



Leaders in
microsurgery and
reconstruction

Spring-Summer 2017

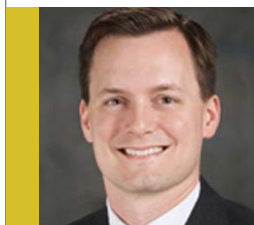
IN THIS ISSUE:

- 2** | President's Message
- 4** | From the Editor
- 6** | 2017 Annual Meeting Photo Gallery
- 9** | 2017 Exhibitors Thank You
- 10** | 2017 ASRM Council and Committees
- 11** | Young Microsurgeons' Group
- 12** | Women's Microsurgery Group
- 15** | International Travel Grant Report
Obituary
- 16** | 2016-2017 New Members
- 17** | Microsurgical Pearls
ASRM Calendar
- 18** | Research Committee Report
- 24** | Message from 2018 Annual Meeting Co-Chairs

Reconstructive Microsurgery

THE AMERICAN SOCIETY FOR RECONSTRUCTIVE MICROSURGERY • VOLUME 28.1

Hawaii Meeting Delivers on Promise to Entertain and Educate



Patrick B. Garvey, MD
2017 Scientific Program Chair

The 2017 ASRM Annual Meeting, held January 14-17, 2017 at the beautiful Hilton Waikoloa Village Resort and Spa on the Big Island of Hawaii, was a tremendous success. This spectacular Polynesian island paradise venue provided a breathtaking setting for the exchange of scientific information and an engaging social program. The theme of year's meeting, "Innovations, Outcomes, and Quality," highlighted the most cutting edge advances and showcased the current best practices in reconstructive microsurgery. This year's ASRM meeting, overseen by ASRM President Dr. Charles Butler, set a record

for attendance with over 600 attendees to the sunny Kohala Coast, the most registrants for an ASRM meeting in the history of the society.

Highlights of the program included the "Masters" symposium, organized by Dr. Jesse Selber, which was a video program

continued on page 6



Incoming president David Chang, MD (left) is welcomed by outgoing president Charles E. Butler, MD



Dr. Julian Pribaz (above) was a winner for Best Save in the popular Best Case/Best Save session, which affords members an opportunity to both laugh and learn.

PRESIDENT'S MESSAGE

Advancing Our Mission



**David W. Chang,
MD**
President

It is my great honor to serve as the President of ASRM for 2017. The mission of ASRM is "to promote, encourage, foster, and advance the art and science of microsurgery and complex reconstruction." This year we hope to highlight how ASRM and our members, either individually or as a group, have advanced our mission by sharing their expertise, innovations and resources within the Society, and with the reconstructive microsurgery community at large to promote excellence in our field. We have also formed a task force to help develop an Outreach Program that will encourage, foster and make it easier for our members to engage in various serving opportunities nationally and globally.

It is important for us to continue to collaborate with other organizations and interact with other communities to look for new opportunities for our members to advance the art and science of microsurgery and complex reconstruction. For the past 2 years, we have been working with LERN (Lymphedema Education and Research Network) to develop a joint research grant, and this year we will start to

accept the applications for this new program. We owe a big gratitude to Paul Cederna, the Education Committee Chairman, for working with LERN to make this new joint venture possible.

We look forward to our Annual Meeting in January 13-16, 2018 at the beautiful El Conquistador Hotel in Fajardo, Puerto Rico. It is a Waldorf Astoria Resort located on a 300-foot bluff overlooking the Atlantic Ocean, Caribbean Sea and El Yunque Rain Forest. Program Co-Chairs Drs. JP Hong and Julie Park, along with Program Committee members, are already busy at work planning a great scientific meeting that will highlight our innovations and how our members have interacted and shared their ideas, expertise and resources to further education and training of our residents, fellows and colleagues to promote excellence in Reconstructive Microsurgery. We are also working on a wonderful combined program with AAHS/ASPN.

continued on next page

"This year we hope to highlight how ASRM and our members, either individually or as a group, have advanced our mission by sharing their expertise, innovations and resources."



The Past President's Breakfast is a tradition at the Annual Meeting. Left to right: L. Scott Levin, Robert Russell, David T.W. Chiu, Lawrence Colen, Keith Brandt, Randy Sherman, Peter Neligan, Chris Pederson, and Greg Evans.

PRESIDENT'S MESSAGE *Continued*

It is critical to ASRM's mission to continue to support programs such as ASRM/PSF Combined Pilot Research Grants, Medical Student Research Grants, International and Medical Student Travel Grants, WMG Scholarships, ASRM/LERN Combined Research Grant, the Godina Traveling Fellowship and the Visiting Professor Program. To provide these great opportunities we depend on dues and Future Growth Fund donations. I would encourage all our members to visit our website to pay your membership dues and make a contribution to the Future Growth Fund.

I look forward to working with you for the next year and if you have any suggestions, questions, concerns regarding ASRM, please do not hesitate to contact me at dchang@surgery.bsd.uchicago.edu.

Sincerely,
David W. Chang, MD

RM

ASRM is now on FACEBOOK!

Join the ASRM members-only Facebook group TODAY. WHY?

- Share ideas and news relevant to the ASRM community.
- View and post photos from the Annual Meeting and other experiences from around the world.
- Communicate with your fellow members in an easy way

This is a closed group, available to ASRM members only.

Find us on 



2018

ASRM

ANNUAL
MEETING



American Society for
Reconstructive Microsurgery

JANUARY 13-16, 2018

El Conquistador Hotel
Fajardo, Puerto Rico

Call for Abstracts!
Submission Deadline / Sunday, July 2, 2017

www.microsurg.org

FROM THE EDITOR

Building Bridges of Excellence



**Liza C. Wu, MD,
FACS**
Editor

A bridge is a structure that contains a foundation, support, and pathway. Its purpose is to provide passage over some obstacle. The significance is that it is a means for connection, progress, and advancement.

In the field of reconstructive microsurgery, microsurgeons are constantly building bridges both literally and figuratively. Whether it is bridging the gap between two nerves or connecting blood vessels, we use microsurgery to reestablish continuity, to restore form and function to individuals impaired by trauma or cancer.

The mission of the American Society for Reconstructive Microsurgery is to promote, encourage, and foster the practice of micro-neurovascular surgery.

We must define the path for the education of our students, residents, and fellows. We need to share ideas and knowledge with our colleagues both nationally and internationally. The ASRM as a society provides the foundation and support, and the Annual Meeting provides a pathway for these ideas. As members, our goal is to cross the bridge as a way to advance the art and science of our field.

Dr. Charles Butler and Dr. Patrick Garvey put together an outstanding program at the American Society for Reconstructive Microsurgery 2017 Annual Meeting in Waikaloa, Hawaii. As we reflect on the knowledge that we gained during that meeting, the information provided has a laid foundation for future growth.

As a new endeavor, the president of the ASRM, Dr. David Chang, has added an additional effort to the overall mission of the ASRM, one of service and outreach. His vision is to build community over conflict, collaboration over confrontation. We look forward to the evolution of his vision. **RM**

Notice Regarding Zika Virus in Puerto Rico

The American Society for Reconstructive Microsurgery looks forward to welcoming you to the 2018 Annual Meeting at the El Conquistador in Fajardo, Puerto Rico. The society's leadership has been closely monitoring the developments related to the Zika virus and will continue to do so. The leadership encourages members and attendees to seek information and travel-related advice on the Zika Virus on the CDC website, the El Conquistador website as well as other media sources. Visit www.microsurg.org for more information on the 2018 Annual Meeting.

RECONSTRUCTIVE MICROSURGERY

President

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*The mission of the
American Society for
Reconstructive Microsurgery
is to foster excellence and
innovation in microsurgery
and reconstructive surgery.
ASRM upholds the values of
Integrity, Collegiality,
Scholarship and Innovation.*



9TH CONGRESS OF WORLD SOCIETY FOR RECONSTRUCTIVE MICROSURGERY

June 14(Wed) – 17(Sat), 2017
COEX, Seoul, Korea

"Bridging the Gap and Beyond"

WSRM
2017

www.wsrmm2017.com

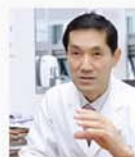
The WSRM 2017 is just around the corner ! Make sure you are also on board!



