SIVB ANNUAL REPORT 2022

SOCIETY FOR
IN VITRO BIOLOGY
SIVB.ORG

PLANT AND ANIMAL BIOTECHNOLOGY AND GENOMICS

Fostering the Exchange of Knowledge of
In Vitro Biology of Cells, Tissues and Organs

PRESIDENT'S REPORT

A YEAR OF TRANSITIONS – As I was preparing my first Annual President's Report, it became clear to me that "A year of Transitions" would be an appropriate way to define 2022. Transition forward from the role of President-Elect to the role of President, and a transition backward from virtual to in-person annual meetings.

Serving in the position of President-Elect in the 2020-2022 term, enabled me to closely work with — and learn from — talented individuals who led this organization in previous years. Years after attending my first SIVB meeting, serving as SIVB President is a great honor and even greater responsibility. I am grateful for the continued support of the SIVB's Board of Directors, Committee Chairs, Business Office, and the broader SIVB community in fulfilling our shared duty for the sustained growth and impact of our Society as a leader in the discipline of in vitro biology. "Plant and Animal Biotechnology and Genomics" and "Fostering the exchange of knowledge of in vitro biology of cells, tissues and organs from both plant and animals" are so much more than taglines – they are at the heart of SIVB. We can all be proud of the diversity, breadth, and depth of the research that SIVB members do in the field of in vitro biology, and we want to acknowledge and celebrate the impact that they are making in their communities, locally and globally. We invite SIVB members and interested scientists to submit research manuscripts to the Society's journals, share stories, perspectives, and news with our *In Vitro Report*, and actively contribute to SIVB's social media platforms. We encourage SIVB members, in all levels of their careers, to participate in the countless educational, social, and leadership activities and possibilities that are an integral part of the SIVB.

Addy Alt-Holland
President

In 2020 and 2021, the Annual Meeting, which is one of the pillars of the SIVB's activities, transitioned to a virtual format in order to keep everyone safe and follow COVID-19 policies and regulations. In 2022, we were able to transition back to an in-person Annual Meeting at the Town and Country Hotel and Resort in San Diego, CA. From both scientific and social perspectives, this meeting was a tremendous success. Those of us who attended the meeting in person had many opportunities to honor and congratulate the Lifetime Achievement, Fellow, and Distinguished Service awardees, enjoy exciting scientific sessions, educational events, and network with new members, seasoned colleagues, and engaging exhibitors. The on-demand virtual component of the 2022 Meeting was available to those who could not attend in-person to stay informed, engaged, and connected with our Society. The success of the 2022 Annual Meeting reflected a true team effort and relied on the commendable hard work of **Marietta Wheaton Saunders** and **Michele Schultz** at the Business Office and the team at New Beginnings Management, **Mae Ciancio** the Program Chair, Section Officers, Chairs and members of multiple committees, conveners, speakers, and presenters. The SIVB community was re-united.

Although my President's Report reflects on 2022, I will be remiss not to mention another critical transition — a transition into a future without Marietta Wheaton Saunders, the Managing Director and a cornerstone of our Society for over 30 years, who passed away unexpectedly in February 2023. Marietta's diligent work, numerous initiatives, and genuine care for the SIVB facilitated a bright future of sustainability and growth for the Society. She touched each one of us in so many ways, and the transition forward without her is one of the most difficult challenges that we face as an organization. However, be assured that we are committed to this process, to honor her legacy, and to see the SIVB thrive and continue making an impact in the field of in vitro biology for years to come.

I look forward to welcoming you to an inspiring and successful 2023 SIVB meeting in Norfolk, VA!

ADDY ALT-HOLLAND
President
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SECRETARY'S REPORT

Mae J. Ciancio
Secretary

The 2022 year marked the return to in-person attendance at the annual SIVB meeting in sunny San Diego, CA. The Board members, in collaboration with the Business Office, worked diligently to facilitate an in-person meeting with a virtual component for those unable to attend or desiring virtual access. The Board recognized and thanked the outgoing Board members and welcomed the new Board members who began their positions at the June 2022 meeting. The Board is continuing their efforts to identify and implement measures to support meeting attendance, membership, community outreach, and student/post-doctoral development. There are multiple ways to contribute to the success of the Society as well as the annual meetings. If you are interested in getting involved and do not know where to start, please contact one of the Board members directly and we will be happy to help you identify an opportunity to meet your interests. New officer elections are held Fall 2023, with officers taking their positions in June 2024. Thank you for your support of the Society.

MAE J. CIANCIO
Secretary
mcianc@midwestern.edu

TREASURER'S REPORT

Barbara B. Doonan
Treasurer

We were all greatly saddened on February 27, 2023, at the loss of our much loved and appreciated Managing Director, Marietta Wheaton Saunders. Our tribute to her will be to make every effort to continue moving forward on the path she set for us as we worked together over the past 30 + years.

As I write this report, we are financially stable. Our first in-person meeting since 2019 in San Diego was well-attended and successful. However, due to circumstances generated by the pandemic, and in spite of the favorable terms negotiated by Marietta in 2020, (making it possible to avoid potentially overwhelming cancellation fees), costs such as food and beverage, hotel rooms, AV and speaker travel expenses, plus a need to provide both in-person and on-demand platforms, unfortunately exceeded our income for the meeting. Additionally, although the Business Office under the direction of Marietta had done an excellent job of negotiating the best technical solutions at the best price, electronic capabilities, which must be kept as current as possible, tend to be very expensive. Our other mainstay, our two journals, continue to provide a reliable guaranteed revenue stream although of late additional royalties have come in slightly lower than budgeted. Again, a plea to all active research members to not only consider submitting their own manuscripts to *In Vitro — Animal* or *In Vitro — Plant* but to also encourage network colleagues to do so. Our investments are holding their own to the extent possible in what has proved to be a worldwide tumultuous period. With respect to membership, we are barely holding our own and must do all we can to encourage rejoining of lapsed members and to seek new memberships from such as students, colleagues, and invited speakers.

I am pleased to report that after a period of uncertainty due to the retirement of Charlie Davis of Davis, Sita and Associates, our accounting firm of 20 years, we have hired a new firm, Berry, Paget and Chandler, PLLC who in a very short time have proven themselves to be well equipped to handle all our accounting needs. Also, with respect to funding support, Chairs and Committee members have successfully expanded efforts in seeking new sources of funding and, additionally, a number of individual members have provided increased monetary support, clearly demonstrating their deep commitment to, and level of caring for, our unique Society.

The Treasurer's Summary Report can be found at the end of this Annual Report. The Report will not, as in the past, present a comparison with the previous year. Due to the need for the Society to establish a new accountancy relationship (having lost our accountant of over 25 years), a new permanent relationship was not successfully established until mid-2022. Such comparative statements made by our new accountant, based on previous statements from another firm, are not considered to be acceptable business practice as related to CPA professional standards.

BARBARA B. DOONAN
Treasurer
doonanbb210@aol.com

BUSINESS OFFICE REPORT

Michele Schultz
Acting
Managing Director

The Business Office was extremely active in 2022. In addition to supporting the daily Society activities, the office also coordinated management of the SIVB's annual meeting, publications, membership, and initiatives from the Board of Directors and committees. The greatest focus in 2022 was SIVB`s return to the first in-person Annual Meeting in 3 years while creating our first hybrid event with both in person and on-demand registration. In addition, the office finalized the agreement for the 2024 World Congress on In Vitro Biology, organized additional installments of the SIVB webinar program as a member benefit, helped amend the Springer Nature contracts per requests from Springer, began the process to prepare the *In Vitro — Plant* journal for submission in PubMed, collaborated with the new Social Engagement Committee, and managed the organization's publications and website.

As with 2021, a good amount of concern hinged on COVID-19, its effect on the Society and our events, and the slow road back to "normal" for the organization. The Business Office worked relentlessly to find ways to stabilize the organization's health both physically and financially. We looked for ways to

connect with the membership who were without an opportunity to meet with everyone face-to-face. While the 2022 meeting helped members start to see a return to a new normal, the virus has taken its toll on SIVB. We look to the future with hope that we can welcome back those who found themselves unable to participate over the last few years.

2022 IN VITRO BIOLOGY MEETING

The In-Person 2022 In Vitro Biology Meeting took place from June 4–7, 2022 at the Town and Country San Diego in San Diego, California. We were thrilled to be able to meet in person for the first time since the 2019 meeting in Tampa; however, SIVB wanted to make sure we came back together carefully and appropriately. In advance of the meeting, the Business Office worked to secure waivers from each participant to confirm that they would not attend if they tested positive for COVID-19 within 14 days of attending the meeting. Some events, such as the Joint Section's Social, were able to be held outside and attendees were encouraged to wear masks wherever possible.

Students at the 2022 In Vitro Biology Meeting had the opportunity to meet Thomas Hartung, the 2022 Keynote Speaker.

Highlights from San Diego included the Keynote presentation from **Thomas Hartung PhD**, director of the Center for Alternatives to Animal Testing (CAAT) and the inaugural holder of the Doerenkamp-Zbinden Endowed Chair in Evidence-based Toxicology in the Department of Environmental Health Sciences at the Johns Hopkins University, who spoke on "Advancing Cell Culture to Meet Scientific and Societal Needs, " and special workshops on "Design of Experiments" organized by **Uyen Cao Chu**, **Todd Jones**, and **Randy Niedz**, and on "Advancing Cell Culture to Meet Scientific and Societal Needs" convened by **Sukhpreet Sandhu** and **Kathy Munkvold**.

SIVB was pleased to present numerous awards to well-deserving members in San Diego. During the Opening Ceremony on Sunday, June 5th, SIVB presented the 2023 Lifetime Achievement Awards to **Shirley A. Pomponi PhD**, and **Kan Wang, PhD**, honoring each of them for the significant contributions they have made during their respective careers. We also formally presented the 2021 Lifetime Achievement Award to **Dwight T. Tomes, PhD** and the 2022 Lifetime Achievement Award to **Cynthia L. Goodman, PhD**. For their support of the Society and its activities, SIVB Past President, **Allan R. Wenck, PhD**, thanked **Rakhi Chaturvedi, PhD**, **Ian Scott Curtis, PhD**, **Ahmad Al-Sayed Omar, PhD**, **Brad L. Upham, PhD**, **Christopher Bagley, PhD**, **Anissa Belfetmi-Stone, PhD**, **Sarbesh Das Dangol, PhD**, **Sadanand A. Dhekney, PhD**, **John W. Harbell, PhD**, **Sukhpreet Sandhu, PhD**, and **Kan Wang, PhD**, by awarding them Distinguished Service Awards. Additional awards presented during the Plant Biotechnology Section Business Meeting included the 2022 Fellow Awards to **Maria M. Jenderek, PhD**, and **J. Pon Samuel, PhD**, and during the IVACS Section Business Meeting to **Mae Ciancio, PhD**, and **Kolla Kristjansdottir, PhD**. We also acknowledged the 2021 and 2022 Distinguished Scientist, Fellow, and Early Career Awards at their respective section meetings.

2022 Distinguished Service Awards Recipients

Allan Wenck (L) with Addy Alt-Holland (R) presented the 2022 Distinguished Service Award to: (L to R): Kan Wang, Sukhpreet Sandhu, John Harbell, Chris Bagley, Anissa Belfetmi-Stone, Brad Upham, and Ahmad Omar

On Saturday, June 4, the 2022 In Vitro Biology Meeting began with a Welcome Reception and poster session followed by the special evening workshop entitled, "Design of Experiments," which provided an introduction to the use of DOE principles and tools through participation in the design and data analysis of prepared examples relevant to various in vitro culture scenarios. Special Oral Competitions were held for Plant Student, Plant Post-Doctoral, and Animal Student & Post-Doctoral candidates, Students who presented as posters were given the opportunity to participate in a Student Non-Competitive Oral Presentation Symposium.

Special social and scientific events offered during this year's event included "The Mission Bay Silent Auction," a fun and informative visit on Tuesday evening to the Maritime Museum of San Diego where guests enjoyed dinner on a historical ship, and the opportunity to purchase group rate tickets to visit the San Diego Zoo on their own. Other social events included the Welcome Reception on Saturday night, Opening Ceremony Reception on Sunday evening after the Keynote Session, special exhibitor refreshment breaks on Sunday and Monday, and the Joint Sections Social on Monday night. While we attempted to organize a scientific tour on Wednesday, due to COVID-19 protocols in place, most venues were unable to offer private tours for the attendees.

Prior to the start of the 2022 meeting, the Business Office and the Executive Committee discussed concerns regarding fulfillment of our contractual obligations to the hotel as there was still unsurety regarding whether people would be able to attend in person. While we were able to successfully meet our

goals, to address those attendees who were still unable to come to San Diego due to travel restrictions and health concerns, SIVB offered a special Exclusive Limited On-Demand Program opportunity where participants were able to view pre-recorded presentations from a few key sessions in the program through the Mobile App and event website. While many of the speakers pre-recorded their presentations in the Cadmium CD Harvester system, some presenters were recorded during the meeting and some speakers who were unable to attend in person last minute, were able to upload and provide their presentations through this method. Some of the onsite recordings required additional editing, but the entire on-demand program was completed and made available 2 weeks after the meeting concluded through September 30. While at the meeting, attendees were able to view in-person poster presentations, and virtual poster opportunities were made available through the online Poster Gallery. This added functionality allowed everyone to spend more time reviewing presentations in greater detail and we hope this opportunity enhanced the experience both for those attending in person as well those participating virtually.

We are pleased to note that attendance in San Diego was healthy. This can be attributed to the lifting of many travel-bans from companies and some government organizations, returning to a popular location and venue with a strong local biotech community, advance assurances to attendees that the Society would follow all recommended protocols regarding COVID-19, and the start of COVID-burnout drawing people back to in person contact. Group registration was expanded so groups of 5 or greater employees could benefit from the discounts. Ten organizations utilized this reduced registration rate opportunity. Final registration came to 421 which included 110 member, 98 group, 13 non-member, 9 research technician, 18 post doc, 85 student, 8 one-day, 2 emeritus, 4 guest, 6 volunteer, and 42 speaker registrants. There were also 4 staff, 3 accompanying guests, and 19 exhibitor registrants.

SIVB again offered a Virtual Conference Bag through the Mobile App rather than including handouts from the Business Office for the attendees. These virtual pdfs were clearly identified and downloadable so attendees could print and send them to our office for processing. Only a few exhibitors and supporters provided printed materials and SIVB distributed a simple registration bag with these materials then offered prior year's registration bags for those who wanted a piece of SIVB history. In addition to all presentations uploaded by speakers, presenters, and exhibitors, both the event website and mobile app included a networking option where participants could connect to each other as well as share information on social media. There were push notifications sent to those using the app to remind them of upcoming events and special opportunities, an online option to complete the meeting evaluation door prize, and an updated color-coded version of the schedule-at-a-glance. Attendees' utilization of the app continues to grow each year due to this added functionality.

The Business Office would also like to thank all the volunteers who provided their support during the event. The meeting wouldn't have been as successful were it not for their help with the registration desk and audio-visual needs at the meeting. Many come back every year and we deeply appreciate their continued support.

2023 IN VITRO BIOLOGY MEETING

We hope you have already made your plans to attend the 2023 SIVB Annual Meeting as we gather for the first time in Norfolk, Virginia. This year's annual meeting runs from June 10–14, 2023, in Norfolk, Virginia at the Hilton Norfolk The Main. While the initial planning for the 2023 Meeting began with the cancellation of the 2021 meeting and re-contracting for a 2023 event, in 2022, plans began in earnest to prepare the program and set the final details with the Hilton Norfolk The Main. The Program Committee formalized a diverse and interesting program of sessions that focuses on timely perspectives on diversity in science, biotechnology for sustainability, and other topics addressing plant and animal biotechnology and genomics. To fulfill SIVB's desire to modernize how we share information while focusing on being more conscious of our impact to the environment and to address the need for authors to have the ability to update their abstract content after submission, the Board of Directors made the decision to transition from a pre-meeting abstract issue to using the mobile app for on-site access to the program and publishing abstracts in a post-meeting proceedings. The Business Office worked with Springer Nature to revise our contract to address this revised offering. The abstracts will be released in the late fall with access to the content in Springer available open access in perpetuity. Because of this, the Board updated the registration process so registrants can choose to opt-in to receive the abstract issue in hard copy.

