and not), poster discussion sessions and lots of poster. The In Vitro Animal Cell Section had 7 symposia, competitive and non-competitive contributed paper oral sessions, poster discussion sessions and posters.



Calvin Kuo was the Keynote Speaker at the 2015 In Vitro Biology Meeting.



President Eugene Elmore (R) thanks John Harbell (L) for his efforts as Program Chair at the 2015 In Vitro Biology Meeting.

The student section, complete with a popular 2015 tee shirt for the occasion, offered a workshop on interviewing which drew on the experiences of members from diverse employment background. The Student Luncheon “Networking Platform” was fully subscribed and very successful. Given the importance of public speaking/oral presentations, a non-competitive student oral presentation session was convened by Ningning Zhang and Shaimar Gonzalez to hear presentations and provide feedback from SIVB members.

Sunday afternoon, the Opening Ceremony was conducted by our society president, Eugene Elmore and included the Robert H. Lawrence, Jr. Keynote Symposium and presentation of awards. The Keynote lecture was delivered by Dr. Calvin Kuo, Stanford University, on the engineering and application of human gastrointestinal organoids to the understanding of cancer biology and development of therapeutic modalities. The awards ceremony followed with the presentation of the 2015 Fellow and Young Scientist, the 2015 Distinguished Service awards and the Lifetime Achievement Awards. Drs. Gertrude C. Buehring (University of California, Berkeley) and Delia R. Bethell were this year’s Lifetime Achievement Award recipients. In their acknowledgement remarks, both recipients focused on the teaching and mentoring mission of the society.

Much of the important interaction, mentoring and collaboration go on during the social events of the meeting. The business office did an exemplary job of arranging the opening reception (Saturday), keynote speaker/lifetime achievement awards

reception (Sunday), the joint social after the business meetings (Monday), and the evening at the Sonora Desert Museum (Tuesday). The first three were free to all participants brought all of the sections together. Intellectual exchange was facilitated by the generous liquid contributions by one of our sponsors. The Sonora Desert Museum even was fully subscribed (as usual) and was an evening to remember.

The work of many people made this meeting a success. Program chairs, conveners, speakers, poster presenters, exhibitors, and attendees all deserve great credit. Our donors and exhibitors help pay for the meeting and make many of the extra enhancements possible. To them we say thank you. Finally, I want to recognize the tremendous efforts and dedication of the members of the business office whose efforts began years before the meeting in negotiating the site, arranging exhibitors and working out the details. Until I became program chair, I had no idea how many emails were sent and received to keep the program on track and on budget. As a society, we are so very fortunate to have such support!

**John W. Harbell**  
2015 Program Committee Chair  
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## PUBLICATIONS

The past year was a good one for *In Vitro-Animal* with consistently high submission rates with full issues for the year. *In Vitro-Plant* had lower overall submissions for the year and we are looking for ways to increase the number and more specifically the quality of the submissions, as the acceptance rate is currently very low. We encourage all our members to submit manuscripts and recommend our journals to your colleagues. Our society members are excellent researchers and as they submit more manuscripts, the impact factor of our journals should increase. Members receive expedited reviews so you should have an even faster publication of your manuscript. Our reviewers and associate editors are providing more rapid reviews than in the past and that improves the speed of publication for our authors. Reviews and special issues are being planned. The *In Vitro*

Report continues to provide member news and updates on SIVB activities and several changes in content by Editors Michael Fay and Sylvia Mitchell have made it even more interesting. Our journals depend on your support, and we hope to see increased submission from our members. I want to thank all the members of the Publications Committee for their assistance over the past six years as I pass the chair position to the very competent hands of Michael Fay.

### ***In Vitro–Animal***

*(For the year 3/1/15 through 2/29/16)*

The journal experienced an increase in total submissions of new manuscripts over the comparable period last year (353 compared to 304 in 2014–2015) showing the highest number of submissions since 1998. The numbers of submitted manuscripts for the past year compared to the prior year were: 328 regular papers (274 in 2014–2015), 19 Reports (24 in 2014–2015), 4 Reviews (3 in 2014–2015), 2 opinion Letters-to-the-Editor (0 in 2014–2015), and no book reviews (0 in 2014–2015). Of the 353 submissions, 82 were accepted (22.23% acceptance rate), 182 (51.56%) rejected, 19 (5.38%) withdrawn, 13 (3.68% were transferred, and 57 (16.15%) still in review or revision.