David CC Chuang, M.D.

President, WSRM
2015-2017.

"The WSRM has involved the world's major groups of reconstructive microsurgeons. It provides the most wonderful opportunities and benefits to many microsurgeons to share and change of their thoughts, ideas and techniques, to meet many pioneers in different specialized fields, and to get acquainted with many friends from different countries."



Myong Chul Park, M.D., Ph.D

Chairman
Organizing Committee of WSRM 2017.

"Under the theme of "Bridging the Gap and Beyond", the Organizing Committee of WSRM 2017 is now putting its utmost efforts to put together an excellent scientific program in order to ensure that you are up-to-date with the latest trends and developments by distinguished microsurgeons from around the world."

Pre-congress Video Workshop

Wednesday, June 14, 2017 12:30-17:45

- Breast: DIEP/TRAM Flap, PAP/four Flaps
- Lymphatic: Supraclavicular LN transfer, LVA
- Transplant: Facial, Bilateral Hand
- Facial Reanimation: Endoscopy Assisted Gracilis, one-stage LD
- Head and Neck: Vascularized Fibular Mandible, Nasal Reconstruction
- Flaps: Keystone, Propeller, Venous, Fibular Head
- Lower Extremity: Neuromusculotendinous Transfer

Registration for a Pre-congress Video Workshop is only possible in conjunction with a full conference registration in advance. And Pre-congress Video Workshop is an additional cost (US\$50) and is not included in the registration fee.
Lunch and coffee will be served.



**Have you decided
Where you're
going to stay?**

The official Housing Bureau of WSRM 2017 will assist you to book a hotel for your stay in Korea.

*** Deadline : May 14**

**Last Chance
to Register with the
Discounted Price!**

Category	Regular Registration (April 1 – May 10, 2017)	Late Registration (May 11, 2017 - Onsite)
WSRM Member	US \$ 750	US \$ 850
WSRM Non Member	US \$ 850	US \$ 950
Resident/ Fellow / Allied Health Professional	US \$ 400	US \$ 450
Medical student* (meal ticket)	US \$ 250	US \$ 300
Accompanying Person	US \$ 300	US \$ 400
Pre-Congress Video Workshop (June 14, 2017)	US \$ 50	US \$ 50
Congress Dinner Ticket	US \$ 100	US \$ 100

WSRM 2017 Secretariat (MICEPT)

Rm.1110, 273, Digital-ro, Guro-gu, Seoul, Korea (08381)

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2017 MEETING HIGHLIGHTS

Continued

that delved into the step-by-step process of how the leaders in our field achieve excellence in advanced reconstructive microsurgery. The cases presented at this year's "Best Case/Best Save" were perhaps the most spectacular ever presented at our meeting. The Best Case was awarded to Dr. Adam Maciejewski, and the Best Save was awarded to Dr. Julian Pribaz. Godina fellow, Dr. Jan Jeroen Vranckx, detailed his exciting travels during his fellowship year. The Women in Microsurgery luncheon and the Young Microsurgeons' Group forums were resounding successes. Many new instructional courses, such as "How to do the Fastest DIEP," were so well attended as to have standing room only. This year's invited lecturers, Dr. R. Barrett Noone, Dr. Randall S. Weber, and Dr. Robert L. Walton delivered thoughtful insights and words of inspiration.

The newly revamped short paper presentations session provided a fresh format that successfully allowed 28 additional abstracts to be presented in two hours as oral presentations rather than posters. The "Sewing with the Masters" program was successfully expanded to three days with two microscope stations, with meeting attendees signing up for every available time slot. In summation, the weather was perfect, the snorkeling and swimming were world class, the views of active lava flows on Mount Kilauea were nothing short of a spiritual experience, and the collegiality among our society members provided lifelong memories. The 2017 ASRM meeting set the standard of excellence bar high for our society.

Please mark your calendars for next year's ASRM Annual Meeting, which will be held January 13-16, 2018 in Fajardo, Puerto Rico, at the El Conquistador Resort. **RM**



Above: Godina Lecturer Jan Jeroen Vranckx, MD. At right: Ming-Huei Cheng, the William A. Zamboni Visiting Professor, gave a lecture on Sunday.



Attendees enjoyed catching up with colleagues at the Welcome Reception.



2017 MEETING HIGHLIGHTS *Continued*



Dr. Charles Butler (right) presents plaque to Program Chair Dr. Patrick Garvey.



R. Barrett Noone, MD (right), gave the President's Lecture.



Veteran independent journalist Miles O'Brien was the Joint Presidential Keynote Speaker



Annual meeting business sessions were well attended



Sewing with the Masters

Outstanding Paper Awards

Alixandra L. VanBelkum, BA

Muscle Graft Volume Implanted in Regenerative Peripheral Nerve Interfaces Influences Electrical Signal Transduction

Mark V. Schaverien, MD, Med, Msc, FRCS

Trainee Selection and Correlation with Cognitive and Microsurgical Technical Skills



Mark V. Schaverien, MD, Med, Msc, FRCS (left), Outstanding Paper Award Winner

psen
PLASTIC SURGERY EDUCATION NETWORK

PSEN recorded sessions from all three meetings at the AAHS ASPN ASRM Annual Meetings are available for sale. For more information, please visit <http://www.psenetwork.org/aahs-aspn-asrm-2017>.

2017 ANNUAL MEETING IN REVIEW



Between sessions, members explore new products in the Exhibit Hall.



Adam Maciejewski, MD (left) receives the Best Case of the Year Award from Michael Zenn, MD

Special Awards

Best Microsurgical Case of the Year Award Winner

Adam Maciejewski, MD

Composite Neck Transplantation

Best Microsurgical Save of the Year Award Winner

Julian Pribaz, MD

Total Face and Scalp Reconstruction without Transplant



Robert L. Walton, MD, 2017 Buncke Lecturer



The panel of judges for the Best Case/Best Save presentation.



The Young Microsurgeons Reception was a chance to unwind and make new connections.



The dinner on Monday brought out plenty of smiles.



2017 ANNUAL MEETING IN REVIEW

THANK YOU TO THE FOLLOWING ASRM ANNUAL MEETING 2017 EXHIBITORS FOR THEIR SUPPORT AND PARTICIPATION:

3D Systems - Medical Modeling	Micrins Snowden-Pencer	Smith & Nephew, Inc.
Acelity: KCI, Lifecell	MicroAire	Spectros Corp.
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Synovis Micro Companies Alliance, Inc.
ViOptix, Inc.