SIVB members from Virginia, North Carolina and the DC area and local professors from nearby Virginian universities were contacted and agreed to become part of the Local Organizing Committee (LOC). With support from the 2023 Program Committee, they have been very active meeting regularly and spreading the word to universities and companies in the area. The Development Committee also met monthly to discuss local and national companies and universities who might benefit by participating in our event and distributed materials prepared by the Business Office to spread information about the program.

Princess I. Imoukheude, PhD , Keynote Speaker

Princess I. Imoukheude, PhD, Hunter and Dorothy Simpson Endowed Chair and Professor in Bioengineering at University of Washington is this year`s Keynote Speaker who will be presenting a talk on "*Bioengineering: Realizing the Promise of Cell Signaling Control in Health and Disease*." At the start of the Opening Ceremony before the Keynote presentation, SIVB will be holding a special tribute to honor the

passing of **Marietta Wheaton Saunders**, SIVB's Managing Director of the last 30 years. We are also pleased to announce the following people have been named as recipients of the 2022 SIVB Awards: Lifetime Achievement Award Recipients, **William Gordon-Kamm, PhD**, **John W. Harbell, PhD**, and **Raymond D. Shillito, PhD**. These awards will be presented during the Sunday Awards Ceremony after the Keynote Symposium. There are awards being presented at the IVACS Section Meeting to Distinguished Scientist Award Recipient, **Terry L. Riss, PhD**, and Young Scientist Award Recipient, **Kristina Martinez-Guryn, PhD**. In addition, Fellow Award Recipient, **Pierluigi Barone, PhD**, will receive his award during the Plant Biotechnology Section Business Meeting. Distinguished Service Awards, Student Awards, and Student and Post Doc Competition Winners will also be announced throughout the meeting.

On Saturday, June 10, 2023, we are offering a number of special workshops to start off the 2023 Meeting. The first is a follow-up Flow Cytometry workshop entitled "Grow with the Flow: Advanced Flow Cytometry and Applications," which will discuss various cytometers including Amnis® ImageStream® cytometery, and Microfluidic devices including the advantages over traditional cytometer. At noon is a special "Principles and Best Practices for Plant Genome Engineering" Workshop which will include both a panel discussion and presentations on using state-of-the-art CRISPR genome engineering tools in plants. In the evening, there will be a follow-up session to last year's well received DOE workshop entitled, "Design of Experiment (DoE) Workshop – Part II (Mixture Designs; R Statistical Software)." You can check out SIVB's YouTube channel to view last year's DOE session recordings *(See Publications further down in this report for SIVB's YouTube link)*.

There are several fun opportunities being planned for the upcoming meeting, such as the "2023 Mermaid City Silent Auction" which will run from Saturday evening through Tuesday morning in the Exhibit Hall. Additionally, on Tuesday evening, SIVB will host "A Blooming Good Time at the Norfolk Botanical Gardens," and, on Wednesday afternoon, we are offering a specially created scientific tour "From Electric Fields to the Stars at Old Dominion University" visiting their bioelectrics and bioelectronics labs and the Michael and Kimthanh Lê Digital Theater and Planetarium at ODU.

This is the 21st year that SIVB has offered our Student Initiative which encourages the educational growth of our youngest members. Since its inception, students have benefitted from this program by receiving discounted abstract submission fees, free registration to attend the meeting, and free membership the year after they attend that meeting. The Student Program has grown each year with the student members creating their own program based on their needs. This year`s sessions include a networking luncheon on "Effectively Communicating Research to The Non-Scientific Community" and a symposium on the "Basics of Gene Editing Using CRISPR Technology." We are pleased to support the careers of our up-and-coming new scientists. If you would like to support the Student Initiative, you can contribute to the Sponsor-a-Buddy program. It only costs $25, but it can make a huge difference in a student's career.

2024 WORLD CONGRESS AND 2025 IN VITRO BIOLOGY MEETING

Negotiations regarding the venue for the 2024 World Congress continued throughout the 2022 calendar year. The 2024 World Congress on In Vitro Biology will return to St. Louis, Missouri, which has been a very popular city with our members. The meeting will run from June 8–12, 2024, at the Hyatt St. Louis at The Arch.

As part of the transition of the 2021 In Vitro Biology Meeting into a virtual program meeting, the Business Office renegotiated a new agreement with the Hilton Norfolk the Main using the same terms as in 2023 to also hold our 2025 In Vitro Biology Meeting at their venue from June 7–10, 2025. This negotiation process allowed us to recoup significant funds charged as a cancellation fee for not holding the 2021 meeting. The Hilton is a beautiful location, and we are excited to be able to return there in a couple years.

MEMBERSHIP

Membership is greatly affected by attendance at our annual meetings and with the return to in-person meetings, SIVB membership has started to stabilize. While we did see a slight drop in SIVB's regular and Post-Doctoral membership, we are proactively looking to find ways to encourage the return of previous members, bring in new members, and retain current membership. The number of members who are taking advantage of the 2-year renewal option has continued to grow and many who did register for the meeting utilized the combination membership and meeting registration options provided for 2022. Non-member speakers from the 2022 meeting were invited to join at a discounted rate as were authors who published in the IVA and IVP journals. To address the need to engage and retain new members and younger members, the Business Office offered two webinars with presentations from **Arun K. Bhunia, BvSc, PhD**, on "Receptor-targeted next-generation bioengineered probiotics to improve gut health and prevent infectious disease" and **Jeffrey Staub, PhD**, on "Plastid engineering: an alternative strategy to the genetic improvements of plants." These webinars were produced by SIVB's staff for the membership along with help from **Ahmad Omar** and **Ian S. Curtis**. Offering these webinars as well as sharing the webinars produced by CAST for our members provides them with a benefit they can use, even if they are unable to attend the annual meeting.

While the organization works to encourage new membership, there is no one better suited to spreading the word about the benefits of being part of this Society than **YOU**. You can share your experiences and help your colleagues join through the Member-get-a-Member program. In this program, you can go to our website or email our office to recommend a new potential regular member. If that person joins, you would

be entered into a drawing for a gift card and the new member receives $10 off their membership dues for their first year. We also held a drawing during the 2022 meeting for members who renewed their membership by December 31, 2021, and are pleased to announce that the winners were: **Yasuhiro Tomooka**, who was awarded with free registration to the 2023 In Vitro Biology Meeting, and **Ian S. Curtis**, who received free 2023 membership. If your 2023 renewal was sent in by December 31, 2022, you could win membership in 2024 or registration to the 2024 World Congress on In Vitro Biology.

SIVB is grateful to our members who have stayed with the organization throughout their career and continue to be active in the organization even after they have retired from full time employment. In addition to participating as Officers and members of various committees, many find ways to give back to the Society both through personal contributions and estate planning, such as setting up gifts and/or endowments for the future. The SIVB thanks some of our extraordinary members who have made charitable gifts or estate contributions to the SIVB in 2022. We acknowledge **Delia Bethell**, **Barbara Doonan**, **Barbara and John Harbell**, **Robert H. and Gale Lawrence, Jr.**, **Dwight Tomes**, and **Raziel Hakim** for their exceptional generosity. To learn more about how you can make a charitable contribution to the SIVB, please contact the Business Office at michele@sivb.org.

Even if you aren't retiring, there are other ways you can give back to the SIVB. You can contribute $25 to the Fund for the Future when you renew your membership dues each year, support us through contributions made with your company via yourcause.com, or volunteer to support the organization on a Committee offering your time and expertise to help the organization grow stronger.

The Business Office also focused on projects for the SIVB Board of Directors and Committees. In 2022, some projects supported included: working with the Executive Committee to address a plagiarism issue with our logo, preparing SIVB's response to the Ukraine conflict and addressing specific membership concerns; assisting the Education and Student Award Committees to review and revise the bylaws to address the new focus of these committees; fulfilling board directives to complete updates to the website; working with the Publications Committee Chair and Social Engagement Committees on protocols for the *In Vitro Report* and Social Media postings; working with the Awards Committee to revise and advertise the deadline date for 2023 submissions; and addressing the addendum *for* the journal contracts to transform our Abstract Issue into a Proceedings.

The organization is sad to share new of the passing of long-time members **Bob V. Conger**, **Dominic Basile**, and **Linda B. Jacobsen**.

PUBLICATIONS

The Publications Department of the SIVB manages activities supporting the Society's print publications and online organizational presence. This department supports *In Vitro Cellular and Developmental Biology — Animal*, *In Vitro Cellular and Developmental Biology — Plant*, and the *In Vitro Report* newsletter plus maintains SIVB's website and monitors our presence on social media.

In March, we were informed by our Publishing Editor at Springer Nature that following a careful review of their growing program in Medicine and Life Sciences, the decision was made to move forward with reorganizing and restructuring day-to-day management of their journals into two main groups – Hybrid journal titles (such as ours) and fully Open Access journals. For Hybrid journals, they can now focus on growing our existing journals within the unique structure of hybrid and managing key relationships more directly with Editors and external subscribers. The changes are designed to make it easier for Publishing Editors to prioritize workloads because the goals will be clearer, and the teams can get closer to the strategy and be more focused on its successful delivery.

With our new Springer Nature publishing contracts, the focus has transitioned as content is mostly shared online with minimal print copies made for our members. The number of papers listed in a Table of Contents has become the gauge to the value of a publication. While we worked to exceed these budgets, we did not achieve the success we had hoped for, though with the workplace challenges that have occurred due to the ongoing pandemic, many publications have indicated a similar struggle. Editorial Manager, the online manuscript submission system used since our transition to Springer Nature, is monitored and updates are occasionally made to better address our journal's needs. During the June Publications Committee Meeting, it was learned that our journals will soon be transitioning to a new editorial review system designed by Springer Nature called SNAPP. A specific date for this transition has yet to be determined.

In June, Publications Committee discussed determining keywords for the organization that should drive website traffic to our site. These terms were then added to the SIVB website via alt-tags on pages so we could track their activity. While these keywords work best within the visible content of a webpage, this is the first step to improving the SEO and visibility of our website. They also discussed the continuing popularity of the Terminology page of our website and plans are being made to create an updated version of this document for the website and potentially for publication in both the *In Vitro — Animal* and *— Plant* journals as well.

The *In Vitro — Animal* journal's impact factor increased again in 2021 from 2.416 to 2.723, the highest it has been, and this moves the journal up into the 3rd level of all Developmental Biology journals for the first time. Submissions have begun to slow, though we did manage to publish a similar number of papers as in 2021. We need to publish greater numbers of articles to support our contract requirements and encourage our members to look to submit their research. **Tetsuji Okamoto** accepts suggestions for new special issue topics that would be of interest to our readers.

In Vitro — Plant has a healthy page flow even though the number of submissions decreased this year. The journal's impact factor rose from the 2020 level of 2.252 to 2.347 in 2021.

This is the highest Impact Factor we have seen for this publication. Due to the efforts of **David Songstad**, the journal met its paper budget for 2022 and issues continue healthy for the 2023 volume.

Both new and senior members of the SIVB are encouraged to submit their work to the *In Vitro — Animal* and *— Plant* journals whenever possible. The benefit is doubled as you can share research directly with colleagues at SIVB who understand the importance of your ressearch and, at the same time, support the journal and your Society.

Your meeting place when you aren't at the Annual Meeting is the *In Vitro Report*, SIVB`s online newsletter. Published 4 times a year, the *In Vitro Report*, is your connection to your colleagues, offering updates about your fellow members; information from various SIVB Officers, Committee Chairs and members of the organization; news and updates; and acknowledgements of SIVB Award Winners. This publication represents all our members, **including you**, and we encourage you to participate in it by submitting articles about news or items of interest in your field or sharing your news with the Editors-in-Chief **Michael Fay** and **Sylvia Mitchell**. We encourage you to provide updates of your accomplishments along with your picture so we can include it in the next Members News update. Every member's news is important! You can also reach the Editors by using the links found on the "Submissions" page (https://www.sivb.org/InVitroReport/) or contacting me at michele@sivb.org.

The 2023 In Vitro Biology Meeting website was released in August 2022 and returned the layout from Generate Press framework to a Divi WordPress platform. This platform is designed to be modern and mobile friendly allowing faster updates to the content. The WordPress design offers expandable session listings for the program, colorful exhibitor pages, links to hotel videos, social media links, and both top and bottom navigation options.

The Social Engagement Committee is extremely active creating content for the Society`s social media channels: FaceBook, LinkedIn, Twitter, Instagram, and YouTube. The team of **Christopher Bagley**, **Sarbesh Das Dangol**, **Anissa Belfetmi-Stone**, **Muneeb Hassan Hashmi**, **Joyce Van Eck** and **Rosaline Eke Emele** design content on recurring themes of interest to our members sharing highlights, awards, news, and other points of interest. The Business Office prepares posts about event deadlines and membership reminders including links to act. We share articles of scientific interest from our journals, by our members, and about our upcoming speakers. In addition, we are including "Shared-it" linking on all journal highlight postings which provide a readable, but not downloadable, version of an article to allow those clicking on it to view the content. We also distribute broadcast emails focused on our membership with reminders for upcoming deadlines, pending renewals, and urgent news of interest to them.

In 2022, an interview was recorded with Kan Wang, one of the two 2022 Lifetime Achievement Award Recipients, which the Business Office edited and made available on our YouTube channel (https://www.youtube.com/@societyforinvitrobiology1716). In addition, recordings from the Design of Experiments Workshop and interviews of a number of SIVB members from the 2022 meeting were released on our YouTube channel in 2023, so make sure to like, comment and subscribe to the content as it is released. We encourage you to follow us through your preferred social media outlet and share our posts: **@SIVBiology** for the organization, **#SIVB2023** for the 2023 In Vitro Biology Meeting in Norfolk; **#SIVB2024** for the 2024 World Congress on In Vitro Biology in St. Louis next year; **#SIVBIVAN** for *In Vitro — Animal*, **#SIVBIVPL** for *In Vitro — Plant*, and **#inVitroReportSIVB** for the SIVB Newsletter.

Marietta Wheaton Saunders, 1953 – 2023

New Beginnings Management, Inc. (NBM) has managed the SIVB's Business Office since 2004 with Marietta Wheaton Saunders at the helm of the organization as its President. While this report addresses activities and news from 2022, it is essential to also address Marietta's passing on February 27, 2023. Marietta Wheaton Saunders was the backbone of SIVB since 1992 when she started working as the Meetings Manager and was promoted to Managing Director of SIVB after only one year. She guided SIVB through some of the best and worst times the organization has faced and many of us do not know SIVB without her. She created NBM to support the SIVB and help them get through a difficult financial time, taking on much of that burden herself. With her passing, NBM continues to maintain the daily operations for the Society and, as of the writing of this report, I have been tasked by SIVB's Board of Directors to step into her very large shoes as Acting Managing Director. Joy Francis of NBM has stepped in as Chief Financial Officer, *ad interim* of SIVB to help the organization move forward while we address Marietta's loss.

On behalf of NBM, I would like to offer my heartfelt appreciation to all our members who have supported Marietta, myself, and NBM by volunteering their time to guide SIVB's future. I especially wish to thank the Executive Committee, Board of Directors, Committee Chairs, and Section Officers, who worked closely with Marietta over the years to navigate SIVB through its challenges and successes. These members are the heart of this organization, and this Society could not exist without their commitment to the organization, its mission, vision, and guiding principles. I am grateful to each of them for guiding SIVB into the future. Additionally, on behalf of NBM, I want to personally thank each of you for supporting Marietta and for recognizing the efforts to which the NBM team has gone to provide you with the best possible service.