In addition to the USA, 33 countries were represented in the submissions received in 2015/2016. The countries and their respective submissions are as follows: Algeria, 1; Australia, 1; Belgium, 1; Brazil, 13; Brunei Darussalam, 1; Bulgaria, 1; Cameroon, 1; Canada, 5; China, 135; Czech Republic, 1; Egypt, 2; Germany, 2; Greece, 1; Iceland, 1; India, 25; Iran, 51; Italy, 1;



*Midwestern University Faculty and SIVB Members Michael Fay, SIVB Secretary; Mae Ciancino and Incoming IVACS Co-chair Membership, Kolla Kristjansdottir enjoy the meeting's social events.*

OUR SOCIETY MEMBERS ARE  
EXCELLENT RESEARCHERS  
AND AS THEY SUBMIT MORE  
MANUSCRIPTS, THE IMPACT  
FACTOR OF OUR JOURNALS  
SHOULD INCREASE.

Japan, 25; Jordan, 1 Republic of Korea, 29; Lebanon, 1; Malaysia, 5; Mexico, 4; Pakistan, 6; Romania, 1; Saudi Arabia, 2; Spain, 1; Taiwan, 2; Thailand, 5; Turkey, 9; United Kingdom, 3; United States, 11; Vietnam, 2; and no country specified, 6.

Average time from receipt to first decision in the review process was 3.53 weeks compared to 4.03 weeks overall last year. All new submissions were received through the online system.

The *In Vitro–Animal* journal publishes 10 individual issues at or above page budget levels and continues to publish on schedule. The 2014 impact factor for IVA was 1.145, which is slight increase from the 2013 impact factor of 1.000. A significant proportion of submissions came from outside the US so there is an awareness of and a market for *In Vitro–Animal* beyond the US and North American research communities.

*In Vitro–Animal* continues to publish papers in traditional areas such as cell line derivation and toxicology, but we are also receiving increasing numbers of submissions in the areas of adult and pluripotent stem cell biology, tissue engineering, cell signaling, and methods development for cell line characterization.

In the past year, several submissions have included irregularities (eg. duplication, manipulation or misrepresentation of data) that were discovered by editors, reviewers or readers. IVA takes quick and decisive action in such cases to maintain the integrity of the journal and to retain the trust of its authors. The editorial board will not review (reject without review) any manuscripts with iThenticate similarity score higher than 40%.

### ***In Vitro–Plant***

The *In Vitro–Plant* journal's impact factor declined to 0.981 in 2014, which is probably a reflection of no review articles or special topic issues published in that year. In 2015, however, three review articles were published; the most since the 2011 Biodiversity special issue. It is hoped that the addition of review articles will help stem the decline in impact factor, but more are needed.

An effort has been made to find guest editors to manage new special topic issues, but so far these efforts have been unproductive. Please contact the Editor-in-Chief if you have a suggestion for a special topic issue and would like to volunteer to invite contributors to the issue.

2015 was a challenging year to fill the pages of each issue of *In Vitro–Plant*. Only 456 manuscripts were received, which is slightly fewer than in 2014. Of those 456 manuscripts over half were rejected for plagiarism or for significant technical flaws leaving a mere 15.6% acceptable for publication. The received manuscripts were from a diverse array of countries, which reflects the international audience of the journal. The top 10 countries were, in descending order, India, China, Iran, Brazil, Turkey, Pakistan, USA, Japan, South Korea, and Poland.

To maintain journal excellence SIVB members are encouraged to publish in *In Vitro–Plant*. Apart from supporting the society and fellow scientists, there are advantages to publishing in *In Vitro–Plant* such as a rigorous and fair peer review process, discounted color photograph printing and timely publishing in a respected international journal. Furthermore, SIVB member with access to *In Vitro–Plant* also have free online access to Plant Cell Tissue and Organ Culture.

### ***In Vitro Report***

The *In Vitro Report* is the quarterly online newsletter for the membership of the Society for In Vitro Biology. The *In Vitro Report* provides a mechanism for the Society's membership to communicate with each other outside of our annual meeting and on a year-round basis. The Co-Editors are Michael Fay and Sylvia Mitchell, who work

together to represent the In Vitro Animal Cell Sciences section (IVACS) and the Plant Biotechnology section (PB). The Co-Editors are thankful to Michele Schultz (Publications Manager) who facilitates the editorial and publication process. The Co-Editors are also thankful to Barbara Reed (Chair of the Publications Committee), Tetsuji Okamoto (Editor-In-Chief of *In Vitro Cellular & Developmental Biology–Animal*), David Duncan (Editor-In-Chief of *In Vitro Cellular & Developmental Biology–Plant*), and the Publications Committee for their guidance and support. We encourage all SIVB members to share their news and accomplishments through the *In Vitro Report*, and don't forget to read the latest issue of the *In Vitro Report* by clicking on the icon located at the upper right corner of the newly designed website for the Society for In Vitro Biology (<https://www.sivb.org>). If you have suggestions for improving the *In Vitro Report* please contact the Co-Editors (mfayxx@midwestern.edu, sylviamitchell.biotech@gmail.com) or the Publications Manager (Michele@sivb.org).