AMERICAN SOCIETY FOR RECONSTRUCTIVE MICROSURGERY

2017 Committees

Audit

Gregory Borschel, MD, *Chair*
Edward Chang, MD
Albert Chao, MD

Buncke Lectureship

Charles Butler, MD, *Chair*
David Chang, MD
JP Hong, MD
Julie Park, MD
Roman Skoracki, MD
Jan Vranckx, MD

Bylaws

Raymond Dunn, MD, *Chair*
Jeff Kozlow, MD
Julie Park, MD
Jon Ver Halen, MD

CPT/RUC

Mark Villa, MD, *Chair*
Scott Hansen, MD
Liza Wu, MD

Education

James Higgins, MD, *Chair*
Edward Chang, MD
Victor Hassid, MD
Mark Tan, MD

Electronic**Communications**

Patrick Garvey, MD, *Chair*
Matthew Hanasono, MD
Raman Mahabir, MD
Vu T. Nguyen, MD

Finance

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Guenter Germann, MD
Bernard Lee, MD
Howard Levinson, MD

Future Growth

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Bernard Lee, MD
L. Scott Levin, MD, FACS
Steve Moran, MD
Peter Neligan, MD

Godina Fellowship Selection

Joseph Disa, MD, *Chair*
Jim Butterworth, MD
David Chang, MD
Matthew Hanasono, MD
Jan Vranckx, MD

Master Series Program

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Edward Chang, MD

Membership

Joseph Disa, MD, *Chair*
Albert Chao, MD
Scott Hollenbeck, MD
Joan Lipa, MD
Julian Pribaz, MD
Liza Wu, MD

Microsurgery Fellowship

Babak Mehrara, MD, *Chair*
Joseph Disa, MD
Matthew Hanasono, MD
Gordon Lee, MD
Valerie Lemaine, MD

Nominating

Charles Butler, MD, *Chair*
Mark Clemens, MD
Greg Evans, MD
L. Scott Levin, MD
Michael Neumeister, MD
William Pederson, MD
Jen Robinson, MD
Jon Ver Halen, MD

Program

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Julie Park, MD, *Co-Chair*
Rudy Buntic, MD
Eric Chang, MD
Amir Dorafshar, MD
Patrick Garvey, MD
Joan Lipa, MD
Evan Matros, MD
Dung Nguyen, MD
Dhruv Singhal, MD
Roman Skoracki, MD
David Song, MD

Research

Paul Cederna, MD, *Chair*
Evan Matros, MD
Scott Hollenbeck, MD
Summer Hanson, MD

Technical Exhibits

Charles Butler, MD, *Chair*
David Chang, MD
Joseph Disa, MD
Patrick Garvey, MD
JP Hong, MD
Julie Park, MD

Time and Place

Charles Butler, MD, *Chair*
Greg Evans, MD
Allen Bishop, MD

Visiting Professor

Gordon Lee, *Chair*
Charles E. Butler, MD
Ming Huei Cheng, MD
Jamie Levine, MD
Babak Mehrara, MD
Liza Wu, MD

Womens Microsurgery Group

Joan Lipa, MD, *Chair*
Angela Cheng, MD
Karen Horton, MD
Valerie Lemaine, MD
Amy Moore, MD
Melissa Poh, MD
Jen Robinson, MD
Aldona Spiegel, MD
Toni Zhong, MD

Young Microsurgeon's Group (YMG)

Jon Ver Halen, MD, *Chair*
Keith Blechman, MD
Ed Buchel, MD
Jim Butterworth, MD
Edward Chang, MD
Jeff Kozlow, MD
Valerie Lemaine, MD
Dhruv Singhal, MD

2017
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Junior Member at Large

Samir Mardini, MD

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Historian

David W. Mathes, MD

WMG Representative

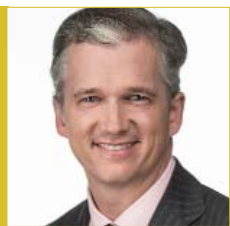
Joan E. Lipa, MD

YMG Representative

Jon P. Ver Halen, MD

YOUNG MICROSURGEONS' GROUP

The Future is Bright!



Jon Ver Halen, MD
Young Microsurgeons
Group Chair

As I begin my term as Chair of the Young Microsurgeons Group (YMG), I want to acknowledge what a tremendous privilege and honor this role is. With the support of the ASRM, it has never been a better time to be a young microsurgeon!

The recent past has seen dramatic growth in the YMG. We provide support, advice, and career development opportunities to young microsurgeons, and facilitate dialogue between our members and the more established members of the ASRM. At this past year's annual meeting in Hawaii, the YMG program was again a resounding success. As always, the social reception was a tremendous opportunity to unwind, network, and soak in some of the incredible Hawaii scenery. The YMG Forum saw a group of young microsurgeons discuss challenging cases in their first years of practice with Dr. Ed Buchel, a world renowned expert in plastic surgery. It presented an excellent opportunity for us to trouble-shoot our practices... in a few cases, some great reconstructive options were right under our noses! The YMG Panel, "Life After Residency – Should You Do a Microsurgery Fellowship," provided a lively debate about the opportunities and challenges of starting a microsurgery practice after training, and some of the considerations young microsurgeons should have as they embark on their careers.

This past year also saw the YMG and ASRM "get social" with a dedicated ASRM Facebook page. This was a great success at the annual meeting, with frequent photos and updates throughout the week and weekend, including a fun Selfie Scavenger Hunt! Aside from fun and games, social media has incredible potential to influence both how surgeons communicate with each other, and educate our patients. Such media outlets will only gain in prominence in the future as we become more "connected."

It is a tremendous honor to follow in the footsteps of our most recent YMG Chair, Valerie Lemaine, and I look forward to making the YMG even better. I will strive to increase YMG membership and participation in the ASRM and our sister societies. We have been working on next year's program with some excellent ideas to contribute to our specialty. We will strive to make this next year the best one yet for the YMG and ASRM. As always, I welcome your ideas to further the YMG's mission. Here's to catching up in Puerto Rico! **RM**

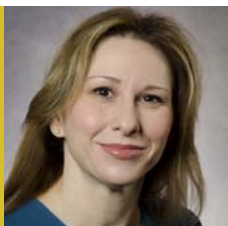
This past year saw the YMG and ASRM "get social" with a dedicated closed group ASRM Facebook page, where members can share photos and updates, and honestly discuss the issues that they face.

*The Young Microsurgeons
Group Reception*



WOMEN'S MICROSURGERY GROUP

Making Our Mark



**Joan Lipa,
MD, MSc, FRCS(C),
FACS**

Women's Microsurgery
Group Chair

The WMG had a noticeable presence at the Annual Meeting, not just because of our trademark WMG wristbands. The Mentorship Program was well-received by those who signed up in advance at the Women's Microsurgery Group webpage of www.microsurg.org. We even had Male Mentors who signed up, and will consider rolling out the program from trainees to include those early in their faculty appointment or own practice. Drs. Karen Horton and Aldona Spiegel are spearheading the mentorship effort.

The ASRM WMG Lunch Series featured a session on Conflict Resolution, with expertise from our past, present, and future leaders – Greg Evans, Paul Cederna, and Julie Park. This was an eye-opening experience for many attendees, and also brought up differences in communication styles and



Lunch Session on Conflict Resolution.

how hidden agendas can come disguised as simple questions. We also learned that Paul Cederna is a "Waterskiing King" and "Backcountry Skiing Beast"! The Lunch Series will continue at the upcoming Annual Meeting, with a session being planned on Life-Work Balance.

ViOptix has generously funded two travel scholarships for the Women's Microsurgery Group, in order to foster early interest in reconstruction microsurgery for women medical students or residents who would not normally be attending the meeting. This year we received an unprecedented number of highly competitive applications. The Resident/Fellow award went to Dr. Paschalia (Lina) Mountziaris, a resident in the Division of Plastic Surgery at Albany Medical Centre. Lina writes about her experience in this issue of *Reconstructive Microsurgery*. The Medical Student award went to Ms. Chao Long, from Stanford University. Chao's article on her experience will appear in the 2017 Autumn-Winter issue of *RM*.

Remember to mention this great opportunity to residents or students who may qualify. Applications are available on the WMG webpage. **RM**



Above and at right: The Women's Microsurgery Group Reception



The WMG Reception received wonderful support from Integra. It was a great opportunity for meeting with friends, networking, and spending time with family before heading into the ASRM Celebration that followed.

WMG *Continued*

Reflections from a ViOptix Travel Fellowship Winner

I would like to extend my most sincere thanks to the Women's Microsurgery Group and ViOptix for the 2017 Travel Scholarship to attend the American Society for Reconstructive Microsurgery Annual Meeting in Waikoloa Village, Hawaii. I was very humbled and honored to learn that I had been selected as the resident recipient of this scholarship. As a fourth year resident in the integrated plastic surgery residency at Albany Medical Center in Albany, NY, I stepped onto the plane dressed in heavy winter clothes and still thinking about the snowblower injuries, skiing accidents, and other consults I had seen on call the night before. This all quickly faded from my mind as I stepped out into the perpetual summertime weather on the Big Island. Throughout the conference, I truly felt the welcoming "Aloha" spirit for which Hawaii is infamous.