If you have thoughts or suggestions regarding how to enhance or encourage the growth of the membership, please feel free to reach out to me at the Business Office directly by sending your suggestions to michele@sivb.org. My goal, like Marietta's, is to help SIVB continue to grow stronger each year. Together, I believe we can accomplish that goal.

MICHELE G. SCHULTZ
Acting Managing Director
michele@sivb.org

IN VITRO ANIMAL CELL SCIENCES SECTION

Kristina Martinez-Guryn In Vitro Animal Cell Sciences Section Chair

The **2022 In Vitro Biology Meeting** was a successful in-person meeting coordinated by a talented and hard-working team of individuals including the late **Marietta Wheaton Saunders** (Meeting Secretariat), **Michele Schultz** (Publications Manager), and the Program Committee: **Mae Ciancio** (Program Chair), **Kristina Martinez-Guryn** (IVACS Program Chair), **Maxwell Jones** (PB Program Chair), **M. Annie Saltarikos** (PB Sr. Co-Chair), **Ahmad Omar** (PB Jr. Co-Chair), **Brad L. Upham** (Education Chair), **Mubeen ul Hasan** (IVACS Student Co-Chair), and **Muneeb Hassan Hashmi** (PB Student Co-Chair).

The **Keynote Speaker** for the 2022 meeting was **Dr. Thomas Hartung**, a leader in the field of toxicology and alternative methods to animal testing. He is the Director of the Center for Alternatives to Animal Testing (CAAT) and inaugural holder of the Doerenkamp-Zbinden Endowed Chair in Evidence-based Toxicology in the Department of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health. Dr. Hartung was instrumental in accelerating the alternative methods validation process and facilitating a global regulatory harmonization in toxicity testing. Dr. Hartung has received numerous awards and is well recognized for his research into the use of toxicity pathways to predict developmental neurotoxicity. Dr. Hartung provided his keynote address on "Advancing Cell Culture to Meet Scientific and Societal Needs" during the opening ceremony on Sunday, June 5, 2022, which was excellent.

The meeting began with a workshop on Saturday June 4th, 2022, on "Design of Experiments". One plenary session was held for each day of the meeting, bringing experts in the field for both plant and animal sciences to share SIVB's knowledge and advances on topics entitled "Advanced Application of Site-Directed Nucleases," "Future Foods", and "Artificial Intelligence and Machine Learning in Plant and Animal Sciences." A joint symposium entitled "New Approaches to Vaccine Development" was also held to bridge the gap between two disciplines. In addition to these plenary sessions, there were additional IVACS-sponsored sessions on the topics of extracellular matrix and tissue engineering, cell imaging, organoid technology, single cell analysis techniques as well as the application of new technologies through academic, industry and regulatory agencies perspectives. Five IVACS contributed papers were presented as well as 6 interactive posters and 21 in-person poster presentations, 9 virtual posters, and 3 education high school student silent abstracts.

A major focus of SIVB is to create opportunities for students and young researchers, and therefore education symposia and workshops were organized by the Student Committee. There were also opportunities for competitive student & post-doctoral oral presentations and non-competitive student oral presentations. A student workshop "State-of-the-Art Cell Imaging Technologies" was offered during the 2022 meeting.

IVACS Oral Presentation Competition Winners

Megan Conking

Sepideh Mohammadhosseinpour

Larissa Marina Pereira Silva

IVACS selected three oral presentation competition finalists including **Larissa Marina Pereira Silva**, **Sepideh Mohammadhosseinpour**, and **Megan Conking**. The Student and Post-doctoral IVACS Oral Presentation Competition was moderated by **Addy Alt-Holland** and **Kolla Kristjansdottir**. Larissa from North Carolina State University received 1st place for her presentation on "A flavonoid-rich extract of moringa oleifera (moringaceae) leaf cultivated in Brazil inhibited inflammatory mediators in lipopolysaccharide-treated macrophages." Sepideh from Arkansas State University received 2nd place for her presentation "Assessing the apoptosis effect of prenylated stilbenoids combined with paclitaxel in triple-negative breast cancer cells." Megan from Florida Atlantic University received third place for her presentation "Habitat restoration and production of bioactive compounds from 3D sponge cell cultures." The student presenters did an excellent job and IVACS extends our congratulations to these outstanding students.

IVACS Contributed Papers included those from **Elizabeth H. Urban-Gedamke** from the Harbor Branch Oceanographic Institute, **Hansa Raj KC** from Arkansas State University, **Richard Heller** from the University of South Florida, **Zoe Zhu** from Tufts University School of Medicine, and **Lucy E. J. Lee** from the University of the Fraser Valley.

Special awards and recognitions were given to the following SIVB IVACS members and students. **Shirley A. Pomponi** was awarded the Lifetime Achievement Award. **Mae Ciancio** and **Kolla Kristjansdottir** were presented with the Fellow Award. **Brad Upham**, **Anissa Belftemi**, and **John Harbell** were presented with the Distinguished Service Award. The following student awards were also presented: 2022 Gordon Sato and Wally McKeehan Award to **Sepideh Mohammadhosseinpour**, 2022 Gordon Sato and Wally McKeehan Award to **Heather Kelly**, 2022 Joseph F. Morgan Award and Student Travel Award to **Katriana Van Woudenberg**, 2022 Honor B. Fell Award and Student Travel Award to **Jasmyn Hoeger**, 2022 Cellular Toxicology Award to **Hansa Raj KC**, 2022 Student Travel Award to **Mubeen Hasan**, and the 2022 Student Travel Award to **Keira Nakamura**.

IVACS recognizes the tireless efforts of the 2022 team: **Mae J. Ciancio** – Chair, **Kristina Martinez-Guryn** – Vice Chair Meeting Program, **Vivian Dayeh** – Vice Chair Membership, **Matt Desrosiers** – Secretary. IVACS recognizes the leadership and dedication of the Board of Directors in 2022: **Allan R. Wenck** –

President; **John W. Harbell** – Past-President; **Addy Alt-Holland** – President-Elect; **Pierluigi Barone** – Vice President; **Barbara Doonan** – Treasurer; **Sukhpreet Sandhu** – Secretary; **Michael J. Fay** – Publications Chair; **Wayne Parrott** – Public Policy Chair; **Michael Dame**, **Cynthia Goodman**, **Todd Jones**, **Kan Wang** – Members-at-Large. Our members also volunteer their time on behalf of the SIVB and support its future. We thank the Executive Committee, Board of Directors, Committee Chairs, and Section Officers. This Society could not exist without their support and commitment to the organization and its mission.

2023 In Vitro Biology Meeting, the Society for In Vitro Biology (SIVB) annual meeting is going to be an in-person event (#SIVB2023) and will be offered from June 10th to 14th, 2023 in Norfolk, VA. The meeting aims to bring together world's top academic and industry leaders to share latest research in emerging technologies, in vitro biology product development, organoids, fish and invertebrate cell culture, microbiome, as well as spatial and single cell genomics. The program committee is committed to providing an excellent scientific program and has put together sessions to facilitate collaboration and networking with key experts in the field of the microbiome, tissue engineering and organoids, and invertebrate systems.

Dr. Princess I. Imoukhuede, Hunter and Dorothy Simpson Endowed Chair and Professor in Bioengineering at the University of Washington, will be sharing a keynote address on "*Bioengineering: Realizing the Promise of Cell Signaling Control in Health and Disease*" during the opening ceremony on Sunday June 11th, 2023. Dr. Imoukhuede`s research focuses on understanding the development of new blood vessels in the context of vascular and cardiovascular health and also the roles of oxytocin in the context of obstetrics. Her successful research program and career achievements have been recognized through several awards including the Engineering Society 2021 Mid-Career Award, National Science Foundation CAREER Award, and the Young Innovator in Nanobiotechnology Award. We are thrilled to have Dr. Imoukhuede serve as the keynote speaker at SIVB 2023.

The SIVB 2023 meeting will be kicked off with workshops "Grow with the Flow: Advanced Flow Cytometry and Applications" and the "Design of Experiments (DoE) Workshop – Part II (Mixture Designs; R Statistical Software)" on Saturday June 10th. The Education Committee and students will be hosting a workshop called "Hands-on CRISPR Workshop Using Gene Editing State-of-the-Art Tool Kits." Four plenary sessions will be offered from 8–10 am on Sunday through Wednesday including "Diversity in Science", "Michael E. Horn Emerging Technologies Symposium: Research to Market — In Vitro Biology Product Development", "Microbiome — Basic Science to Application", and "Frontiers in Spatial and Single Cell Genomics." The In Vitro Animal and Cell Sciences section of SIVB is thrilled to offer a number of exciting sessions for SIVB 2023. IVACS sessions include those on organoid modeling, fish cell culture, invertebrate cell culture, chemoprevention, photobiomodulation, and in vitro assay design and development of in vivo prediction models.

We expect to have another outstanding showing at SIVB 2023 due to the tireless efforts of the meeting leadership and session conveners: **Addy Alt-Holland** (President), **Hong Luo** (Program Chair), **Kenneth Kandaras** (IVACS Program Chair), **Annie Saltarikos** (PB Program Chair), **Ahmad Omar** (PB Sr. Co-Chair), **Carlos Hernandez-Garcia** (PB Jr. Co-Chair), **Christina Yevtushenko** (PB Student Co-Chair), **Jasmyn M. Hoeger** (IVACS Student Co-Chair), **Brad Upham** (Education Chair), **Marietta Wheaton Saunders** (Meeting Secretariat), and **Michele Schultz** (Publications Manager). Special thanks to the 2022-2024 Board of Directors for their guidance and support including **Addy Alt-Holland** (President), **Allan R. Wenck** (Past President), **Michael Dame** (Vice President), **Pierluigi Barone** (President-Elect), **Mae Ciancio** (Secretary), **Barbara B. Doonan** (Treasurer), **Michael J. Fay** (Publications Chair), **Wayne Parrott** (Public Policy Chair), as well as **Cynthia Goodman**, **Kolla Kristjansdottir**, **Todd Jones**, and **Hong Luo** (Members-at-Large).

We would also like to acknowledge the **2022-2024 IVACS officers** including **Kristina Martinez-Guryn** (IVACS Chair), **Kenneth Kandaras** (IVACS Vice Chair – Meeting), **Vivian Dayeh** (Vice Chair – Membership), and **Deborah Esposito** (Secretary). IVACS would like to thank **Marietta Wheaton Saunders** (Managing Director), **Michele Schultz** (Publications Manager) and the entire staff of New Beginnings Management for their hard work, dedication, and flexibility in performing the daily operations of the Society for In Vitro Biology to make our annual conferences successful.

Future of IVACS. We understand the need for innovative research and discovery to meet the needs of the research community and public worldwide. IVACS is positioned to serve as a unique platform to engage the scientific community in multiple areas of research to harness discovery and innovation. By fostering active communication and collaborations among students and investigators in academics and industry, we can successfully tackle some of the most challenging issues facing our world.

Lastly, IVACS would like to offer our sincerest condolences to the colleagues, friends, and family of the late **Marietta Wheaton Saunders**. Marietta was the heart of SIVB and did an outstanding job getting the organization through very trying times with the recent pandemic that required transitioning from in-person to virtual and hybrid formats in 2020 and 2021 and then transitioning back to in-person for the 2022 meeting in San Diego. She also did an impeccable job over the years keeping everyone on task, coordinating with the program organizers, conveners, and speakers to always ensure successful SIVB conferences. This is a huge loss for the organization and Marietta will be greatly missed in the years to come.

KRISTINA MARTINEZ-GURYN
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PLANT BIOTECHNOLOGY SECTION

Jessica Rupp
Plant Biotechnology Section Chair

The 2022 In Vitro Biology Meeting was held in beautiful and sunny San Diego, California on June 4-7. It was great to be back together after several years of Covid-19-related restrictions and issues with travel, but those challenging times have allowed us to grow and change leading to increased activities held in a virtual format this past year.

This meeting aimed to bring together the world's top academic and industry leaders to share their latest research in emerging technologies, genome editing, genomics, organoids, synthetic biology, in vitro technologies, and other fields. As always, SIVB holds a unique place among societies as we bridge the plant and animal world. We owe a great deal of thanks to our Plant Biotechnology Planning Committee of **Dr. Max Jones**, **Dr. Annie Saltarikos**, and **Dr. Ahmad Omar** for the fabulous work they did to ensure a strong, vibrant, and relevant Plant Program.

The meeting kicked off with a Saturday evening panel regarding Design of Experiments, an extremely relevant and popular topic. One plenary session was held each day of the meeting, bringing experts in the field for both plant and animal sciences to share the knowledge and advances on topics entitled "Advanced Application of Site-Directed Nucleases," "Michael E. Horn Emerging Technologies Symposium on Future Foods", and "Artificial Intelligence and Machine Learning in Plant and Animal Sciences." A joint symposium entitled "New Approaches to Vaccine Development" has also been organized to bridge the gap between the two disciplines. In addition to the four plenary sessions, there were numerous concurrent symposia throughout the day. Foci included "Frontiers in Gene Editing for Crop Improvement", "Advances in Double Haploid Technology", "Plant Growth Regulators", "Alternative Approaches to Plastid Engineering", "Advances in Cannabis Biotechnology", and "In Vitro Technologies for Plant Conservation and Gene Banking." **Dr. Thomas Hartung**, a leader in toxicology and alternative methods to animal testing, provided the Keynote address on "Advancing Cell Culture to Meet Scientific and Societal Needs" during the Opening Ceremony on Sunday, June 5, 2022. Interactive poster and oral presentations provided excellent opportunities to visit other scientists.

SIVB is always striving to create meaningful opportunities for students and young researchers. To that end, educational symposia, luncheons, and workshops were organized by our very engaged student committee. There are opportunities for competitive student and post-doctoral oral presentations and non-competitive student oral presentations. A student workshop "State-of-the-Art Cell Imaging Technologies" was held on Sunday evening, June 5. Students also held a student networking luncheon focused on improving grantsmanship skills.

SIVB has a strong emphasis on supporting the next generation of scientists, therefore we honored our student awardees. The 2022 Student Award winners were as follows: **Dominic Dharwadker**, the Wilton E. Earle and Student Travel Award; **Gaurav Gajurel**, the John S. Song Award and Student Travel Award; **Eleanor Brant**, the Philip R. White Award; **David May**, Student Travel Award; **Peter James Icalia Gann**, Student Travel Award, and **Muneeb Hassan Hashmi**, Student Travel Award.

Plant Biotechnology Student Oral Presentation Competition Winners

Eleanor Brant

Peter James I. Gann

David May

Plant Biotechnology Post-Doc Oral Presentation Competition Winner

Viet Dang Cao

Our student and post-doc competitions were excellent in San Diego, leading to a tough job for judges **Jeff Beringer** (Inari Agriculture, USA), **Max Jones** (University of Guelph, Canada), **Satya Swathi Nadakuduti** (University of Florida, USA) and **Uyen Chao Chu** (Corteva Agriscience, USA). The judges recognized **Eleanor Brant** (University of Florida, USA) with the 1st place award, **Peter James I. Gann** (University of Arkansas, USA) with the 2nd place award, and **David May** (University of Florida, USA) with the 3rd place award. For our post-doc competition, our expert panel of judges consisted of **Pal Maliga**, Rutgers University, **Carlos M. Hernandez-Garcia**, CTC Gemonics, and **Terrence Frett**, Sun World Innovations. The judges recognized **Viet Dang Cao** (University of Florida, USA) with the 1st place award for his presentation on Field Evaluation of Metabolically Engineered Energycane for Hyperaccumulation of Triacylglycerol. All competition winners were presented with a certificate and a cash award. We continue to encourage all Plant Biotechnology graduate student and Post-Doctoral candidates to consider this as an opportunity to develop their presentation skills at future meetings.