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## PUBLIC POLICY

The Public Policy Committee is a standing committee of the Society with multiple roles — alert and educate membership about current issues affecting the scientific community, be a resource to the general public for fact-based information, and provide advice and assistance to the SIVB Board of Directors in regard to public policy issues in national and international arenas. The SIVB has allies in these endeavors through memberships in American Institute of Biological Sciences (AIBS) and Council for Agricultural Science and Technology (CAST; Nancy Reichert represents SIVB on their Board of Representatives).

Alerts, information and weblinks sent to the membership in 2015 included: results from two surveys (Pew Research Center, Oklahoma State) on genetically modified (GM) crop perception/acceptance; National Academies Press' workshop summary "Trust and confidence at the interfaces of life sciences and society"; Council for Agricultural Science and Technology's issue paper "Process labeling of food: consumer behavior, the agricultural sector, and policy recommendations"; Proceedings of National Academy of Sciences USA Kyndt et al. article "The genome of cultivated sweet potato contains Agrobacterium T-DNAs with expressed genes: an example of a naturally transgenic food crop"; a news article regarding FDA's approval of a genetically engineered salmon — the first transgenic animal to enter our feed chain; and webcast information regarding the National Research

Council's Committee on Genetically Engineered Crops public meetings.

In 2015, the U.S. House of Representatives passed a bill regarding voluntary labeling of food containing GM plants/products that would override any state labeling law. We have been watching the activity in the U.S. Senate who tried to pass a similar bill — yet to happen. With no national GM labeling oversight, Vermont's mandatory labeling law goes into effect on July 1, 2016. Tom Flynn (incoming Public Policy Chair) and committee members will continue to monitor this situation, as well as other situations/topics of interest, and keep the membership informed.

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Plant Biotechnology Section Members spend some time socializing. Pictured from L to R are Barbara Reed, Jessica Rupp, Kerri Neugebauer, Michael Kane, Dwight Tomes, and Harold Trick.

# REPRESENTATIVES OF THE SIVB

## ATCC

ATCC continues to play an active role in broadcasting the need for cell line authentication. Over the past year the organization has participated in several projects to promote best practices in cell banking to ensure consistent and reproducible results. Most recently, ATCC published its third consensus standard, *Species-Level Identification of Animal Cells through Mitochondrial Cytochrome c Oxidase Subunit 1 (CO1) DNA Barcodes* (ANSI/ASN-0003-2015). This consensus standard is intended for interspecies identification of animal cell lines and tissues. The technique, which is based on the sequencing of the CO1 gene, can be easily replicated among laboratories because reference databases contain verified sequences obtained from voucher (reference) specimens. This new standard complements the existing standard, *Authentication of Human Cell Lines: Standardization of STR Profiling* (ANSI/ASN-0002-2011), which is used for human cell line and tissue identification.

CELL LINE AUTHENTICATION CONTINUES TO BE A FOCUS FOR BOTH FUNDING AGENCIES AND JOURNAL EDITORS AS A TOOL TO ADDRESS REPRODUCIBILITY IN SCIENCE.

Cell line authentication continues to be a focus for both funding agencies and journal editors as a tool to address reproducibility in science. The National Institutes of Health (NIH) has made changes to grant application policies and now requires the authentication of key biological reagents to include cell lines. These changes, as well as other updates designed to increase the rigor of biomedical science, became effective



Great networking opportunities are available at the SIVB Annual Meetings.