I am very grateful to my mentors, particularly Dr. Kristen Rezak, Director of the Albany Medical Center Microsurgery Fellowship, for encouraging me to apply for this scholarship, and to Dr. Joan Lipa, WMG Committee Chairperson, for her warm welcome on the first morning of my stay and for providing many introductions throughout the meeting. I was inspired to meet other microsurgeons, including current fellows and fellowship program directors, and grateful for their advice for my upcoming microsurgery fellowship applications. Attending the social aspects of the meeting provided invaluable networking opportunities. The WMG Lunch Session on Conflict Resolution and the WMG Reception provided particular insight on how such relationships would be useful in the future, as I watched established microsurgeons share information and provide career advice for professional development.

Journalist and former CNN anchor Miles O'Brien gave the Joint Presidential Keynote Lecture on the



Paschalia Mountziaris, MD, PhD, with ASRM President Charles Butler, MD

first day. It was a truly dynamic talk on his unique perspective as both a science journalist and an amputee; he developed acute compartment syndrome while on assignment and required a mid-humeral amputation. He provided valuable insight into the challenges faced by upper extremity amputees and the ways in which medicine, surgery, and technology can help. I really enjoyed the Young Microsurgeons Group Forum: "On the Hot Seat: How Would You Handle This Complication?" In addition to panel discussion, audience participation was included through cell-phone based voting on a variety of topics, e.g. the best flap or next step in the case, the best recipient vessel for the flap given complications so far, etc. It was intriguing to see the real-time thought processes of various microsurgeons in the room. During the ASRM William A. Zamboni Visiting Professors Presentation, Dr. Jamie Levine mentioned his trip to visit us at Albany Medical Center, and its special meaning since that is where he went to medical school.

I attended a variety of fascinating and diverse sessions and left the Annual Meeting with renewed excitement for complex reconstruction. During a panel discussion on "Alternative Perforator Flaps for Microsurgical Breast Reconstruction," Dr. Robert Allen showed a photo of himself and his microsurgical fellow immediately after the first DIEP flap. It was amazing to hear him reflect on such an important development in microsurgery. The scientific presentations and discussions of emerging methods

continued on next page

TRAVEL FELLOWSHIP REFLECTIONS *Continued*

in the field provided experience in reconstructive techniques and strategies that will be critical for my future career in complex microsurgical reconstruction. I was particularly excited to learn more about the recently described lateral thigh perforator (LTP) flap, and to listen to Dr. Stefania Tuinder's panel presentation on the design of innervated LTP flaps.

The Best Case presentations were a highlight of the meeting, each one more amazing than the next. Dr. Justin Sacks described a pedicled incontinuity femur-fibula construct for ventral spine reconstruction. Dr. Jesse Selber described simultaneous transplantation of scalp and calvarial bone, as well as kidney and pancreas; the plan was almost foiled by the donor's self-inflicted gunshot wound through the temple. As amazing as these presentations were, the best was yet to come. Dr. Adam Maciejewski presented the case of a 37 year-old head and neck cancer survivor, who had undergone renal transplant in 2001 for end-stage renal disease, then developed cancer and underwent total laryngectomy in 2009. Years later, with his cancer in remission, he presented to Dr. Maciejewski for reconstruction, and eventually underwent simultaneous transplantation of the neck skin, strap muscles, larynx/trachea/pharynx, and thyroid/parathyroids. Post-operatively, the patient had normal thyroid function and regained vocal

cord function. Most impressive of all, the patient, a native Polish speaker, learned English to tell the ASRM audience the huge impact that this reconstruction had on his quality of life. This really spoke to me, as I find this psychological impact of microsurgical reconstruction to be a very rewarding and worthy cause.

Attending the 2017 ASRM Annual Meeting proved to be a truly inspirational and valuable opportunity. I am thankful for the welcoming hospitality of Dr. Lipa and all the members of the Women's Microsurgery



Above: Lina with Dr. Joan Lipa. At right: Lina with Dr. Kristen Rezak, Dr. Siba Haykal... and a dolphin!



Group, as well as for the generosity of the WMG and ViOptix in funding my trip. I look forward to an academic career combining my interests in tissue regeneration and microsurgical reconstruction, and I am very appreciative of the valuable educational and networking opportunities that I gained by attending the Annual Meeting. Thank you again!

Sincerely,
Paschalia (Lina) Mountziaris, MD, PhD
Albany Medical Center, Albany, NY

FIND A PHYSICIAN This is a reminder to sign up for the "Find a Physician" tool made available on the ASRM website. This added membership benefit allows you to be included in a searchable public listing. Please keep in mind this is an optional resource so you are not required to input your information, but if you wish to participate please log in to the members section of the ASRM website to complete your profile. If you have any questions or difficulty, please contact Krista Greco at kristagreco@isms.org or you can call the Central Office at 312-456-9579. We look forward to your continued participation in the ASRM. **RM**

INTERNATIONAL TRAVEL GRANT

Report from the 2017 International Travel Grant Recipient



Erika de la Concha, MD
Mexico

I would like to thank the American Society of Reconstructive Microsurgery for encouraging young surgeons from underdeveloped countries to expand their knowledge in microsurgery by helping us attend this high quality meeting with cutting edge topics and internationally recognized faculty. By attending this meeting I got to meet professors, fellows and residents, like myself, coming from all over the world allowing me to exchange different opinions and discuss complex cases. This was a great opportunity for me to start a network that could bring to future collaborations in research or in other academic projects. This meeting is recognized by microsurgeons as one of the best meetings on this subject as it reunites the best doctors in each field: peripheral nerve, lymphedema, head and neck, lower limb, and breast reconstruction, among others, which allowed me to learn from the best on all this topics in the same meeting.

This meeting had a very positive impact in my professional career because I believe we have a commitment with our patients to continue to do research and to keep seeking advancements and improvements in our techniques to achieve better results and this means being up to date with all topics in microsurgery. I want to be fully

prepared with the best training possible and by taking the most advantage of this meeting I can take this knowledge to my upcoming years in practice and create new pathways to solve our current problems. I wish to continue to attend this meeting in the upcoming years after finishing my fellowship in microsurgery to collaborate in this continuing exchange of ideas. Thank you so much for this support. **RM**

"Attending this meeting allowed me to exchange different opinions and discuss complex cases."

OBITUARY

Kayvan Khiabani, MD



ASRM member Kayvan Khiabani passed away on April 18, 2017 at the age of 51 due to injuries from a tragic bicycle accident. Dr. Khiabani was a tenured professor of surgery at the University of Nevada School of Medicine where he was head of the section of micro-neuro-vascular and chief of hand surgery at University

Medical Center. He was a passionate reconstructive plastic surgeon and mentor to many. Kayvan was a member of many prestigious surgical societies, including the ASRM, and was actively involved in teaching many continuing medical education courses in reconstructive and hand surgery. He is survived by his devoted wife, Katy; sons, Aria and Keon; his parents, Ali and Touran Taghipour Khiabani; and his sister, Kathy Taghipour Khiabani. **RM**