The Society was honored to show our appreciation to our other award winners, **Dr. J. Pon Samuel** and **Dr. Maria Jenderek**, who were recipients of the Fellow Award. **Dr. Kan Wang** received the 2022 Lifetime Achievement Award. Distinguished Service Awards were given to **Ian Scott Curtis**, Consultant, **Ahmad Al-Sayed Omar**, University of Florida, **Christopher Bagley**, Inari, **Sadanand A. Dhekney**, University of Maryland, Eastern Shore, **Sukhpreet Sandhu**, HM. Clause, and **Kan Wang**, Iowa State University.

On behalf of the officers of the Plant Biotechnology Section, I thank all members who have contributed their time and effort to make 2022 a successful year and I look forward to what is to come next for SIVB Plant Biotechnology Section at our next meeting in Norfolk, VA, June 10-14, 2023.

JESSICA RUPP
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 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; **Cynthia L. Goodman**, CryoCrate LLC, **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 and Global Biological Standards Institute (GBSI) Cell Authentication; **J. Denry Sato**, Manazar Project Foundation, and **Guy Smagghe**, Ghent University, Belgium.

John W. Harbell, PhD

The History Society and Records History Committee nominated and supported the 2023 Lifetime Achievement Award for **John W. Harbell, PhD**, President, JHarbell Consulting LLC, Dallas, Texas and Adjunct Professor, Department of Dermatology, University of Texas Southwestern, Texas. Dr. Harbell was honored for his significant contributions to the development of bioassays for cellular toxicity and mutagenicity to validate medical devices, pharmaceutical and cosmetic products, and to assess regulatory compliance. A respected member of the national and internationally scientific community, he is known for his scientific and policy contributions to in vitro alternatives to animal testing.

Dr. Harbell's scientific and pioneering contributions include: leading the international pre-validation effort for the validation of the EpiOcular Eye Irritation Assay for the Validation of Alternative Methods; developing a system for determining the depth of tissue injury in Bovine Corneal Opacity and Permeability Assay; developing in vitro bioassays programs to evaluate toxicology, efficacy and regulatory compliance for the pharmaceutical and cosmetic industries; establishing 60 carcinoma and sarcoma cell lines to test pharmaceutical chemotherapeutic sensitivity and drug interactions; developing vitro toxicology methods and modernizing risk assessment programs for national and international pharmaceutical and cosmetic product registration; developing a Good Laboratory Practice (GLP) compliant cell and immunogenicity system studies for medical product process validation and characterization of implantable medical materials. The Lifetime Achievement Award for Dr. Harbell was generously funded by the International Foundation for Ethicical Research and Alternatives Research & Development Foundation.

Gordana Vunjak-Novakovic, PhD, University and Mikati Foundation Professor of Biomedical Engineering & Medical Sciences Laboratory for Stem Cells and Tissue Engineering, Columbia University, was cast in Tesla Nation playing herself. Tesla Nation is a documentary, directed by Želijko Mirković, about the history of Serbian immigration to the USA.

Robert Auerbach, PhD, Emeritus Professor University of Wisconsin-Madison and "father of the UW Odessey Project (https://odyssey.wisc.edu/), received the Outstanding Individual Philanthropist award from the Association of Fundraising Professional-Greater Madison Chapter. The oral history of Dr Auberbach's expertise in music and his lifetime of scientific research and developmental biology in the UW Department of Zoology is part of the UW-Madison Oral History Program (http://digital.library.wisc.edu/1793/68773).

The History Society recognizes the passing of **Linda Jacobsen, PhD** (1946-2022). Dr. Jacobsen served as Director, Cell Culture Laboratory, Purdue Cancer Center and Scientist/ Research Manager, Roche Diagnostic. A member of the TCA/SIVB since 1977, she was Secretary, Vertebrate Section Chair, Constitution and Bylaws Committee Chair, and Laboratory Materials and Biosafety Committee. Dr. Jacobsen's research career included expertise in primary cell culture, cell banking for cGMP applications and transfection of cells for protein expression (https://www.researchgate.net/scientific-contributions/ Linda-B-Jacobsen-9515466).

The Society was notified that **Marietta Wheaton Saunders**, Congress Secretariat and SIVB Managing Director, passed away unexpectedly on February 27, 2023. Marietta's first meeting and introduction to Society members was the 1992 TCA meeting in Silver Springs, MD, and the challenges of a financially unstable business office. She had amazing financial, executive and organizational skills that kept the impact of the many internal challenges, disruptions, technology modernizations, publication changes and the evolution of the society sections minimized.

Marietta's career spanned many major changes to the Society to include: 1994 name change from the Tissue Culture Association (TCA) to the Society for In Vitro Biology (SIVB);

2000 World Congress San Diego: Marietta Wheaton Saunders, Dr. Sandra Schneider, and Nobel Laureate, Dr. Stanley Pruisner.

University of Maryland Library administration and cataloging of all TCA and SIVB historical and scientific records; facilitating technology changes and transfer of SIVB Journals to Springer, negotiating terms and controlling costs.

Marietta was instrumental in the overwhelming scientific and financial success of the 2000 World Congress in San Diego, CA. She supported the World Congress Chair/Co-Chairs and President managing details for the Distinguished Plenary Speaker and Nobel Laureate, Dr. Stanley Prusiner, Distinguished Speaker, Dr. Peter Raven; 3 Japanese tissue culture societies; travel and visas for scientists from 30 countries, in addition to all details for vendors, sponsors, scientists and speakers programs.

Marietta was "efficient, organized, elegant, a model of professionalism, fair, balanced and non-political. A good friend to us all, her death is a great loss for the Society for In Vitro Biology".

SANDRA L. SCHNEIDER
History and Records Committee Chair
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STANDING COMMITTEES

AWARDS

Dwight Tomes
Awards Chair

The Awards Committee had multiple meetings during 2022 to choose award winners for the Lifetime Achievement Award(s) and Fellow Awards for the Plant and Animal Sections. The individual members who participated for each meeting are noted since these differed by meeting date and the specific award being discussed. A zoom meeting was held 02/23/22 (11:00 AM–12:00 PM EST) with committee members Ian Curtis, Vivian Dayeh Maria Jenderek, and Marietta Saunders, Managing Director, to discuss the Lifetime Achievement (LTA) Awards for 2022. Those attending voted unanimously recommended Kan Wang and Shirley Pomponi for the LTA awards for the Plant and Animal sections respectively. The IVACS Fellow Award Selection Committee met on 02/23/22 with Maria Jenderek, Ian Curtis, Vivian Dayeh and Marietta Saunders attending. The committee voted unanimously to recommend the Fellow awards to Mae Ciancio and Kolbrun (Kolla) Kristjansdottir. The Plant Fellow Awards selection committee met on February 25 at 4 PM with Allan Wenck, Kan Wang, Addy Alt-Holland (observer), Dwight Tomes, John Finer and Marietta Saunders attending. This committee voted unanimously to approve Maria Jenderek and J. Pon Samuels for the Fellow Award.

Kan Wang

Lifetime Achievement Award

Kan Wang

Dr. Kan Wang is an internationally recognized research leader in plant transformation who made ground-breaking research accessible to public sector researchers around the world. She is also an NSF Program Director and Global Professor of Biotechnology at Iowa State University. *Agrobacterium tumefaciens* DNA transfer in plants owes its broad acceptance in the plant community in large part due Dr. Wang`s contributions in understanding the molecular mechanism of gene transfer in plants and making it available to public institutions around the world in the Transformation Facility has had global impact. In addition, an extensive network of research collaborations arose that stimulated original research in corn and soybeans. Serving as a Program Director of the Plant Genome Research Program at NSF and Associate Editor for five journals rounded out her contributions to the Scientific Community. At ISU, she was Director of Graduate Education for an interdepartmental Plant Biology major, an NSF-funded program for undergraduates—where she recruited undergraduate students from Midwest non-research colleges and historic black colleges. Over 95% of these student interns have continued further careers in professional or scientific professions. In addition, she mentored numerous graduate students, postdoctoral fellows, served on graduate student committees, and 18 international visiting scholars. She has been an active member of SIVB, serving as Co-chair and Chair of the Program Committee from 2009–2011, Awards Chair from 2014–2016, and Member-at-Large of the SIVB Board of Directors from 2018–2022.

Shirley A. Pomponi

Shirley A. Pomponi

Dr. Shirley A. Pomponi, a marine scientist and aquanaut, is internationally recognized for her contributions to marine biotechnology and oceanographic policy. She has developed immortalized invertebrate marine sponge cell lines, conducted marine drug discovery research, and also led programs supporting coral reef restoration. She serves as Research Professor Florida Atlantic University; Special Professor, Marine Biotechnology, Wageningen University, Netherlands; and Associate Director, Cooperative Institute for Ocean Exploration, Research and Technology, Ft. Pierce, Florida. She is President & CEO, Harbor Branch Oceanography Institute, Florida Atlantic University, and Consultant/Group Leader, SeaPharm, Inc., Fort Pierce, FL., where she has led the collection of 30,000 marine invertebrate and algae specimens, identified mechanisms of coral skeleton bioerosion, developed the first marine invertebrate sponge cell line, pioneered methods to immortalize marine invertebrate cells lines to study test and provide pharmaceutical compounds from the sea. She has developed techniques for isolating bioactive metabolites from sponge cell lines as antitumor, anti-inflammatory, antifungal, antibacterial compounds, and applied hybridoma technology to stimulate expression of natural metabolite products. Her research has produced numerous peer reviewed publications, patented marine invertebrate cell lines and served as an ad hoc reviewer for Frontiers in Marine Science, National Science Foundation, National Oceanic and Atmospheric Administration (NOAA), European Union, Schmidt Ocean Institute, Scientific Reports, Peer J, Invertebrate Biology and Coral Reefs. Her awards include National Academy of Inventors, Women Divers Hall of Fame, Champion of the Oceans, Mother Xavier Award Leadership in

Ocean and Coastal Research, Florida Atlantic University Researcher of the Year, and Iron Arrow Honor Society. She has served as a reviewing editor of *In Vitro — Animal*, Program Committee, Chair/Co-Chair World Congress, In Vitro Biology Invertebrate Section. She is a Fellow Invertebrate Biology and received a SIVB Senior Investigator Award (Marine Comparative Biology). Her research work has resulted in 42 patents in the area of medically important bioactive compounds. She was inducted into the 2021 National Academy of Inventors, Researcher of the Year Award, Florida Atlantic University, The Mother Xavier Award. She has over 133 papers in peer reviewed journals and has received grants amounting to over 30 million dollars including European Union Horizon 2020 Program ("$11 million) for preservation and sustainability of deep-sea sponge ground eco systems. She has been active in undergraduate and graduate student education and has led a unique program in the development of cell lines and novel pharmaceuticals from marine invertebrates.

Fellow Awards

Mae Ciancio

Mae Ciancio

Dr. Mae Ciancio is an Associate Professor and Program Coordinator of the Biomedical Sciences Program at the College of Graduate Studies, Midwestern University (MWU), Illinois. Her basic science research projects focus on: 1) prevention of diet-induced obesity by voluntary exercise, with emphasis on the role of heat shock protein 70 (Hsp70), macrophage polarization, nutrient transport, and the intestinal microbiota; 2) Hsp70-mediated protection against Chlamydia muridarum-induced pathology in the urogenital tract; and 3) the pathogenesis of oral cancer. Mae has received extramural and intramural grant support from MWU, foundation and federal sources. Dr. Ciancio authored and co-authored 22 peer reviewed publications in scientific journals and published over 70 abstracts in peer reviewed conference proceedings, non-peer reviewed publications, and posters. Mae was awarded Tenure at MWU in 2014, where she serves as a course director and instructor of multiple courses and workshops and as Chair and/or member of multiple University-wide committees since 2008. Dr. Ciancio has a strong record of service to the SIVB since joining the Society in 2011. She has been an active contributor to the success of the Society meetings in general, and specifically for In Vitro Animal Cell Sciences section. Mae served as a convener of five symposia on the human microbiome and microRNA (from 2013) and contributed to students at all levels of their careers by acting as a panelist in SIVB's student activities, as a judge in the IVACS Student and Post-doc Oral Presentation Competition, and as a reviewer at student poster presentations (from 2012). She was elected as the Program Co-Chair of the IVACS section (2018–2020), served as the Chair of the IVACS section (2020–2022) and served as the 2022 SIVB Meeting Chair. She assumed the position of the Secretary of the SIVB Board of Directors in the 2022–2024 term. Mae serves as a reviewer for multiple professional journals, including SIVB's *In Vitro Cellular and Developmental Biology — Animal*.

Kolbrun (Kolla) Kristjansdottir

Kolbrun (Kolla) Kristjansdottir

Dr. Kolla Kristjansdottir has made major contributions to the IVACS and SIVB through her teaching and scientific research. Kolla has been an active member of the SIVB for ten years in which her service to the Society has been considerable. She has co-convened seven IVACS symposia (2013 to 2021) and has been instrumental in organizing and helping to judge the IVACS student/post-doctoral Oral Presentation Competition for several years. Kolla was elected IVACS Co-chair for Membership (2015–2018) and Section Chair. She joined the faculty of the Biomedical Sciences Program, College of Health Sciences, Midwestern University, Downers Grove, IL in 2012. Kolla was promoted to Associate Professor in 2017 (with tenure) and then promoted to Associate Program Director of the Precision Medicine Program, College of Graduate Studies, in 2019. She has a very successful and diverse research program with an area focused on understanding the ex vivo culture, genetic and topographical (external substrate) factors guiding axonal outgrowth from dorsal root ganglia and a second area focusing on the role of NPM1 (NPM1 histone chaperone) neuroblastoma (brain cancer). Kolla completed her BS (1997) and Masters (1999) degrees at the University of Iceland (Reykjavik, Iceland), and received her PhD from Duke University in 2005. She completed post-doctoral training at the University of Chicago (2005–2011).

Maria M. Jenderek

Maria M. Jenderek

Dr. Jenderek began her career at the Research Institute of Vegetable Crops, Skierniewice, Poland, as Res. Assistant, Res. Associate, Res. Scientist, and eventually, as the Vice-Head of Genetics and Breeding Department. Dr. Jenderek spent 10 years as a Senior Researcher and Manager of a virus-free tissue-culture laboratory, developing fertility restoration and true seed for garlic at Basic Vegetable Products, Hanford, CA. Restoring fertility to garlic has had a significant economic impact on the garlic industry; it allows breeding and planting garlic with virus-free seed rather than cloves. During this time, Dr. Jenderek managed a tissue culture lab that produced 0.5 million starts of virus-free planting material via meristem culture. This process increased bulb yield >5-fold. In 1998, Dr. Jenderek became the Horticulturalist-Curator, Lead Scientist at the USDA-ARS, National Arid Land Plant Genetics Resources Unit, Parlier, CA for 8 years. She expanded the plant collections and further examined fertility restoration in the garlic accessions. As an Adjunct Assistant Professor at California State University, she and her associates developed the first genetic linkage map in *Allium sativum* L. During this time, she also established a micropropagation system for *Hibiscus syriacus* and H rosa-sinensis, and a regeneration method from callus. Since 2006, Dr. Jenderek has been the Plant Physiologist for clonal plant cryopreservation at the USDA-ARS, National Laboratory for Genetic Resources Preservation, Fort Collins, CO where she expanded the cryopreservation security backup of NPGS clonally propagated plants from "8% to 18% of the clonal accessions. She

also improved methods and introduced cryopreservation of additional clonal crops: banana, pineapple, sweet potato. Dr. Jenderek greatly improved the cryostorage of dormant buds. She developed pretreatment methods for dormant buds (DBs) that increased post-LNV viability for selected woody plant species. This allowed the lab to apply DB cryopreservation to *Juglans cinerea*, *Pyrus*, *Ribes* and some *Prunus* species (apricot and plum). Currently the lab is cryopreserving DBs of P. avium on a pilot scale, testing the method, before cryo-processing the entire sweet cherry collection from the Germplasm Repository at Davis, CA. Dr. Jenderek mentored several undergraduate students and a graduate student from Colorado State University on cryopreservation methods and viability improvement of dormant buds that led to the student's doctoral dissertation. She has published 42 peer-reviewed papers and four book chapters, as well as over 100 meeting proceedings and abstracts. Dr. Jenderek studied at the University of Agriculture, Kraków, Poland for her BS, MS (Engineering in Horticulture, Horticulture), and PhD (1979 Plant Breeding and Genetics). Dr. Jenderek has been very active in SIVB for over 30 years, presenting papers, organizing symposia, and moderating sessions. Maria is well known for her willingness to contribute to SIVB activities. Since 2012, she has been a member of the Publications Committee and is also currently an Associate Editor for *In Vitro — Plant*. She chaired the Awards Committee 2016–2022 and was honored with Distinguished Service Awards in 2019 and 2021.