January 25, 2016. See link for more information <https://www.nih.gov/research-training/rigor-reproducibility/updated-application-instructions-enhance-rigor-reproducibility>. Additionally, over 300 scientific associations, societies and journal editors have endorsed the need for reporting cell line source, authentication and mycoplasma testing as prerequisites for publication. See NIH “Principal and Guidelines for Reporting Preclinical Research (<https://www.nih.gov/research-training/rigor-reproducibility/updated-application-instructions-enhance-rigor-reproducibility>)”

**Yvonne Reid**  
*Manager/Scientist*  
*Standard Resource Center, ATCC*  
[yreid@atcc.org](mailto:yreid@atcc.org)

## COUNCIL FOR AGRICULTURAL SCIENCE AND TECHNOLOGY

The Society for In Vitro Biology is a member of CAST, which is a nonprofit 501(C)(3) organization composed of individual members and representatives from scientific societies, nonprofit and trade organizations, and commercial companies. CAST addresses issues surrounding animal, plant and food sciences, and agricultural technology including biotechnology. Their

mission is to “assemble, interpret, and communicate credible science-based information regionally, nationally, and internationally to legislators, regulators, policymakers, the media, the private sector, and the public.” A complete list of their reports, to date: <http://www.cast-science.org/publications/>. Issue papers, commentaries, and one-page quickCASTs are freely available online. I represent the SIVB in CAST and serve on their Board of Representatives. As a member of the Food Science and Safety Work Group, I am continuing to spearhead the coordination of an issue paper on food biofortification. I also served as a member of CAST’s ad hoc Strategic Planning Committee. Goals in this strategic plan will include better engagement with member societies (and their members) in seeking input on topics of interest to them. Any and all suggestions for future CAST reports would be welcomed — just email me.

The 2015 Annual Meeting of the CAST Board of Directors and Board of Representatives took place in Des Moines, IA, October 27–29. Primary discussions were on scientific topics thought to be most critical for inclusion in science-based reports in the near future; working sessions then fine-tuned these ideas and initiated proposal drafts for these reports. The

Strategic Planning Committee also sought input from the membership to fine-tune the strategic plan draft.

**Nancy Reichert**  
*CAST Board of Representatives, SIVB*  
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## INTERNATIONAL ASSOCIATION FOR PLANT BIOTECHNOLOGY

It is a great honor for me to serve as the new US national correspondent for the International Association for Plant Biotechnology (IAPB, [www.iapbhome.com](http://www.iapbhome.com)). I am delighted to have been given the opportunity to promote the association and to build the membership, especially in the United States. I would like to take this opportunity to thank all of our members and the previous national correspondents for their time and commitment over the past number of years. The IAPB was founded in 1963 and is the largest international professional organization representing the interests of the world-wide plant biotechnology research community. The 13th International Association for Plant Biotechnology Congress 2014 (Melbourne, Australia) was a huge success and thanks to



*SIVB thanks our exhibitors, such as PhytoTechnology Laboratories, pictured above, for supporting the SIVB and its members.*

Prof German Spangenberg and his organizing committee. Following the successful 2014 conference, IAPB is pleased to announce that the 14th IAPB Congress will take place in Dublin, Ireland from 19th to 24th August 2018 ([iapb2018.com](http://iapb2018.com)). Preparations have already begun for the 2018 congress. Barbara Doyle Prestwich is our new president and she will continue in that role until 2018. Her colleague, Ewen Mullins, is the Editor-in-Chief for the IAPB issues of *In Vitro Cellular and Developmental Biology – Plant*. Eoin Lettice is the new secretary/treasurer. IAPB members span over 89 countries, ranging

from industrial to early career scientists. One of the key goals for this year is to strengthen the US membership of the IAPB. IAPB offers excellent value for money and is probably the lowest membership rate for any professional organization at \$25 per year. Members will receive a copy of the IAPB newsletter twice yearly and two issues of the journal. In addition, reduced conference rates for IAPB symposia are offered to all members. In addition, the current secretariat and the US correspondent are working towards providing small travel bursaries to members, on a competitive basis, to promote networking opportunities especially but not exclusively to early career scientists.

IAPB looks forward to good collaboration with its personal members to further improve the impact and the visibility of plant science in USA and beyond. I encourage all plant scientists to join the IAPB. The two societies IAPB and SIVB also work closely together and members can renew their IAPB membership through SIVB. Interested? Please contact me and I will send you an application.

**Siva Velivelli**  
*US Correspondent, IAPB*  
[svelivelli@danforthcenter.org](mailto:svelivelli@danforthcenter.org)

## SOCIAL MEDIA

Social media is an essential tool in how SIVB communicates with our members and the community at large. SIVB's Twitter account has 110 followers and our Facebook page has over 650 followers. LinkedIn provides our greatest reach with almost 2,000 members. We use these outlets to share information on our meetings and publications as well as articles of interest and Throw Back Thursday images, which are always popular.