ASRM MEMBERSHIP

2016-2017 New Members

Active

Shagun Aggarwal, MBBS, MS, FRACS

Rozina Shahzady Ali, MD, FRCS, MBBS

Jacqueline Bastiaanse, MD, PhD

Muneera E.A.A. Ben-Nakhi, MD

Craig A. Blum, MD

Harvey W.M. Chim, MBBS, FACS

Jorge Alejandro Conejero, MD, FACS

Marco Ellis, MD

Christine Fisher, MD

Oren Ganor, MD

Francesco Gargano, MD, PhD

Olivia Ho, MD, FRCSC

Robert Thomas Howard, MD, FACS

Avinash Islur MD, FRCSC

Mehul Kamdar, MD

Kevin R. Knox, MD

Rene Denis Largo, MD



Cheng-Hung "Luke" Lin, MD

Moein Momtazi, MD, MSc, FRCSC

Andrew S. Newman, MD

Adrian Seng Huan Ooi, MD

Raymond Anthony Pensy, MD

Edward Ray, MD, FACS

Peter Charles Rhee, DO, MS

David E. Sahar, MD, FACS

Timothy A. Schaub, MD

Mark Schaverien, MD, MSc, Med, FRCS

Farooq Shahzad, MBBS, FACS

Christopher M. Shale, MD

Dhruv Singhal, MD

Ali Soltani, MD

Maakan Taghizadeh, MD

Sumeet S. Teotia, MD

Paul Hoa Tran, MD

Hidehiko Yoshimatsu, MD

Wei Feng Zeng, MD

Candidate

Robert Johnson Allen, Jr, MD

Faisal Ashfaq, MBBS, FCPS

Carrie Black, MD

Anca Bordianu, MD, PhD

Courtney Anne Carpenter, MD

Matthew Chetta, MD

Bianca Chin, MD

Emily M. Clarke-Pearson, MD, MEd

Ingrid M. Ganske, MD, MPA

James R. Gatherwright, MD

Joshua J. Goldman, MD

Edward Hahn, Jr, MD

Kevin D. Han, MD

Aladdin H. Hassanein, MD, MMSc

Stacy Rebecca Henderson, MD

Cedric L. Hunter, MD

Suzanne M. Inchauste, MD

Waqas Jalil, MD

Jason Daniel Johnson, DO

Irena Karanetz, MD

Nikolas Hajime Kazmers, MD

Snehankita Kulkarni, MD

Brock Lanier, MD

Allison Nauta, MD

Marilyn Ng, MD

Anaeze Offodile, MD

Alexis Lanteri Parcels, MD

Jessica F. Rose, DO

Fares Samra, MD

Mark A. Schusterman II, MD

Vishal Kumar Sharma, MD, MEd

John W. Shuck, MD

Ji Son, MD

Janelle D. Sousa, MD

Jill Stone, MD

John Timothy Stranix, MD

William Donn Tobler, Jr, MD

Kavita Vakharia, MD

Julian Winocour, MD

Alice S. Yao, MD

Mehmet Emin Cem Yildirim, MD

Shuhao Zhang, MD

Kevin Zuo, MD

RM



ASRM Merchandise

**Support the Future
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EDUCATION COMMITTEE

Microsurgical Pearls: Donor Site Management



James Higgins, MD

Education Committee
Chair

As the field of microsurgery progresses, we realize we are lucky to be practicing during a period of remarkable innovation. If one were to be asked what the future of microsurgery holds, one would think of the innovations in four major areas: allotransplantation, tissue engineering, bioprosthesis, and autogenous reconstruction.

We've looked at these areas as being the source of improving our aesthetic and functional outcomes, and look toward the day when reconstruction can be performed without donor site morbidity being a consideration.

"You should never assume that any tissue type will reflexively be harvested from the same site in every case."

However, many of these fields are still in their infancy and our routine offerings in reconstructive surgery focus on autogenous reconstruction. Whether we work in craniofacial reconstruction, hand surgery, lower extremity surgery, breast reconstruction, burn surgery, etc., we all seek the best results at the lowest cost.

Minimizing donor site morbidity is a challenge we face every day. There are flaps we've all abandoned because of

unacceptable impact on the aesthetic result, complications with nerves, fractures, vascular injuries, etc. Over the last two decades, we have gravitated towards the flaps we know can be harvested with the least impact on the patients. Flaps such as the gracilis flap, the lateral arm flap, the anterolateral thigh flap, the SGAP flap, medial sural artery perforator flap and a growing multitude of other freestyle perforator flaps can enable us to "get in and get out" with minimal detectable impact.

Despite our focus on the selection of the flap, we may often find ourselves in major reconstructive cases where a multitude of different tissue types are required. When these are all vascularized on a common pedicle, we describe this as a chimeric flap. However, there is a very common opportunity to minimize donor sites when multiple grafts are required as well. It's a simple concept but often overlooked. Whether trainee or seasoned reconstructive surgeon, we can all recount times where we realized we harvested multiple grafts from various sites and could have combined these sites for the benefit of the patient.

Many of the common harvest sites we use offer a portal for harvest of multiple other grafts, and we should always be vigilant to combine these when possible. We stress in our training of young hand surgeons that you should never assume that any tissue type will reflexively be harvested from the same site in every case.

continued on next page

ASRM Calendar



JANUARY 13–16, 2018

ASRM 33rd ANNUAL MEETING

El Conquistador
Fajardo, Puerto Rico



FEBRUARY 2–5, 2019

ASRM 34th ANNUAL MEETING

JW Marriott Desert Springs
Resort and Spa
Palm Desert, California



JANUARY 11–14, 2020

ASRM 35th ANNUAL MEETING

Marriott Harbor Beach
Resort and Spa
Ft. Lauderdale, Florida

COMMITTEE REPORT: RESEARCH

Providing Opportunities: The Year in Review



Paul Cederna, MD
Research Grant
Committee Chair

It has been a busy year for the American Society for Reconstructive Microsurgery Research Committee. We have made substantial progress towards not only increasing the number of research funding opportunities available to members of the ASRM but have also opened the door to increase the depth and breadth of funding through additional collaborative efforts. We have also spent a substantial amount of time ensuring that we are providing additional funding opportunities not only for our ASRM members but for residents and medical students as well. I will now summarize the

efforts of our committee over the past year.

Committee Roster

Paul Cederna, *University of Michigan*

Evan Matros, *Memorial Sloan Kettering Cancer Center*

Scott Hollenbeck, *Duke University*

Summer Hanson, *MD Anderson Cancer Center*

MEDICAL STUDENT GRANTS

The American Society for Reconstructive Microsurgery (ASRM) recognizes the importance of fostering the development of surgeon scientists and innovative research in micro-

surgery and reconstructive surgery. We are committed to investing in the future of our specialty and developing the next generation of leaders in microsurgery and to support a research experience for Medical Students. To this end, we have created the ASRM Medical Student Research Grants which provide \$2500 for a 3 month research period. This past year the award recipients were:

Alexandra Keane

Institution: Washington University, St. Louis

Title of Project: *"Role of Macrophage Recruitment on Neuromuscular Junction Reinnervation After Motor Nerve Injury"*
(report published on page 22)

continued on next page

MICROSURGICAL PEARLS *Continued*

A good example of this would be the workhorse gracilis flap. If harvesting as a muscle flap, one should consider the skin laxity of the thigh as an opportunity for harvesting skin via the same incision as a gracilis muscle harvest. In our center, we scalpel-harvest skin via a longitudinal (or a transverse) ellipse as a split or full-thickness graft. The underlying dermis and fat is then excised and discarded, leaving generous access for ease of harvest of the gracilis muscle. The donor site can then be closed as a longitudinal suture line without the need of a lateral thigh dermatome harvest, avoiding a conspicuous and unnecessary additional scar.

Likewise, if one were harvesting the gracilis or latissimus muscle for soft tissue coverage with a mangled limb, one should never forget the otherwise unused motor branches to these muscles that can be harvested as nerve autograft without needing to then proceed to another additional donor site. This would save the patient an additional incision and anesthetic donor site.

Tendon grafts commonly needed for upper extremity reconstruction can always be harvested via the same incision as an anterolateral thigh flap (TFL). Lesser saphenous vein harvest allows ease of access to

the plantaris tendon. MFC harvest can readily provide overlying skin graft and adductor tendon graft. Examples of combined donor sites abound.