J. Pon Samuel

Pon began his career as a lecturer at Madras Christian College, Madras University, India, teaching several courses, introducing a plant tissue culture course, and starting a tissue culture laboratory. He identified specialized air passages in Liliaceae and supervised several graduate students during his tenure. Pon joined Dow Agrosciences in 1999 as a cell biologist where he helped develop and advance maize, soybean, and cotton including Corteva's Enlist E3™ soybeans, planted on more than a third of US soybean acres last year. Pon collaborated with an external partner to develop the BY2-CFPS system currently licensed to LenioBio and distributed by Millipore-Sigma. Pon was also a key contributor in licensing a proprietary genome editing tool to industrial competitors.

J. Pon Samuel

He organized three NSF-sponsored workshops with Morgan State University, teaching students in various scientific areas and technical training. Pon was a Visiting Scientist at Purdue University's Bindley Bioscience and Birck Nanotechnology Center. He developed new enabling technologies using single plant cells and functionalized nanocarriers for molecular delivery into plants. Concurrently, Pon is a mentor for doctoral students working on the team. Pon has been active in the SIVB for 30 years starting when he first joined as a student in 1992 and has continued in planning the Society's annual meetings and organizing plenary and PB sessions. Pon has served as the PBS Program Chair and received the 2018 Distinguished Scientist Award. Pon has organized and run full-day workshops on flow cytometry, a continually advancing subject relevant to PB and IVACS section members, starting in 2017. Pon organized a 2022 plenary session on vaccines. Pon has also been active in securing funding for the Society over the years and is active in recruiting new members.

Pamela Weathers
Student Affairs Chair

STUDENT AWARDS

The evaluating committee this year consisted of **Pamela Weathers** (Chair), **Vivian Dayeh**, **Piero Barone**, **Raj Deepika Chauhan**, and **Cindy Goodman**. The SIVB Student Award Program provides recognition and financial support for students who have contributed and made outstanding achievements in the field of in vitro biology.

The following awards were presented at the 2022 meeting. The **Philip R. White Award** was given to **Eleanor Jane Brant**, University of Florida, Gainesville, FL for "Highly conserved sgRNA target sequences support Cas9-mediated mutagenesis of LIGULELESS1 in both sorghum and sugarcane." The **Wilton R. Earle** and a **Travel Award** went to **Dominic Dharwadker**, University of Arkansas Fayetteville, AR for "Targeted mutagenesis of vacuolar H+ translocating pyrophosphatase (V-PPase) promoter limits sucrose formation and disturbs cytosolic pH during germination in Rice." The **Joseph F. Morgan** and a **Travel Award** were given to **Katriana Van Woudenberg**, University of the Fraser Valley, Abbotsford BC, CANADA. for "Investigation of Endocytic Mechanisms of Lipid Nanoparticles (LNP-siRNA systems) into Rainbow Trout Fish Cells in Vitro." The **Cellular Toxicology Award** was presented to **Hansa Raj KC**, Arkansas State University, Jonesboro, AR for "Antimicrobial Studies of 1,3-Diphenylpyrazole-derived Anilines Against Methicillin-resistant *Staphylococcus aureus*." The **Hope E. Hopps** and a **Travel Award** were given to **Peter James Icalia Gann**, University of Arkansas, Fayetteville, AR for "Deletion in the GATA promoter element of vacuolar H+ translocating pyrophosphatase (V-PPase) by CRISPR/Cas9 reduces chalkiness in Rice." The **Honor B. Fell** and a **Travel Award** were presented to **Jasmyn M. Hoeger**, University of Dubuque and Tri-Vet Associates, Dyersville, IA for "Novel Mammalian Fibroblast Cell Culture Media Technique for Ultraviolet Cell Reduction." The **John S. Song Award** was given to **Gaurav Gajurel**, Arkansas State University, Jonesboro, AR for "Comparative Assessment of Antioxidant Activity of Prenylated Stilbenoid-Rich Extracts from Elicited Hairy Root Cultures of Three Different Cultivars of Peanut." Two **Gordon Sato and Wally McKeehan Awards** were presented to **Heather Kelly,** University of the Fraser Valley, Abbotsford BC, CANADA for "The Investigation of LNP-siRNA Formulations for Rainbow Trout Fish Cell Lines Through the Examination of Cellular Uptake and Reporter Gene Knockdown in Vitro"; and to **Sepideh Mohammadhosseinpour**, Arkansas State University, Jonesboro, AR for "Assessing the apoptosis effect of prenylated stilbenoids combined with paclitaxel in triple-negative breast cancer cells." Additional **SIVB Student Travel Awards** also were granted to **Mubeen Hasan**, Nigde Omer Halisdemir University, Nigde, Turkey, for "The investigation of SNP in SOCS2 gene associated with mastitis resistance, milk composition, and quality in Awassi sheep"; to **Muneeb Hassan Hashmi**, University of Siegen and Nigde Omer Halisdemir University, Germany for "Knock-down of Vital Gene(s) of *Tuta*

absoluta (Meyrick) (Lepidoptera: Gelechiidae) Using in Planta RNAi"; to **David May**, University of Florida, Gainesville, FL for "Efficient, Multi-allelic Editing for the Genetic Improvement of Bahiagrass (*Paspalum notatum Flüggé*)"; and to **Keira Nakamura**, University of California, San Francisco, CA for "Mapping Interneuron Migration During Late Neurodevelopment in the Piglet Brain."

Certificates were presented at the SIVB June 2022 Business Meeting to honor these exceptional students.

DWIGHT T. TOMES
Awards Committee Chair
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PAMELA J. WEATHERS
Student Awards Committee Chair
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CONSTITUTION AND BYLAWS

Michael Kane
Constitution and Bylaws Chair

The SIVB Constitution and Bylaws Committee serves to review all requests by the Board of Directors for amendments to the Constitution or Bylaws of the Society. The 2022 committee members included **Michael Kane** (Chair), **Addy Alt-Holland**, **Esther Uchendu**, **Sylvia Mitchell**, and **John Harbell**.

In 2022, the SIVB Constitution and Bylaws Committee was requested by the SIVB Board of Directors to review a proposed revision to the description for the Education Committee in section 3, C 1,e of the Bylaws. These revisions were submitted by Brad Upham, Education Committee Chair. Key changes in the revised description were:

- Including the Ad Hoc Student/Post Doc Committee Co-Chairs become official members of the Education Committee, as many of the educational activities and resources are directed to the students and provide another significant layer of SIVB's long standing tradition of mentoring students and providing professional development opportunities for them.
- Confirming that the Education Chair will oversee the Student/Post Doc Committee Co-Chairs in organizing their program at the SIVB Annual Meeting.

The proposed revision to the Education Committee description read as follows:

The Education Committee shall consist of an elected Chair, the two elected Student and Post-Doc Affairs Committee Chairs, plus appointed members. It is charged with furthering the educational goals and activities of the SOCIETY which may include both in-person and web-based educational activities. The Chair will oversee the Student Program at the Annual Meeting and ad hoc sub-committees created by the Education Committee to address specific educational needs of SIVB.

The Constitution and Bylaws Committee determined that the proposed revisions would not conflict with the language in either the Constitution or Bylaws. In December 2022, the proposed revisions were forwarded to the SIVB Board of Directors and approved following discussion.

Should you wish to suggest improvements to our governing documents or volunteer to assist in preparing recommendations, you may reach out to the Committee Chair with your thoughts.

MICHAEL KANE
Constitutions and Bylaws Committee Chair
mkane92@gmail.com

DEVELOPMENT

Michael K. Dame
Development Chair

The Development Committee, chaired by Piero Barone, facilitated support for the 2022 In Vitro Biology Meeting and SIVB totaling $150,852, a notable 29% increase from the previously successful 2021 year. This was made possible through the substantial contributions from our partners in industry, non-profits, and universities ($81,752; 54%), including support for the Lifetime Achievement Awards ($17,500; 12%); grants from the NSF Grant No. 2220889, Regeneron Corporation, and USDA-NIFA ($27,500; 18%); and personal donations from the SIVB membership ($24,100; 16%). We thank the below supporters and members for their generous support, making the 2022 fundraising campaign, and our subsequent annual meeting, a resounding success.

Industry/non-profit/university supporters include: **Ball Horticultural Company**, **BASF Agricultural Solutions Seed US LLC**, **Bayer AG, Bayer CropScience**, **Cibus, Corning**, **Corteva Agrisciences**, **CTC Genomics**, **Donald Danforth Plant Science Center**, **Harbor Branch Oceanographic Institute Foundation**, **Harbor Branch Oceanographic Institute**, **Inari Agriculture**, **International Foundation for Ethical Research**, **Iowa State University**, **Midwestern University-College of Graduate Studies**, **MilliporeSigma**, **National Anti-Vivisection Society**, **Ohalo Genetics**, **Pairwise**, **Plastomics**, and **Syngenta**.

SIVB member donors include **Barbara B. Doonan**, **Barbara and John Harbell**, **Robert H. and Gale Lawrence. Jr.**, **Dwight Tomes**, **Todd Jones**, **Michael J. Fay**, **Raziel S. Hakim**, **Kolbrun Kristjansdottir**, **Barbara M. Reed**, **Michael K. Dame**, **and Maria Jenderek**.

We would like to thank the following committee members for their service: **Addy Alt-Holland** (Tufts University), **Eudald Illa Berenguer** (University of Georgia), **Mae Ciancio** (Midwestern University), **Vivian Dayeh** (University of Waterloo), **Michael Fay** (Midwestern University), **John Harbell** (JHarbell Consulting), **Carlos Hernandez-Garcia** (CTC Genomics), **Jasmyn Hoeger** (The University of Iowa), **Ken Kandaras** (International Foundation for Ethical Research), **Kolla Kristjansdottir** (Midwestern University), **Hong Luo** (Clemson University), **Annie Saltarikos** (Bayer CropScience), **J. Pon Samuel** (Corteva Agricscience), **Sukhpreet Sandhu** (HM. Clause), **Brad Upham** (Michigan State University), **Veena Veena** (Donald Danforth Plant Science Center), **Allan Wenck** (Syngenta Crop Protection), **Christina Yevtushenko** (McGill University), and **Margaret**

Young (Elizabeth State University). We offer special thanks to **Piero Barone** (Corteva Agriscience), **Raj Deepika Chauhan** (Pairwise), and **Ahmad Omar** (University of Florida), for their continuous and dedicated efforts.

Finally, we extend our deepest gratitude to our dearly departed **Marietta Wheaton Saunders** for her devoted and enthusiastic efforts to drive the fundraising initiatives of SIVB.

MICHAEL K. DAME
Development Committee Chair
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EDUCATION

Brad L. Upham
Education Chair

The 2022–2023 Education Committee was chaired by **Brad Upham**, Michigan State University, and was comprised of the following members: **Osameh Atiya**; **Piero Barone**, Corteva Agriscience; **Daniel J. Barnes**, Mississippi State University; **Raj Deepika Chauhan**, Pairwise; **Mae Cianco,** Midwestern University; **Rakhi Chaturvedi**, Indian Institute of Technology Guwahati; **Yinghui Dan**, Virginia Polytechnic Institute and State University; **Vivian Dayeh**, University of Waterloo; **Cindy Goodman**, USDA, ARS, BCIRL; **Addy Alt-Holland**, Tufts University; **Michael E. Kane**, University of Florida; **Sylvia Adjoa Mitchell**, University of the West Indies; **Ahmad Omar**, University of Florida; **Alperen Ozturk**, Omer Halisdemir University; **Valerie C. Pence**, Center for Conservation and Research of Endangered Wildlife Cincinnati Zoo & Botanical Garden; **Terry Riss**, Promega Corp.; **Jessica L. Rupp**, Kansas State University; **J. Denry Sato,** The Manzanar Project; **Carol M. Stiff**, Kitchen Culture Kits, Inc.; **Pamela Weathers**, Worcester Polytechnic Institute; **Allan Wenck**, Syngenta; and **Margaret M. Young**, Elizabeth City State University. The 2023 program student Co-chairs elected during the 2022 Student and Education Committees meeting are: **Christina Yevtushenko**, PB Student Co-Chair, and **Jasmyn Hoeger**, IVACS Student Co-Chair.

The 2022 Student Program was organized by the 2021–2022 student Chairs, **Muneeb ul Hasan** and **Mubeen Hassan Hasmi** and Education Committee Chair, **Brad Upham.** The program comprised of a workshop titled, "State-of-the-Art Cell Imaging Technologies", a student networking luncheon on "Research Proposal and Grant Writing", and a non-competitive oral presentation session. The workshop began with a 15 min presentation on the history of microscopy ranging from the early simple compound microscope to an overview of the latest imaging technologies. The students then visited two of our exhibitor booths, Agilent and Etaluma, where they learned about their latest in cell imaging technologies. Students were given hands-on experiences with their instruments. We had a competition for the "Most Interesting" specimen using the Etaluma live imaging instrument. Etaluma granted the award to Muneeb ul Hasan , which was a free ticket to the "Ships of the Seven Seas, Tuesday Evening at the Maritime Museum". Four students (J. Hoeger, C. Swilley, M. Qiande and B. Senfi) presented their science at the non-competitive student oral presentation education symposium.

The Student and Education Committee Meeting was held on Tuesday during the Annual Meeting and included discussion on the 2023 Program and the election of the 2022 Student Co-Chairs. We also addressed goals for the Education Committee for the 2022-2023.

Mubeen Hassan Hashmi
Student Co-Chair

Muneeb ul Hasan
Student Co-Chair

A summary of the Education Committee activities are the following. As Committee Chair, Brad Upham, met weekly with the two student representatives, **Christine Yevtushenko** and **Jasmyn Hoeger**, and the Ad Hoc Student Support Chair, **Eudald Illa-Berenguer**. We planned the activities for the annual 2023 meeting in Norfolk, VA. Event planning began with a survey sent out to the students of SIVB to determine topics of greatest interest. The results of the survey led to organizing a workshop on "Basics of Gene Editing Using CRISPR Technology" and a luncheon, on "Effectively Communicating Research to The Non-Scientific Community". Our group also recruited Doris Anita Taylor, former Director of the Regenerative Medicine Research and Director, Center for Cell and Organ Biotechnology at the Texas Heart Institute in Houston to present her work in regenerative medicine and tissue engineering of heart organs. Due to scheduling conflicts, health issues, and death of Marietta Saunders, we decided to postpone the presentation to next fall and resume our inter-meeting webinar series in 2023-2024.