SIVB continues to develop ways that we can utilize these social media tools to share the SIVB's message.

**Discussion Forum:** [sivb.org/forum/](http://sivb.org/forum/)

**Facebook:** [www.facebook.com/pages/Society-for-In-Vitro-Biology/198079413553746](http://www.facebook.com/pages/Society-for-In-Vitro-Biology/198079413553746)

**Twitter:** [twitter.com/SIVBiology](https://twitter.com/SIVBiology)

**LinkedIn:** [linkedin.com](https://www.linkedin.com) (Search for Society for In Vitro Biology)

**Website:** [sivb.org](http://sivb.org)

### Contact SIVB:

Society for In Vitro Biology

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Raleigh, NC 27605

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**TREASURER'S SUMMARY REPORT**

**SOCIETY FOR IN VITRO BIOLOGY**

**STATEMENTS OF FINANCIAL POSITION  
DECEMBER 31, 2015 AND 2014**

**ASSETS**

	December 31, <u>2015</u>	December 31, <u>2014</u>
<b><u>Current Assets:</u></b>		
Cash	\$ 483,248	\$ 463,465
Accounts Receivable	505	865
Prepaid Expense	<u>35,997</u>	<u>41,230</u>
Total Current Assets	<u>519,750</u>	<u>505,560</u>
<b><u>Other Assets:</u></b>		
Investments	<u>174,091</u>	<u>177,243</u>
Total Other Assets	<u>174,091</u>	<u>177,243</u>
Total Assets	<u>\$ 693,841</u>	<u>\$ 682,803</u>

**LIABILITIES AND NET ASSETS**

<b><u>Current Liabilities:</u></b>		
Accounts Payable	\$ 1,834	\$ 4,753
Deferred Dues and Subscriptions	<u>43,255</u>	<u>35,813</u>
Total Current Liabilities	<u>45,089</u>	<u>40,566</u>
<b><u>Net Assets:</u></b>		
Unrestricted	396,664	384,799
Temporarily restricted	<u>252,088</u>	<u>257,438</u>
Total Net Assets	<u>648,752</u>	<u>642,237</u>
Total Liabilities & Net Assets	<u>\$ 693,841</u>	<u>\$ 682,803</u>

## TREASURER'S SUMMARY REPORT

### SOCIETY FOR IN VITRO BIOLOGY

#### STATEMENTS OF ACTIVITIES FOR THE YEARS ENDED DECEMBER 31, 2015 AND 2014

	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Total</u>	December 31, 2014 <u>Total</u>
<u>Revenue:</u>				
In Vitro-Animal	\$ 110,391	\$ -	\$ 110,391	\$ 108,286
In Vitro-Plant	52,956	-	52,956	56,980
Newsletter	5,901	-	5,901	6,520
Meetings	150,026	64,742	214,768	225,461
Horn Endowment Fund contributions	-	120	120	110
Administrative	35,920	-	35,920	31,844
Net assets released due to satisfaction of program restrictions	<u>70,212</u>	<u>(70,212)</u>	<u>-</u>	<u>-</u>
Total revenue	<u>425,406</u>	<u>(5,350)</u>	<u>420,056</u>	<u>429,201</u>
<u>Program services:</u>				
In Vitro-Animal	4,603	-	4,603	5,625
In Vitro-Plant	9,383	-	9,383	8,347
Annual meeting	<u>166,148</u>	<u>-</u>	<u>166,148</u>	<u>182,013</u>
Total program services	<u>180,134</u>	<u>-</u>	<u>180,134</u>	<u>195,985</u>
<u>Supporting services:</u>				
Administrative	<u>222,809</u>	<u>-</u>	<u>222,809</u>	<u>224,809</u>
Total expenses	<u>402,943</u>	<u>-</u>	<u>402,943</u>	<u>420,794</u>
Change in net assets before unrealized gain/(loss) on investments	22,463	(5,350)	17,113	8,407
Unrealized gain/(loss) in fair value of investments	<u>(10,598)</u>	<u>-</u>	<u>(10,598)</u>	<u>128</u>
Change in Net Assets	11,865	(5,350)	6,515	8,535
Net assets, January 1	<u>384,799</u>	<u>257,438</u>	<u>642,237</u>	<u>633,702</u>
Net assets, December 31	<u>\$ 396,664</u>	<u>\$ 252,088</u>	<u>\$ 648,752</u>	<u>\$ 642,237</u>