It's a simple concept and may seem to save the surgeon only minimal time and effort. But to the patients, these small details and lower morbidity may appear to be the most important aspect of the case. So whenever harvesting a flap, we should always think to ourselves: can this site provide me everything I need? **RM**

RESEARCH COMMITTEE REPORT

Continued

Alixandra VanBelkum

Institution: University of Michigan Medicine

Title of Project: *"Determination of Reinnervation by Motor, Sensory, and Mixed Nerves in Regenerative Peripheral Nerve Interfaces (RPNI)s"* (report published on page 20)

The award recipients both attended the 2017 ASRM Annual Meeting held in Waikoloa, Hawaii, and presented their work. Both presentations were outstanding and well received by all in attendance. Their separate reports on the outcomes of their research are published in this newsletter. We also look forward to seeing their work published in the plastic surgery literature.

The Research Grants Committee recently completed review of the 5 new 2017 ASRM Medical Student Grant applications. All of the grants were outstanding and the committee had a difficult time selecting the two award recipients. It is with great pleasure that we announce the 2017 ASRM Medical Student Grant Award Recipients are:

David Paul Perrault

Institution: Keck School of Medicine of the University of Southern California

Title of Project: *"Critical Ischemia Time for Vascularized Lymph Node Flaps"*

Ishani Premaratne

Institution: Weill Cornell Medicine

Title of Project: *"Perfusion of Tissue-Engineered Pre-Vascularized Skin Flap"*

We look forward to hearing their presentation next year at our 2018 ASRM Annual Meeting and seeing their work published.

ASRM/PSF COMBINED GRANTS

Our first goal was to increase the number of grants offered to members of

ASRM through the ASPS/PSF Combined Pilot Grant Program. The ASPS/PSF established combined grants five years ago with subspecialty societies. The goal of the Combined Pilot Grant Program was to allow the ASPS/PSF to donate \$5000 towards a grant and the subspecialty society to contribute an additional \$5000, for a total award of \$10,000. Through this program, the ASRM can select which grant gets funded to ensure that the goals, objectives, and priority areas for the ASRM are honored and maintained. The ASRM now offers a second combined grant which will allow the ASRM to award two \$10,000 grants to their membership. The total investment for ASRM is \$10,000 but the total amount of grant funding is \$20,000. We are excited about this new opportunity for funding for our membership and should provide us flexibility to begin evaluating various types of grants which have the opportunity to enhance the diversity of the ASRM research funding portfolio. Last year's recipients of the two grants were:

Anthony Echo, MD

Institution: The Methodist

Hospital Research Institute

Title of Research: *"Measuring Stress Levels in Novice Surgical Trainee While Learning Novel Microsurgical Tasks"*

(report published on page 23)

Kasandra Hanna, MD

Institution: University of Virginia School of Medicine

Title of Research: *"Recovery from Mastectomy: Qualifying Survivorship through Patient-Centered Outcomes"*

(report to be published in Fall issue)

The Plastic Surgery Foundation Study Section, along with our ASRM representatives, has just completed the grant review process for the 2017-2018 grant cycle and we will be forwarding the ASRM/PSF Combined Grants scores to the ASRM for review and funding allocation.

MEDICAL STUDENT ANNUAL MEETING SCHOLARSHIP

We have once again offered the Medical Student Annual Meeting Scholarship to allow medical students interested in microsurgery to attend our 2017 ASRM Annual Meeting. There was a great deal of interest in the program this year as demonstrated by the receipt of 25 applications this year. Three meeting scholarships were generously awarded by the ASRM to:

Zachary Collier

Geoffrey Hespe

Jason Silvestre

INTERNATIONAL TRAVEL GRANT

We received 7 applications for the International Travel Grant program to support an international microsurgeon from an underdeveloped location to attend the 2017 ASRM Annual meeting. Two travel grants were awarded this year to:

Erika de la Concha

Usama Frghaly Omar

continued on next page

RESEARCH COMMITTEE REPORT

Continued

COMBINED RESEARCH GRANT WITH THE LYMPHATIC EDUCATION AND RESEARCH NETWORK

We have spent the last 18 months in conversations with the Lymphatic Education and Research Network to develop a combined research grant with the ASRM in the area of lymphatic research. We have had numerous conversations with William Repici, Executive Director of the LERN. We have also had numerous conference calls with Stanley Rockson, Stanford University, and David Zawieja, Texas A and M, the two medical directors for the LERN. They are all highly motivated to

begin this program. We have developed a Memorandum of Understanding with the following details:

- \$5000 Grant: \$2500 from ASRM, \$2500 from LERN
- Grants reviewed by ASRM Research Grants Committee and scored
- Grants reviewed by LERN Research Grants Committee and scored
- Scores of grants shared between Research Grant Committees
- ASRM and LERN agree to which grant should be funded

It is with great pleasure that the leadership for the LERN and the

ASRM have agreed to the terms of the ASRM/LERN Combined Research Grant. The first grant deadline will be December 1, 2017, with funding to begin July 1, 2018 – June 30, 2019. We are very excited to start this new funding mechanism.

CONCLUSIONS

Our goal is to enhance the diversity of our research portfolio of the ASRM to ensure that our members have the opportunity to innovate, discover, and advance the field of reconstructive microsurgery. We have made substantial strides this year towards that goal and are excited about the future of ASRM research. **RM**

RESEARCH GRANTS

Conclusions from Medical Student Research Grant Award Recipients, Part I

DETERMINATION OF REINNERVATION BY MOTOR, SENSORY, AND MIXED NERVES IN REGENERATIVE PERIPHERAL NERVE INTERFACES (RPNI'S)

AL VanBelkum, BA; NG Lawera; V Thieu; ZN Khatib; MG Urbanchek, PhD; PS Cederna, MD; SWP Kemp, PhD

Upper extremity amputation is devastating and severely impairs quality of life for affected patients. Current prosthetic devices are lacking and do not provide their users with sufficient and precise motor control or sensory feedback to perform activities of daily living. When using a prosthetic limb, everyday tasks such as buttoning a shirt or holding a hot cup of coffee with just enough pressure to keep it from slipping become infeasible. Our laboratory has developed a Regenerative Peripheral Nerve Interface

(RPNI), with the ultimate goal of providing amputees with motor control of and meaningful sensory feedback from their prosthetic limbs. RPNI's are constructed within the residual limb by securing a free muscle graft to enclose the end of a residual nerve fascicle. Multiple RPNI's can be constructed within a residual limb, as a free muscle graft will be transferred to surround the distal aspect of each residual nerve fascicle. Conceptually, a motor command originating in the CNS will travel to its corresponding motor nerve, into the RPNI, to an electrode implanted on the RPNI surface, and to the prosthetic limb to elicit coordinated movements. This sophisticated model will provide the patient with multiple degrees of freedom, in a high-fidelity manner, thereby significantly improving a patient's quality of life.