Eudald Illa Berenguer
Ad Hoc Student Support Chair

The Education Committee (EC) met once last term (March 10, 2023). We discussed future activities for the three subcommittees for **Webinar Coordination**, **SIVB Educational Electronic Resources**, and **Student Mentorship Development**. We thank **J. Denry Sato** for his efforts which involved surveys and reaching out to the students. The committee recommended that this subcommittee be student led, of which Christine Yevtushenko and Jasmyn Hoeger have agreed to lead the efforts to organize and develop the Educational Electronic Resources for SIVB. The Student Mentorship Development subcommittee led by Addy Alt-Holland met April 11, 2023. We discussed and began planning new mentorship activities. One is to resume the "Meet-and-Greet" event where students are invited to the presidential suite to meet with the Board of Directors. We will also reach out to students inquiring about their creative talents beyond science and provide forums (e.g. presidential suite night socials, and joint social programs) at the annual meeting for them to share their talents. Attempts to begin implementing this activity are underway for this year's meeting. We are also moving forward with a program to engage students in a Buddy Program where students and postdocs will be paired with SIVB members to visit posters together. Other activities are being considered to

prevent students from being lost or isolated at our annual meetings and get them immediately engaged with members. Next year, plans are for the subcommittees to meet more routinely and for the Education Committee to meet at least twice between the annual meetings.

Christina Yevtushenko
Student Co-Chair-Plant

Jasmyn Hoeger
Student Co-Chair-IVACS

Also, in 2022, the SIVB Constitution and Bylaws Committee was requested by the SIVB Board of Directors to review a proposed revision to the description for the Education Committee in section 3, C 1,e of the Bylaws. These revisions were submitted by Brad Upham, Education Committee Chair recommending key changes in the revised description to describe the functions of the "Education Committee" more accurately. More specifically: To include the Ad Hoc Student/Post Doc Committee Co-Chairs to be official members of the Education Committee, as many of the educational activities and resources are directed to the students and provide another significant layer of SIVB's long standing tradition of mentoring students and providing professional development opportunities for them. To confirm that the Education Chair will oversee the Student/Post Doc Committee Co-Chairs in organizing their program at the SIVB Annual Meeting. The proposed revision to the Education Committee description read as follows:

The Education Committee shall consist of an elected Chair, the two elected Student and Post-Doc Affairs Committee Chairs, plus appointed members. It is charged with furthering the educational goals and activities of the SOCIETY which may include both in-person and web-based educational activities. The Chair will oversee the Student Program at the Annual Meeting and ad hoc sub-committees created by the Education Committee to address specific educational needs of SIVB.

Again, the Education and Student Committee Chairs thank everyone for all their efforts in executing and expanding the educational programs of our society over the last year. We are excited to welcome the new student chairs to be elected at this year's meeting and, also, welcome and encourage our members, including students and postdocs, to be involved in the future efforts of the Education Committee. Please contact Brad Upham on your willingness to join the Education Committee.

BRAD L. UPHAM
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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: **Sandra L. Schneider** (Chair), Research and Clinical Laboratory Systems; **Walter Finkbeiner**, University of California-San Francisco; **Thomas Goodwin**, Sovaris Aerospace; **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 latest International Cell Line Authentication (ICLAC) Register of Misidentified Cell Lines lists 576 misidentified cell lines. Of these misidentified cell lines, 531 have no known authentic stock, 73 do not correspond to the original donor and 67 are from a different species. Of the 144 different contaminants, HeLa continues to be most common contaminant. The National Center for Biotechnology Information estimates that between 18–36% of all cell lines are contaminated. The annual cost of irreproducible research is $28 billion due to contaminated and misidentified cell lines.

The American National Standards Institute (ANSI) standard for identification and authentication of human cell lines is short tandem repeat (STR) profiling. The 2021 version of the ASN-002 standard has been updated and available as a spiral bound version of the standard. See Human Cell Line Authentication. Standardization of Short Tandem Repeat (STR) Profiling. This is a must have for every cell culture laboratory and/or anyone doing research with human cells and cell lines. *CT Korch, EM Hall, WG Dirks, GR Stykes, A Capes Davis, T Barrett, JM Butler, RM Neve, RW Nims, DR Storts, F Tian, RM Nardone. ATCC Standards Development Organization ASN-0002 Revised 2021–2022*. Order the latest version of at the ANSI Standard for STR profiling at (https://webstore.ansi.org/standards/atcc/ansiatccasn00022022).

SANDRA L. SCHNEIDER
Laboratory and Biosafety Materials Committee Chair
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LONG RANGE PLANNING

SIVB Long range Planning Committee Charge and Members: The committee is Chaired by the SIVB President-Elect, and it is charged with developing strategic ideas that impact the long-range or future plans and growth of the Society. As incoming Chair, I want to re-emphasize the points of the Strategic Plan previously developed and adopted:

- Promote and enhance the knowledge base and information exchange of *in vitro* science
- Promote scientific competencies among professional, educational, and lay audiences
- Promote the professional development of members
- Ensure the financial practices, annual meetings and other activities of the society are conducted effectively and in a fiscally sound manner allowing for the continuation and expansion of the SIVB
- Ensure continuity of the activities of the society

Pierluigi Barone
Long Range
Planning Chair

Since the Strategic Plan approval, the LRPC has been collaborating with various other Committees in the Society for its implementation. Besides the implementation of the Strategic Plan, in order to ensure a focused direction for the long-term sustainability of SIVB, it is important that we continue expanding the knowledge of in vitro applications for use in basic, translational, and applied research. The development of organoids as model systems, the deployment of genome editing technologies and the production of agricultural products from cell cultures are some of the most recent examples of focus areas for SIVB. It is imperative for the Society to become a resource in these new disciplines not only for its members but also for the scientific community in general, regulatory decision-makers, educators, and science writers. I challenge our members to drive the evolution of SIVB as a multidisciplinary Society, with a long history in all areas of cell and tissue culture, which enable both established and new in vitro based applications. As a member you can help with this challenge by a) contributing content to the Society's annual meetings as presenters, session chairs or co-chairs or as members of the Program Committee, b) by submitting and publishing scientific articles in *In Vitro* journals, ensuring their success and adoption both inside SIVB and in the larger scientific community, and c) by supporting the professional development of students and post-docs.

PIERLUIGI BARONE
Long Range Planning Committee Chair
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MEMBERSHIP

Vivian Dayeh
Membership Chair

It is essential to have members to achieve the goals and endeavors of our society. At the end of 2022, our membership was 443 members, which included: 71 Emeritus Members, 2 Honorary Members, 8 Life Members, 141 Student Members, 5 Post-Doctoral Members, and 216 Regular Members. This was a 4.7% increase for all membership and a 4.43% decrease for regular members from the previous year. There was a slight decline in regular membership; however, there was substantial growth in Student membership. This very healthy student membership is a promising sign for the future as students embark on their careers.

With the help of the Social Engagement Committee, the SIVB Instagram page has showcased the hard work of our members, events, and the benefits to spread the word about the impact made by the SIVB members. In addition, the SIVB Business Office has worked hard to promote membership benefits, but we can't succeed in growing the membership of the Society without your help. You can refer someone who may benefit from an SIVB membership through the Member-get-a-Member program by filling out the referral form. With this program, everyone benefits including entry of the current member for a chance to win a gift card and your colleague joining the Society will save $10 off their membership. Please consider referring a colleague to the SIVB and encourage them to get more involved in the Society in the future.

Since 2020, the SIVB has offered a 2-year membership option. There has been a steady increase in members using this option where 32 members utilized this option for 2021–22 and 29 members for their 2022–2023 renewal. Another excellent membership type is the Life Member, which ensures you don't miss out on any renewal periods and receive continual benefits of membership. If you are a Regular member and interested in becoming a Life member of the SIVB please contact the SIVB Business Office at michele@sivb.org.

Each year the SIVB holds a drawing for members who renew their membership before December 31st of the prior year. The winners of the 2022 competition, who renewed by December 31st, 2021, were **Yasuhiro Tomooka**, who received free registration to the 2023 SIVB meeting, and **Ian Curtis**, who received free membership for 2023. By renewing your membership by December 31, 2023, you'll be entered to win a 2024 membership or registration to the 2024 annual meeting. We hope you will consider this incentive when renewing your membership!

Membership in the SIVB has many benefits, and everybody can be involved. Feel free to share the word with colleagues about our wonderful society. We can't do it without you!

VIVIAN DAYEH
Membership Committee Chair
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NOMINATING

Allan Wenck
Nominating Chair

It is the great responsibility – but also the great pleasure – of the Past President to chair the Nominating Committee. The Society for In Vitro Biology is made up of its members. We have formal boards and committees that we fill with the great people of the SIVB and occasionally with somewhat OK people like myself! We have two-year election cycles with some exceptions that will be noted. Further, not all volunteer positions are elected as the President appoints certain positions and certain committees are always receptive to volunteer participation.

As chair of the Nominating Committee, I am tasked with submitting a slate of candidates to the Board of Directors for Elected Positions. In general, we would like to have multiple candidates for each position and ideally from both IVACS and PB. In certain cases, the candidates must be from one of the sections or the other — as I will detail.

This year we have several openings for the Board of Directors for the SIVB. This board is made up of both IVACS and PB members though the proportion is not dictated. The Presidency is one of the positions where the section is considered as it alternates between IVACS and PB. Further, the president is elected not only for 2 years but for 6 as this arrangement assures greater continuity of the board. The President-Elect this year will need to come from IVACS as our current President-Elect – Piero – is from PB and our current President – Addy – is from IVACS. The President-Elect position will be cycled to IVACS for this next election cycle. The President-Elect learns what is required to be President during their 2 years and also chairs the Long Range Planning Committee. The President-Elect is also a member of the Executive Committee. I need you!!! I not only take recommendations from IVACS members and others, but I am also looking for those interested in being considered. Only requirement is that you are a member of the SIVB and are in IVACS.

This next election cycle we also have Board of Director openings for the Treasurer, Secretary and Vice President – who are also members of the Executive Committee. We also have Board openings for the Head of the Education Committee, the Awards Committee, the Constitution and Bylaws Committee, the Publications Committee, and the Public Policy Committee. These are all two-year positions, however, there are two other elected board members that are elected for 4-year positions and are specific for each section. These are the Member-at-Large positions with both PB and IVACS having one member each rotating through this election cycle. The Board includes the Program Chair, but that person is appointed by the President and is on the Board only for the current year. This appointed position also rotates between PB and IVACS. The President also appoints various other committee chairs with Development Committee Chair defaulting to the Vice President and the Finance Committee Chair defaulting to the Treasurer.

In addition to the Board positions, each section has the following positions: Chair of IVACS/PB; Secretary IVACS/PB; and Co-Chair. For Co-Chair, IVACS has a Meeting Co-Chair and a Membership Co-Chair. PB also has Meeting Chairs, however, they are appointed within PB and only the Co-Chair for PB as a whole is elected. Further, each year, the students elect one representative from each section to serve within the Education Committee. This election is done at the annual meeting. These students do also meet with the Board as part of the Education Committee and often as part of the Meeting Committee reporting.

As mentioned, there are also appointed Committee Chairs that the President makes and/or re-affirms. The President also may form ad hoc committees as they see the need. These committees last during the President's two-year term but may be re-affirmed by the next president if desired.

Now, for the I WANT YOU PART!!!! I have a list of potential candidates for some, but not all openings. I have consulted with the Board of Directors and also with the IVACS and PB chairs as part of the Nominating Committee. However, we don't necessarily know everyone. Nor do we know everyone's desire to contribute in a greater way to the SIVB. SPEAK UP!!!! Please send me a note at allanwenck@yahoo.com.au or allan.wenck@syngenta.com if you are interested in being considered for one or more positions. If you are not sure, I am happy to set up a call to discuss. Secondly, if your name has already been mentioned, I will be starting to reach out. JUST SAY YES!!!! when you hear from me.

What's next? Once I present the list to the board, we begin the process of going through gathering information. We will be asking for a picture and a platform. These are easy!

Lastly, I should say WHY. I personally never thought to be on the Board. To be honest, I wasn't quite sure about involvement when I first raised my voice to say I would be a junior co-convenor for a session. Since then, though, the experience of being involved within the SIVB has taught me more than I can imagine. It has contributed to my personal growth, professional growth, and social growth. I have gotten to know, appreciate, and admire the talent within SIVB so much more than I would ever have experienced as "just" a member. And, for those who wonder, yes, I do have it on my CV and my LinkedIn profile! Last, but not least, being active on the Board allowed me to become well acquainted with one of the people I have most admired — Marietta. While no one will be able to take her place, Marietta — a person with great wisdom, knowledge, and energy — represents the type of persons that make up the board. They have taught me more of value to me than I think I have given them in value of service. I cycle off but stay involved. I am making a space — and more than one space — FOR YOU!!!

ALLAN WENCK
Nominating Committee Chair
allanwenck@yahoo.com.au

Mae J. Ciancio
2022 Program Chair

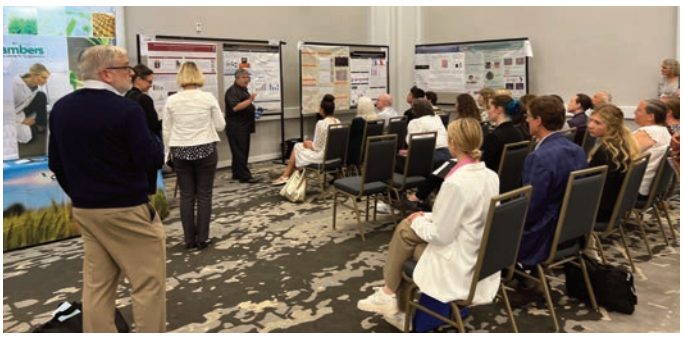
PROGRAM

Thanks to the energy and committed efforts of the Business Office, the Board, the Section Chairs and the Local Organizing Committee, the **2022 In Vitro Biology Meeting** in San Diego, CA (June 4-7, 2022) was a huge success. In-person attendees enjoyed dynamic presentations, engaging discussions,

and opportunities to develop and renew friendships. Virtual access to select presentations and posters was made available to those unable to attend in person or seeking virtual access. Heartfelt thanks to the meeting attendees as well as the many individuals whose tireless efforts and commitment to the success of the meeting made it possible, including: **Marietta Wheaton Saunders** (Managing Director, SIVB and Meeting Secretariat), **Michele Schultz** (Publications Manager, SIVB), **Kristina Martinez-Guryn** (IVACS Program Chair), **Max Jones** (PB Program Chair), **M. Annie Saltarikos** (PB Sr. Co-chair), **Ahmad Omar** (PB Jr. Co-Chair), **Piero Barone** (Development Committee), **Brad L. Upham** (Education Chair), **Mubeen ul Hasan** (IVACS Student Co-Chair), and **Muneeb Hassan Hashmi** (PBS Student Co-Chair). There were 355 in-person attendees and 66 virtual attendees, totaling 421 registrants, signifying a unique cross-section of scientists, educators, and students representing universities and industries from around the world. The **Keynote Speaker** for the 2022 Society for In Vitro Biology annual meeting was **Dr. Thomas Hartung**, Director of the Center for Alternatives to Animal Testing (CAAT) and Inaugural Holder of the Doerenkamp-Zbinden Endowed Chair in Evidence-based Toxicology in the Department of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health. Dr. Hartung's engaging presentation on ***Advancing Cell Culture to Meet Scientific and Societal Needs*** was enthusiastically received by the audience, prompting questions and further discussions. Attendees had the unique opportunity to hear Dr. Hartung speak on several occasions during the 4-day conference.

The meeting offered plenary sessions, symposia, contributed paper sessions, and interactive poster sessions which fostered the exchange of exciting new research in the areas of plant and animal in vitro biology. Three plenary sessions were hosted by PB and IVACS collaborations, including: ***Advanced Applications of Site Directed Nucleases*** by **Durga Attili**, **Pierluigi Barone**, **Raj Deepika Chauhan**, and **Michael Dame**; the ***Michael E. Horn Emerging Technologies Symposium***: ***Future Foods*** convened by Vivian R. Dayeh, Veena Veena, and Sukhpreet Sandhu; and ***Artificial Intelligence and Machine Learning in Plant and Animal Sciences*** co-convened by Mae J. Ciancio, M. Annie Saltarikos, Evan M. Hill, and Babak Senfi.

Nine plant section sponsored symposia included: ***Frontiers in Gene Editing for Crop Development*** convened by Fredy Altpeter and Yiping Qi; ***Advances in Double Haploid Technology*** convened by Cliff Hunter and Charles L. Armstrong; ***Novel Delivery Technologies-Overcoming Bottlenecks*** convened by Gozde Demirer; ***Plant Growth Regulators*** convened by Geny Anthony and Kristian Adamek; ***Alternative Approaches to Plastic Engineering*** convened by Jeffrey Staub; ***Advances in Cannabis Biotechnology*** convened by Max Jones; ***Model Systems for Developing CRISPR/Cas Technology in Plants*** co-convened by Shubha Subbarao and Jeff Beringer; ***Genetic Transformation and Regeneration of Recalcitrant Species (i.e. Fruit Trees, Orphan Crops), Challenges and Way Forward*** convened by Carlos M. Hernandez-Garcia, Juan Debernardi, and Pamela Vogel; and ***In Vitro Technologies for Plant Conservation and Gene Banking*** co-convened by Valerie C. Pence and Lori Marcum.



Interactive Poster sessions provide dynamic opportunities for oral presentations in front of posters with Q&A and discussion opportunities.

Animal sponsored symposia included five sessions: ***Organoid Technology*** convened by Terry Riss and Kristina Martinez-Guryn; ***Extracellular Matrix and Tissue Engineering*** convened by Michael Dame and Josh Gasiorowski; ***Moving the Field Forward: Application of New Technologies in Academic, Industry and Regulatory Agencies Perspectives*** convened by Addy Alt-Holland, Kenneth Kandaras, and John W. Harbell; ***The Art and Science of Cell Imaging*** convened by Brad Upham, Debora Esposito, Cynthia Goodman, Muneeb Hassan Hashmi, and Mubeen ul Hasan; and ***Single Cell Technology and Application in Biomedical Research*** co-convened by Kristina Martinez-Guryn and Rosa Ventrella. IVACS and PBS jointly sponsored one symposium titled, ***New Approaches to Vaccine Development,*** which was co-convened by Julie Swartzendruber, Barbara B. Doonan, and J. Pon Samuel.

Three exciting workshops were offered, including: ***Design of Experiments*** hosted by Uyen Cao Chu, Randall Niedz, and Todd Jones; ***State of the Art Cell Imaging Technologies*** sponsored by the Education Committee, Mubeen ul Hasan, Muneeb Hassan Hashmi, and Brad Upham; and ***Public-Private Collaborations that Spur Innovation*** moderated by Sukhpreet Sandhu and Kathy Munkvold. A student networking luncheon sponsored by the Education Committee included: ***Research Proposal and Grant Writing***.

There were multiple PB and IVACS sponsored interactive poster sessions as well as Student and Post-Doctoral Oral competitions. The Education Committee sponsored a Non-competitive Student Oral Presentation session for graduate students. Interactive posters and contributed paper sessions provided additional opportunities for individuals to actively engage in dialogue and further research discussions. Many SIVB members were responsible for organizing these events, including **Ahmad Al-Sayed Omar**, **Alex da Silva Conceicao**, **Addy Alt-Holland**, **Kolla Kristjansdottir**, **Baskaran Kannan**, **Savanah Senn**, **Mae Ciancio**, **Nagesh Sardesai**, **Chhandak Basu**, **Heqiang Huo**, **Vivian Dayeh**, and **Kristian Adamek**. Thank you to the members who served as evaluators for the posters and oral presentations: your thoughtful insights were appreciated by the students and the speakers.

The 2022 meeting provided the opportunity for the Society to present the awards to the 2020 and 2021 award recipients in-person, since the previous two meetings were virtual. It was wonderful to formally recognize their accomplishments. The 2022 special awards and recognitions were given to the following SIVB members and students: **Shirley A Pomponi** and

Kan Wang were awarded the Lifetime Achievement Award; and **Mae Ciancio**, **Maria M. Jenderek**, **Kolla Kristjansdottir**, and **J. Pon Samuel** were presented with the Fellow Award. The Distinguished Service Award was presented to: **Rakhi Chaturvedi**, **Ian Scott Curtis**, **Ahmad Al-Sayed Omar**, **Brad L. Upham**, **Christopher Bagley**, **Anissa Belfemi**, **Sarbesh Das Dangal**, **Sadanand A. Dhekney**, **John W. Harbell**, **Sukhpreet Sandhu**, and **Kan Wang**. The following student awards were presented at the 2022 meeting: Wilton R. Earle and SIVB Travel Awards to **Dominic Dharwadker** – University of Arkansas; the John S. Song Award to **Gaurav Gajurel** – Arkansas State University; the Honor B. Fell and SIVB Travel Awards to **Jasmyn M. Hoeger** – University of Dubuque and Tri-Vet Associates; Cellular Toxicology Award to **Hansa Raj KC** – Arkansas State University; the Hope E. Hopps and SIVB Travel Awards to **Peter James Icalia Gann** – University of Arkansas; the Joseph F. Morgan and SIVB Travel Awards to **Katriana Van Woudenberg** – University of the Fraser Valley; the Philip R. White Award to **Eleanor Jane Brant** – University of Florida; the Gordon Sato and Wally McKeehan Award to **Heather Kelly** – University of the Fraser Valley and **Sepideh Mohammadhosseinpour** – Arkansas State University; and the SIVB Travel Award to **Mubeen ul Hasan** – Nigde Omer Halisdemir University, **Muneeb Hassan Hashmi** – University of Siegen and Nigde Omer Halisdemir University, **David May** – University of Florida, and **Keira Nakamura** – University of California, San Francisco. The IVACS sponsored Student and Post-Doc Oral competition winners were: **Larissa Marina Pereira Silva** (First Place); **Sepideh Mohammadhosseinpour** (Second Place); and **Megan Conkling** (Third Place). PB sponsored Post-doctoral Oral Competition winner was **Viet Dan Cao** from the University of Florida. Great job by all the presenters! SIVB is always striving to provide meaningful opportunities to promote and develop graduate students and post-doctoral fellows.

2022 Student Award Winners

Taste testing during a morning break provided by **Conscious Foods** was a truly unique and well-received experience. Many attendees were sharing their taste testing opinions well into the evening. A relaxing social event at the Maritime Museum: Ships of the Seven Seas completed the meeting. It was a wonderful way to spend time with friends and colleagues while enjoying the beauty of San Diego.

Special thanks and appreciation to the **Development Committee** and the following contributors for their generous financial support of the meeting: Ball Horticultural Company, BASF Agricultural Solutions Seed US LLC, Bayer AG, Bayer U.S. - Crop Sciences, Barbara and John Harbell, Barbara B. Doonan, Barbara Reed, Cibus, Corning, Corteva Agrisciences, CTC Genomics, Donald Danforth Plant Science Center, Dwight T. Tomes, Harbor Branch Oceanographic Institute/Florida Atlantic University, Harbor Branch Oceanographic Institute Foundation, Inari Agriculture, Iowa State University, Kolla Kristjansdottir, Maria Jenderek, Michael J. Fay, Michael K. Dame, Midwestern University, MilliporeSigma, National Anti-Vivisection Society, Ohalo Genetics, Pairwise, Plastomics, Raziel S. Hakim, Robert and Gale Lawrence, Jr., Syngenta Crop Protection, LLC, The Scotts Miracle-Gro Company, The Michael E. Horn Endowment Fund, and Todd Jones. Funding from the following grantors is appreciated by the Society: USDA-NIFA, NSF, and Regeneron.

The **Local Organizing Committee**, co-chaired by **Sukhpreet Sandhu** and **Savannah St. Clair Senn**, along with local members **David Songstad**, **Hope Jones**, **Dolendro Nameirakpam**, **Martha L. Orozco-Cardenas**, **Norman Senn**, and **Micah Stevens** worked tirelessly to facilitate the success of the meeting. Thank you.

Special recognition to the leadership and dedication of the Board of Directors: **Allan R. Wenck** – President; **John W. Harbell** – Past-President; **Addy Alt-Holland** – President-Elect; **Pierluigi Barone** – Vice President; **Barbara Doonan** – Treasurer; **Sukhpreet Sandhu** – Secretary; **Michael J. Fay** – Publications Chair; **Wayne Parrott** – Public Policy Chair; **Michael Dame**, **Cynthia Goodman**, **Todd Jones**, and **Kan Wang** – Members-at-Large.

I would personally like to thank **Marietta Wheaton Saunders** (Managing Director), **Michele Schultz** (Publications Manager), and the entire staff of *New Beginnings Management* for their hard work, creative talents, and flexibility in managing the daily functions of the Society and to making our annual meetings so successful. Marietta's patience, guidance, and friendship will be greatly missed.

MAE J. CIANCIO
2022 Program Committee Chair
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PUBLICATIONS

Michael J. Fay
Publications Chair and Co-Editor-in-Chief of In Vitro Report

The Publications Committee is pleased to announce that the impact factors for both of our Society journals have increased. The impact factor for *In Vitro Cellular & Developmental Biology — Animal* increased from 2.117 (2020) to 2.723 (2021), and the impact factor for *In Vitro Cellular & Developmental Biology — Plant* increased from 2.252 (2020) to 2.347 (2021). The 5-year impact factor for *In Vitro Cellular & Developmental Biology — Animal* is 2.303, and the 5-year impact factor for *In Vitro Cellular & Developmental Biology — Plant* is 2.404. These are the highest impact factors we have received for both journals! The success of our journals is due to the hard work and dedication of **Tetsuji**

Okamoto (Editor-In-Chief, *In Vitro Cellular & Developmental Biology — Animal*) and **David Songstad** (Editor-In-Chief, *In Vitro Cellular and Developmental Biology — Plant*). Please read the individual journal reports submitted by **Tetsuji Okamoto** and **David Songstad** to learn more about our journals. To maintain the momentum of our journals we need your support. We need you to submit your original research manuscripts and review articles to *In Vitro Cellular & Developmental Biology — Animal* and *In Vitro Cellular & Developmental Biology — Plant*. Also, please be available to serve as a peer-reviewer for our journals.

The SIVB Business Office and the Publications Committee continue to work on several initiatives with Springer Nature. We have initiated the process to facilitate a future application for *In Vitro Cellular & Developmental Biology — Plant* to be indexed in PubMed. In preparation for the application, we are updating the Editorial Board information, transitioning to structured abstracts, requiring disclosure statements, and updating conflict of interest policies in the instructions for authors. Springer Nature is building their own manuscript review system (SNAPP), and they will provide training on the new system for the Publications Committee and Journal Editors. We continue to work with Springer Nature on the transition from our Copyright Transfer Form to the new License-to-Publish Agreement. The Publications Committee is also finalizing new guidance documents for the SIVB membership on submission requirements for the different *In Vitro Report (IVR)* article types and for promoting Search Engine Optimization (SEO) of submitted *IVR* content.

The Ad Hoc Social Engagement Committee (**Chris Bagley**, **Sarbesh Das Dangol**, **Anissa Belfetmi-Stone**, **Muneeb Hassan Hashmi**, **Joyce Van Eck**, **Roseline Eke Emele**, **Addy Alt-Holland**, **Allan Wenck**, **Michael Fay**, **Michele Schultz**) has been instrumental in identifying strategies to promote the social media presence of the SIVB. The SIVB continues to grow our social media presence on Facebook, LinkedIn, Twitter, YouTube, and Instagram. The Ad Hoc Social Engagement Committee has developed an SOP for our membership to provide instruction on how to create an effective social media post. They are also busy creating social media posts to market the 2023 In Vitro Biology Meeting. The Publications Committee is collaborating with the Ad Hoc Social Engagement Committee to share the *IVR* content on the SIVB social media platforms. Please remember to participate in the SIVB's social media efforts. The following hashtags can be used: @SIVBiology ((Twitter and Instagram accounts), #SIVBiology (General Hashtag), #SIVB2022 (2022 Annual Meeting), #SIVB2023 (2023 Annual Meeting), #IVANSIVB (In Vitro Cellular & Developmental Biology-Animal), #IVPLSIVB (In Vitro Cellular & Developmental Biology-Plant), and #InVitroReportSIVB (In Vitro Report).

On behalf of the Publications Committee, I want to thank **Marietta Wheaton Saunders** (Managing Director), **Michele Schultz** (Acting Managing Director), the Publications Committee (**Michael J. Fay**, **Barbara B. Doonan**, **Cynthia L. Goodman**, **John W. Harbell**, **Maria M. Jenderek**, **Jiaui Li**, **Sylvia Adjoa Mitchell**, **Tetsuji Okamoto**, **Gregory C. Phillips**, **Barbara Reed**, **J. Denry Sato**, **David D. Songstad**, **Dwight T. Tomes**, **Michele Schultz**), and the Ad Hoc Social Engagement Committee (Chris Bagley, Sarbesh Das Dangol, Anissa Belfetmi-Stone, Muneeb Hassan Hashmi, Joyce Van Eck, Roseline Eke Emele, Addy Alt-Holland, Allan Wenck, Michael Fay,, Michele Schultz) for their dedication, guidance, and support of our Society, Publications, and social media outreach.

Remember to talk to your colleagues, students, and postdocs about the SIVB, and encourage them to submit their manuscripts to *In Vitro Cellular & Developmental Biology — Animal* and *In Vitro Cellular & developmental Biology — Plant;* and their news items to the *In Vitro Report*.

Tetsuji Okamoto
Editor-in-Chief
In Vitro — Animal

IN VITRO CELLULAR AND DEVELOPMENTAL BIOLOGY – ANIMAL

(For the year 3/1/22 through 2/28/23)

The journal experienced a decrease (16.1%) in total submissions of new manuscripts over the comparable period last year (374 compared to 446 in 2021-2022).

The numbers of submitted manuscripts for the past year compared to the prior year were: 360 regular papers (422 in 2021-2022), 9 Reports (26 in 2021-2022), 1 Invited Reviews (4 in 2021-2022), and 3 opinion Letters-to-the-Editor (1 in 2021-2022). Of the 374 submissions, 66 were accepted (17.6% acceptance rate), 20 (5.4%) rejected, 66 (17.6%) withdrawn, 44 (11.8%) were still in review or revision and 178 transferred to other Springer Publications (47.6%).

Thirty-one (31) countries were represented in the submissions received in 2022/2023. Approximately ninety percent (90.6%) of submissions were from China (209), Iran (38), India (31), Turkey (23), Japan (12). Korea (10), Brazil (8), and the USA (8). The average time from receipt to first decision in the review process was 11.7 days compared to 12 days overall last year. All new submissions were received through the online system.

The decrease in submitted manuscripts is not unexpected given the effect of the COVID pandemic on the ability of scientists to conduct research. Another and persistent reason for the declining number of submissions seems to be related to the requirement for cell line authentication (including mycoplasma testing) of the cells used in the research of the submitted papers, especially human cells. This requirement should be maintained as it is the minimum requirement for cell culture research.

If the cell authentication (including mycoplasma testing) of the cultured cells used in the research of the submitted papers is insufficient, I immediately return the paper with major revision. Some authors perform cell authentication in response to this request and resubmit revised manuscripts to IVA, but most authors submit to other journals without doing authentication. This is another reason why the average time from receipt to first decision in the review process is very short (11.7 days).