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RESEARCH GRANTS

REINNERVATION IN RPNI'S *Continued*

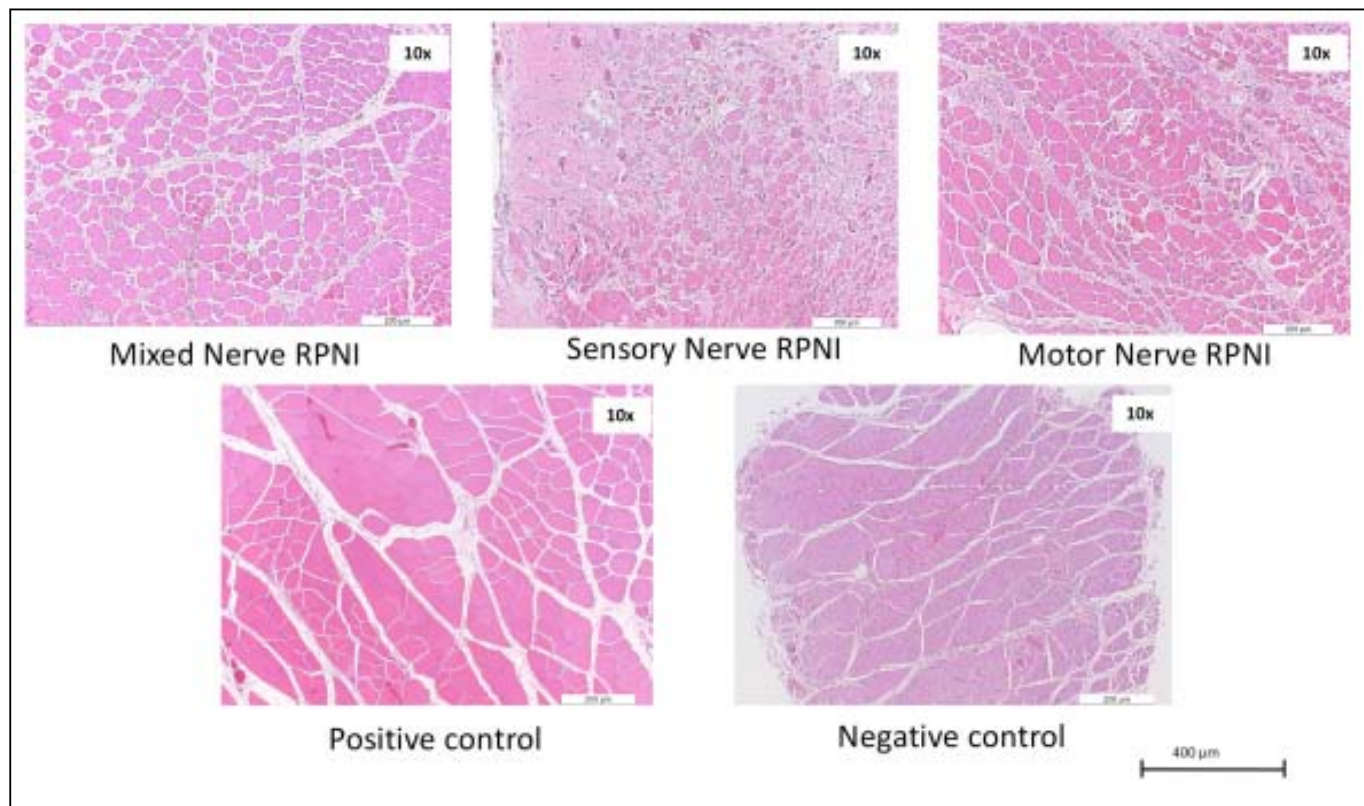
Our previous rat studies have demonstrated long-term function of RPNI's and high signal-to-noise ratio without adverse biological effects. However, characterization of different types of RPNI's has not yet been evaluated. In order to do this, we divided twenty-four rats into four groups: 1) motor RPNI (femoral nerve, n=6), 2) sensory RPNI (sural nerve, n=6), 3) mixed nerve RPNI (peroneal nerve, n=6), and 4) control (n=6). The control group was divided into two sub-groups: A) positive control (surgical naïve animal, left leg), B) negative control (common peroneal nerve transected and not repaired, right leg). All groups were evaluated 3 months after their initial surgery. Nerve conduction velocities and CMAP's were recorded for all groups. Each group was visualized with H&E staining. All RPNI's were harvested and are currently being processed via Immuno-Enabled Three-Dimensional Imaging of Solvent-Cleared Organs (IDISCO) for visualization of nerve fibers. Retrograde labeling

was undertaken to examine the number of neurons contributing fibers to each RPNI. Additionally, a 5-mm nerve segment proximal to the RPNI was harvested for histomorphometry.

All RPNI's were well-vascularized 3 months after initial surgery. Electrical stimulation reliably elicited compound muscle action potentials (CMAP's) in all RPNI's, and the mixed nerve RPNI group had the greatest CMAP's. Although RPNI's were healthy 3 months post-operatively, final muscle weights were lower than when originally implanted. The mixed nerve RPNI had the largest terminal weight. H&E imaging revealed viable muscle fibers in motor, sensory, and mixed nerve RPNI's, whereas the negative control group lacked healthy muscle fibers.

Motor, sensory, and mixed nerve RPNI's displayed robust neural regeneration. Results from this study will enable us to further evaluate electrode-biological interfaces, and help us develop future prostheses with the ability to respond to both motor and sensory neural signals. Enhanced motor control of and sensory feedback from prosthetic limbs will greatly improve quality of life for prosthetic users. **RM**

Figure 1: H&E staining for all control and experimental groups. Motor, Sensory, and Mixed nerve groups had viable muscle fibers 3 months post-operatively. Positive control represents native EDL and has viable muscle fibers. Negative control represents denervated EDL and lacks viable muscle fibers. 10x.



RESEARCH GRANTS

Conclusions from Medical Student Research Grant Award Recipients, Part II

THE ROLE OF MACROPHAGES DISTAL TO THE NERVE INJURY AT THE NEUROMUSCULAR JUNCTION (NMJ)

AM Keane, BA; KB Santosa, MD; A Jablonka-Shariff, PhD; AK Snyder-Warwick, MD

Washington University School of Medicine in St. Louis

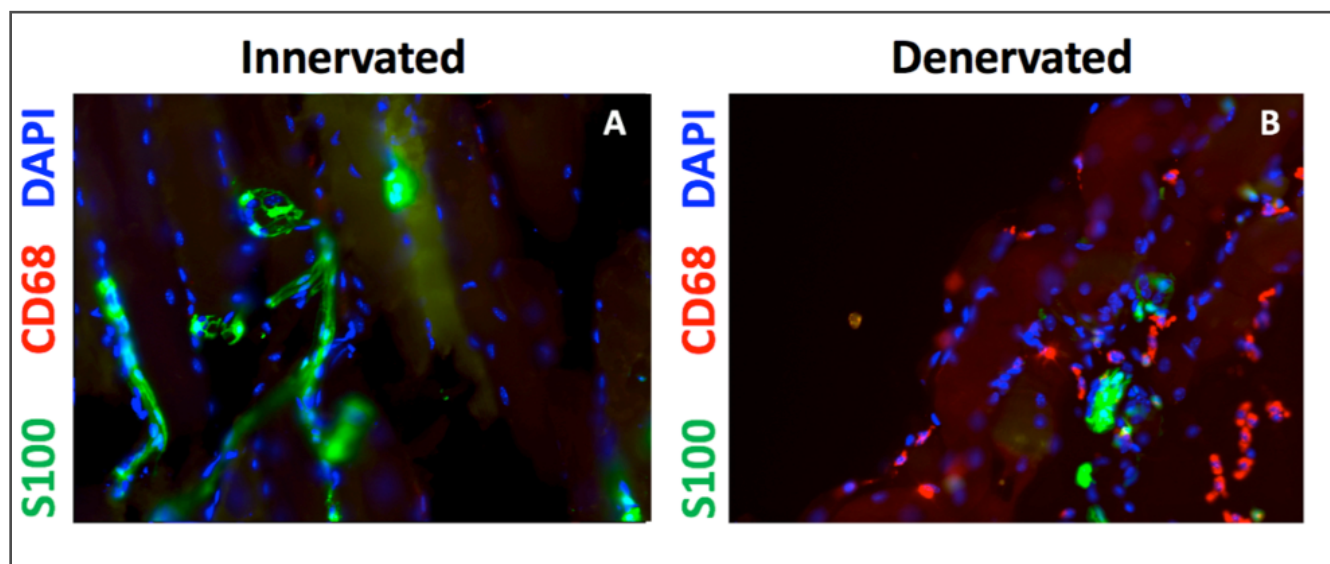
Macrophages have been shown to play a critical role in regeneration following nerve injury. While most studies have focused on the role of macrophages on neural regeneration and the site of nerve injury itself, we instead sought to determine the role of macrophages distal to the nerve injury, at the neuromuscular junction (NMJ). The NMJ is the interface between a motor nerve and its end-target muscle. It is a tripartite synapse composed of the innervating motor axon, the post-synaptic acetylcholine receptors, and an important resident cell referred to as the terminal Schwann cell (tSC). After nerve injury, these tSCs extend processes from denervated to innervated endplates to facilitate NMJ reinnervation. Because the processes allowing for

axonal regeneration across a nerve injury site utilize similar cellular components as reinnervation of the NMJ, we believe that macrophages could play a critical role in this process.