The *In Vitro — Animal* journal publishes 10 individual issues at or around our article budget though has published slightly behind schedule. The 2021 impact factor for IVA was 2.723, which is an increase from the 2020 impact factor of 2.416, and the 5-year impact of 2.303, which is up from last year's 1.588. More than 98% of the submissions came from outside the US so there is a strong 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 the areas of biotechnology, cell and tissue models, cell growth/differentiation/apoptosis, cellular pathology/virology, cytokines/growth factors/adhesion factors, establishment of cell lines, product applications, signal transduction, stem cells, and toxicology/chemical carcinogenesis. Submissions to the respective journals in the last year were: cell growth/differentiation/apoptosis (187), cell and tissue models (158), signal transduction (68), biotechnology (62), stem cells (61), cytokines/growth factors/adhesion factors (53), toxicology/chemical carcinogenesis (42), cellular pathology/virology (38), establishment of cell lines (26), and product applications (16).

In the past year several submissions included irregularities (eg. duplication, manipulation, or misrepresentation of data) that were discovered by editors, reviewers, or readers. *IVA* will take quick and decisive action in such cases to maintain the integrity of the journal and to retain the trust of its authors and readers.

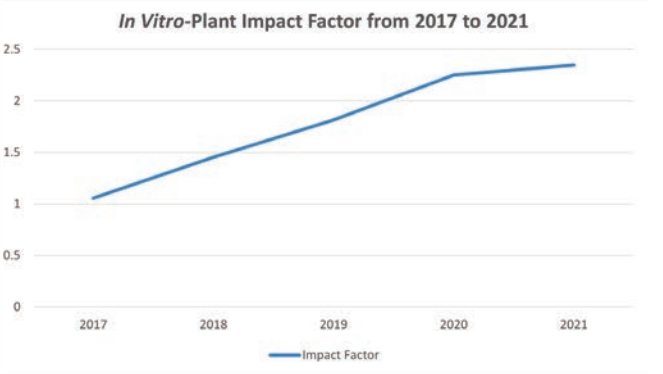
David Songstad
Editor-in-Chief
In Vitro — Plant

IN VITRO CELLULAR AND DEVELOPMENTAL BIOLOGY – PLANT

I have completed my third full calendar year as Editor in Chief (EIC) of *In Vitro — Plant* and want to thank all the Associate Editors for their support to the journal and timely processing of manuscripts. Thanks also for the many reviewers who took their time to give a critical assessment of the manuscripts submitted to *In Vitro — Plant*. Without your dedication and time, *In Vitro — Plant* would not be in this promising position for future growth and impact. I also want to continue to thank the past EICs (David Duncan, Dwight Tomes, John Finer and Greg Phillips) for their encouragement and support.

The impact factor for *In Vitro — Plant* has steadily increased from 1.057 in 2017, to where it is currently, 2.347, for 2021. The five-year impact factor has now reached 2.404. It is noteworthy to recognize that the impact factor has more than doubled since 2017.

The increase in impact factor is likely due to a combination of reasons including the improved quality of manuscripts accepted for publication in *In Vitro — Plant* and eight of the 102 published manuscripts in 2022 being "open access". The majority of the open access manuscripts (5) were in the last issue of 2022, number 6, published in December 2022. The journal is still benefiting from the Special Issue on Genome Editing, which was published in 2011. For example, one of the fifteen manuscripts in this Special Issue is the paper by Jenkins *et al*. (Impacts of the Regulatory Environment for Gene Editing on Delivering Beneficial Products) receiving an Altmetric score of 43 with over 4.600 downloads to date. Hopefully this, in addition to the manuscripts published in 2022, will result in a continued "positive bump" in the impact factor for next year, too. Credit is also due to Dr. Albert Kausch for providing the scanning electron micrograph of early proembryo stage sorghum somatic embryos forming on the scutellar explant surface 6-d post-inoculation using the Rapid Alturisic *Baby boom* and *Wuschel* mediated *Agrobacterium* transformation system which was the cover image for the June 2022 (Issue 3) of *In Vitro — Plant*. However, genome editing is not an exclusive topic for invited reviews. All Society members are encouraged to submit original research manuscripts or a review concerning the subject of your current research or perhaps the introductory thesis chapter of a graduating student. All of these would be excellent submissions to *In Vitro — Plant*.



A total of 331 manuscripts were submitted to *In Vitro — Plant* in 2022, which is a significant decrease compared to 2021 where 395 were submitted or to the 482 submitted in 2020. This could be the lingering effect of the COVID-19 pandemic's effect on scientific research and publishing. Even though there were fewer manuscripts submitted, the number of manuscripts published increased from 95 in 2021 to 102 in 2022. Furthermore, the number of printed pages in the journal increased from 1065 in 2021 to 1144 in 2022, a 78-page number increase. This is good news, although it is still important to realize that meeting the page count required to publish each issue of In Vitro-Plant will continue to be an important challenge. Of those 331 manuscripts, 220 were rejected (slightly over a 66% rejection rate) leaving close to 34% acceptable for publication. Of the rejected manuscripts, about 29% were rejected for plagiarism, a continuing problem for the journal. Approximately 22% were rejected for technical flaws and another 17% rejected based on novelty. About 10% of the rejections were based on "Out of Scope" and 3% were due to submitting to the wrong journal and were redirected to *In Vitro — Animal*. This leaves 19% of the rejections due to a variety of "other" reasons including submitting a PDF, poor writing, improperly submitted, refused to submit revised version, etc.

In 2022 the top 10 countries from which manuscripts were submitted includes India, China, Iran, Turkey, Brazil, USA, Mexico, Egypt, Pakistan, and Russia. One of the biggest problems to having a robust journal is the lack of researchers willing to review manuscripts. Please, when asked to review a manuscript do not hesitate to do so. Your effort helps the Society, is a perk on your C.V., and helps insure that when you submit a manuscript there will be reviewers available to quickly assess your work.

Finally, 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, free color photograph printing, both online and in the hard copy of the journal, and timely publishing in a respected international journal.

IN VITRO REPORT

Sylvia Mitchell
IVR Co-Editor-in-Chief

The *In Vitro Report* (*IVR*) is the quarterly online newsletter for the Society for In Vitro Biology (SIVB) and continues to serve as an important platform for the SIVB membership to share news and communicate beyond the annual meeting. The *IVR* Co-Editors are **Michael J. Fay** (Midwestern University) and **Sylvia Mitchell** (University of the West Indies). The Co-Editors work with **Michele Schultz** (Acting Managing Director) to solicit and edit the content submitted by the SIVB membership that is published in the *IVR*. The Co-Editors also received guidance and support from **Marietta Wheaton Saunders** (SIVB Managing Director), **Tetsuji Okamoto** (Editor-In-Chief, *In Vitro Cellular & Developmental Biology — Animal*), **David Songstad** (Editor-In-Chief, *In Vitro Cellular & Developmental Biology — Plant*), and the SIVB Publications Committee (**Michael J. Fay**, **Barbara B. Doonan**, **Cynthia L. Goodman**, **John W. Harbell**, **Maria M. Jenderek**, **Jiaui Li**, **Sylvia Adjoa Mitchell**, **Tetsuji Okamoto**, **Gregory C. Phillips**, **Barbara Reed**, **J. Denry Sato**, **David D. Songstad**, **Dwight T. Tomes**, **Michele Schultz**). Routine articles in the *IVR* include: The SIVB President's Report, Editor-selected Journal Highlights for *In Vitro Cellular & Developmental Biology — Plant* and *In Vitro Cellular & Developmental Biology — Animal*, SIVB Annual Meeting Updates, feature articles on SIVB Award Recipients, Public Policy Updates, New SIVB Members, Section Officer and Board Member Election Results, Student Section Updates, and Member News from the In Vitro Animal Cell Sciences Section (SciNews) and Plant Biotechnology Section (ExPlants). We are working with the *Ad Hoc* Social Engagement Committee (**Chris Bagley**, **Sarbesh Das Dangol**, **Anissa Belfetmi-Stone**, **Muneeb Hassan Hashmi**, **Joyce Van Eck**, **Roseline Eke Emele**, **Addy Alt-Holland**, **Allan Wenck**, **Michael Fay**, **Michele Schultz**) to share *IVR* content on social media platforms utilized by the SIVB. We have prepared new guidance documents for the SIVB membership on submission requirements for the different types of *IVR* articles and for promoting Search Engine Optimization (SEO) of submitted *IVR* content. The *IVR* Co-Editors, Publications Committee and Ad Hoc Social Media Committee encourage all SIVB members to share their news and accomplishments in the *IVR*. Prior to the publication of each *IVR* issue, the SIVB membership is contacted by email to solicit submissions. Please consider sharing your updates and accomplishments with the SIVB membership in the *IVR* and visit the SIVB website to read the current *IVR* issue (www.sivb.org/InVitroReport/). If you have any questions or suggestions concerning the *IVR*, please contact the Co-Editors (mfayxx@midwestern.edu, sylviamitchell.biotech@gmail.com) or Michele Schultz (michele@sivb.org).

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MICHELE G. SCHULTZ
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PUBLIC POLICY

Wayne Parrott
Public Policy Chair

The Public Policy Committee is a standing committee of the Society for In Vitro Biology (SIVB). Membership is open to all SIVB members interested in biotech policy, though government regulators only serve on an ex officio basis. The year 2023 should be an important year for policy formulation, so we always welcome interested members!

In 2022, the committee reached out to Plant Section Members looking for experts to provide advice to the USDA for the post 2020 Global Biodiversity Framework under the Convention for Biological Diversity. The Committee assists Society members and the scientific community-at-large to better understand in vitro biology, biotechnology, and the current research and public policy issues affecting the scientific community. The Committee supports the SIVB to interact with members of Congress and other governmental officials for the purpose of giving scientific advice on funding priorities and other issues relevant to in vitro biology and biotechnology.

Submitted by the SIVB Business Office on behalf of

WAYNE PARROTT
Public Policy Committee Chair
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It was great to welcome back all of our exhibitors for our 2022 in-person meeting in San Diego

REPRESENTATIVES OF THE SIVB

Dwight Tomes
CAST Representative

COUNCIL FOR AGRICULTURAL SCIENCE AND TECHNOLOGY (CAST)

During 2022, CAST began the process of returning to more in person events compared to the previous two years in which many activities were conducted either via Zoom or in hybrid meetings. Our annual meeting in 2022 was held at Iowa State University, commemorating the meeting location of our first annual meeting of CAST fifty-one years ago. We were fortunate to have President Wendy Wintersteen and Dean of Agriculture Daniel J. Robison share their perspective about research funding, the direction of future research of high impact as well sharing informal discussions with attendees at our annual meeting. The in-person discussions with prominent national research leaders and colleagues are a great benefit of working with CAST. I serve as the Co-chair of the Food Work Group (FWG) within the Board of Representatives. The FWG has monthly meetings where we discuss potential new topics for investigation and publication by CAST — **note that suggestions from SIVB members are** especially welcome!

Every member of SIVB has complete access to all of the publications and special presentations (webinars) from CAST about topics of interest. Included below are links to weekly newsletters, general information about CAST, and publications available online to SIVB members:

- Information about CAST: https://bit.ly/AboutCASTScience
- Link to Access CAST Publications: https://www.cast-science.org/publications/
- Link to Past Friday Notes Newsletters (2 weeks out, CAST members receive weekly newsletter directly to their inbox): https://www.cast-science.org/friday-notes/
- Link to individual CAST Membership Information: https://www.cast-science.org/membership

CAST publications and outreach have national and international impact in a time where science-based knowledge becomes more valuable every day. Antimicrobial resistance has become more important in every aspect of animal production and human health. Our scientific community must continue developing more applications for CRISPR-cas-9 and continue progress on gene-based technologies for plant and animal improvement. New hybrids of corn, soybeans, wheat and other cereal grains have improved yield and yield stability and dramatically increased pest resistance with increased productivity that also reduce food insecurity both domestically and in third world countries.

This technology and scientific advancement have produced dramatic progress—practically on a monthly basis and accomplishments that were not possible even in the last year or two. Despite the challenges we face from climate change and volatile politics, we can look forward to keeping up with the latest science communication that is understandable and a pleasure to read! Suggestions of topics for new publications are always welcome—contact me directly or on the website. If you would like to receive CAST news and updates please join the CAST mailing list.

DWIGHT TOMES
CAST representative
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INTERNATIONAL ASSOCIATION FOR PLANT BIOTECHNOLOGY (IAPB)

Randall Niedz
IAPB Representative

The International Association for Plant Biotechnology (IAPB) was founded in 1963 at the first international conference on plant tissue culture, which was organized by Philip R. White. The IAPB is the largest international organization representing the plant biotechnology community worldwide. The IAPB has been hosting successful symposia around the world since the early '60s, including a congress held every four years. The current IAPB officers are Jang R. Liu, IAPB President and Donghern Kim, Treasurer. IAPB members span over 89 countries, ranging from industrial to early career scientists. The 15th International Association for Plant Biotechnology Congress will take place in the Daejeon Convention Center, Daejeon, South Korea from August 6-11, 2023. The theme of the IAPB 2023 congress is "Driving the Future of Plant Biotechnology: From Test Tube to Field". The congress is co-organized by the IAPB Secretariat and The Korean Society for Plant Biotechnology. Dr. Randall Niedz (randall.niedz@usda.gov) is the US Correspondent for the IAPB and can provide further details on how to become a member. Members will receive a copy of the IAPB newsletter twice yearly, two issues of the journal, and reduced conference rates for IAPB symposia. IAPB and SIVB work closely together; SIVB members can join and renew their IAPB memberships through the SIVB online store.

RANDALL P. NIEDZ
IAPB Representative
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STAY INFORMED & STAY CONNECTED!

We encourage all members to become actively involved with SIVB and stay connected to us via social media. Find us through any and all methods below and don't forget to Like, Share, and Subscribe to our content to help spread the word about this phenomenal organization!

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Society For In Vitro Biology
Statement of Financial Position
December 31, 2022

	12/31/2022
Assets	
Current Assets	
Cash	232,819
Accounts Receivable	425
Prepaid Expense	69,874
Total Current Assets	303,118
Other Assets	
Investments	343,368
Total Other Assets	343,368
Total Assets	646,486
Liabilities and Net Assets	
Current Liabilities	
Accounts Payable	14,108
Deferred Income	34,816
Total Current Liabilities	48,924
Total Liabilities	48,924
Net Assets	
Unrestricted	150,679
Temporarily Restricted	446,883
Total Net Assets	597,562
Total Liabilities and Net Assets	646,486

Society For In Vitro Biology
Statement of Activities
For the One Month and Ten Months Ended December 31, 2022

	Month Ended 12/31/2022			Nine Months Ended 12/31/2022
	Unrestricted	Temporarily Restricted	Total	(Combined)
Revenue				
In Vitro- Animal	122	-	122	89,776
In Vitro- Plant	122	-	122	57,489
Newsletter	-		-	1,227
Meetings	-	800	800	192,430
Administrative	1,807	-	1,807	24,619
Total Revenue	2,051	800	2,851	365,541
Expenses				
Program Services:				
In Vitro Animal	378	-	378	31,588
In Vitro Plant	1,008	-	1,008	56,732
Annual Meeting	(19,890)	-	(19,890)	198,270
Total Program Services	(18,504)	-	(18,504)	286,590
Support Services:				
Administrative	27,992	-	27,992	252,217
Total Support Services	27,992	-	27,992	252,217
Total Expenses	9,488	-	9,488	538,807
Change in net assets before unrealized gain(loss) on investments	(7,437)	800	(6,637)	(173,266)
Unrealized gain(loss) in fair value of investments	(3,895)	-	(3,895)	(35,130)
Change in Net Assets	(11,332)	800	(10,532)	(208,396)
Net assets, beginning of period	162,011	446,083	608,094	805,958
Net assets, end of period	150,679	446,883	597,562	597,562