To investigate this further, peroneal nerve transections without repair were performed on 14 S100-GFP mice, in which glial cells (i.e. SCs and tSCs) fluoresce green. The extensor digitorum longus (EDL) muscles were harvested from the denervated side and contralateral control side for immunostaining with CD68 for macrophages and DAPI for cell nuclei. Muscles were harvested daily from 1–7 days after nerve injury, with two animals evaluated at each time point. The number of macrophages recruited to the NMJ following nerve injury was then quantified using confocal microscopy.

We found that macrophages are abundant in the end-target muscle and at the NMJ at all time points after acute nerve injury. We observed the greatest macrophage presence at 5-6 days post-injury (Figure 1). Additionally, macrophage morphology was distinct across time points, which likely represents phenotypic variation. Further investigation is ongoing to determine the role and necessity of macrophages on reinnervation of the NMJ after nerve injury. **RM**

Figure 1. Macrophage recruitment to the extensor digitorum longus (EDL) muscle and its neuromuscular junctions (NMJ) after nerve injury. Immunostaining to detect SCs and tSCs (S100), and macrophages (CD68). Five days after peroneal nerve transection, CD68 staining was prominent in the EDL muscle and near NMJs (B), compared to controls (A). DAPI= nuclear staining.



RESEARCH GRANTS

ASRM/PSF Combined Grant Progress Report

MEASURING STRESS LEVELS IN NOVICE SURGICAL TRAINEE WHILE LEARNING NOVEL MICROSURGICAL TASKS

Anthony Echo, MD

*Division of Plastic Surgery
at the Houston Methodist Hospital*

Stress during the learning of a new task is well documented, however, unobtrusive measurement of stress is particularly important in surgical residents and surgeons in general, because there is little room for error and methodologies hindering or limiting manual dexterity would be unduly detrimental to performance. Therefore, there is no better experimental framework to perform a stress study than when humans are engaged in challenging tasks with substantial stakes, as exemplified in microsurgery.

In this project, we will explore a novel methodological framework for measuring and understanding stress patterns in humans, and for determining their importance in phenotypes and performance. Physiological stress alters blood flow distribution, skin conductance, breathing rate, breathing function, and body movement, which can all be quantified and analyzed using a battery of tests that include novel technology, such as an E4 wrist sensor and Zephyr bioharness. We use these tools to quantify stress response. We will also study the association between physiological and subjective stress

responses of novice trainees performing novel microsurgical tasks. Microsurgical tasks will be our particular focus since these tasks are particularly challenging and require a great deal of focus.

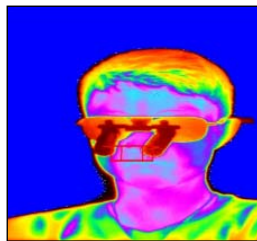
Our central hypothesis is that physiological and subjective measures of stress will be significantly positively correlated, with physiological measures in real time allowing detailed analysis of stress response. We further hypothesize that the trainees will have lower physiologic response to the acute stressor than as they become more familiar to the given task.

This study is a collaboration with Ioannis Pavlidis, PhD at the University of Houston Computational Physiology Lab and the Division of Plastic Surgery at the Houston Methodist Hospital. We are in the midst of the study as the subjects have completed approximately half of the microsurgery training sessions required for the study. We have approximately 28 medical students, who have never performed microsurgical tasks, participating in the study. We had 2 students quit the study due to time constraints. We are expecting approximately 23-25 students to complete the study, which will give us enough data points to hopefully draw a statistically significant conclusion from the data. We are seeing the participants' technical skill improve each week

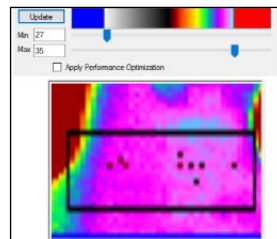
which has been also demonstrated in the improved stress response to the given tasks. We are hoping to have the study complete and all of the data gathered in the next month. **RM**



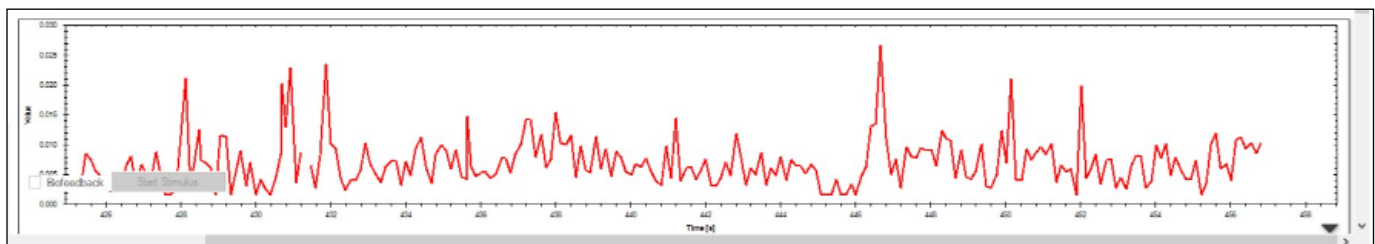
Latex glove for with slit for microsurgical repair.



Thermal image of participants face



Thermal image with perspiration on the participant's upper lip measuring the stress response.



Below: Participant's stress response in relation to time.

A MESSAGE FROM THE 2018 PROGRAM CHAIRS

Invitation to Attend 2018 Annual Meeting



Joon Pio (JP) Hong, MD

2018 Scientific
Program Co-Chair



Julie E. Park, MD, FACS

2018 Scientific
Program Co-Chair

On behalf of your president Dr. David W. Chang, we would like to extend an early invitation to participate in the 2018 ASRM Annual Meeting to be held January 13-16, 2018 at the beautiful El Conquistador Hotel Fajardo, Puerto Rico. Puerto Rico's rich history, tropical climate, diverse natural scenery, renowned traditional cuisine, and along with the scientific and social program will be an unforgettable experience. The theme of this year's meeting, "Achieving excellence through serving and sharing," will highlight how we share our passion for reconstruction with the world and continually strive for excellence.

We will maintain the high quality programming that has made this meeting so popular among microsurgeons while introducing new exciting elements. This year's Master Series, the "Consistency of the Masters," will have the leaders in our field show videos and results of five consecutive cases to give strategies and pearls for achieving the best results all the time. The "Young Microsurgeons Group Forum" promises to continue more interaction with seasoned surgeons, while the ever popular "Sewing with the Masters" offers one-on-one time with senior microsurgeons to continue to provide insight and new knowledge to your practice. A pre-meeting

symposium is being planned with our partners American Society for Lymphatic Surgery and WSRM on advanced lymphatic surgery on Friday afternoon. On Saturday, our combined panel with AAHS and ASPN will focus on Targeted Muscle Reinnervation. Programming such as "Best Case/Best Save," the Godina Lecture, the Women Microsurgery Group lunch panel, and our "Science Slam: Libations and Presentations" will provide stimulating variety for meeting attendees.

The meeting promises to be comprehensive and fun as we celebrate the creativity in all of aspects of microsurgery. The social events will reflect the history and culture of Puerto Rico with ample time and activities to enjoy the beautiful setting with your friends and family.

We look forward to seeing you in Puerto Rico in January!

RM



JANUARY 13–16, 2018
**ASRM 33RD ANNUAL
MEETING**

El Conquistador Resort
Fajardo, Puerto Rico

The El Conquistador offers a commanding view of the ocean from above, and lots of fun at the waterpark at shore's edge.

