New Publishing Practices for AJP and JMD in 2011

Over the past several months, ASIP has been hard at work on a number of issues that will have a major impact on our organization. An essential priority has been rethinking the business model for our journals. Scientific publishing is undergoing tremendous evolutionary pressures from factors such as the Open Access movement, adoption of new publishing and discoverability technologies, and increased globalization of content. This changing climate has put traditional revenue streams such as institutional subscriptions at risk, while also demanding higher levels of diligence, investment, and innovation. While The American Journal of Pathology (AJP) and The Journal of Molecular Diagnostics (JMD) have had strong success as self-published non-profit journals, the Society wants to ensure that the journals remain able to provide continued innovative technological improvements and financial stability, while still ensuring the high editorial and production quality of articles published by the AJP and JMD. With that in mind, last winter ASIP put out a Request for Proposals to consider managed publication of our journals. Under managed publishing, the Society still owns the journal, maintains copyright, and retains full editorial control, but production, promotion and other publishing support services are provided by a commercial publisher. Several major publishers responded with significant interest in the AJP and JMD. The proposals were reviewed by an ASIP subcommittee chaired by Bill Stetler-Stevenson and composed of five other members (Abul Abbas, Stanley Cohen, Karen Kaul, Charles Parkos and Mark Sobel) and several ASIP staff advisors (Audra Cox, Managing Editor, Angela Colmone, Scientific Editor, James Douglas, Director of Finance and Operations, Maria Giorla, Director of Journal Business and Strategic Planning, and Priscilla Markwood, Director of Journal Business and Strategic Planning, and Priscilla Markwood, Director of Scientific Affairs, Communications, and Society Services). In April, the ASIP Council authorized the ASIP Executive Office to pursue a managed publishing arrangement, which we are currently in the process of finalizing. We are confident that this arrangement will provide enhanced technological advancement and financial stability, and has the potential to greatly expand the readership and global visibility of our flagship journals. One immediate benefit that our members will see is that we will be able to afford to lower the international shipping fee for those who reside outside the US and receive the print subscription to AJP. ASIP will also be able to continue its "first color figure free" benefit program for members who are corresponding authors of accepted articles in AJP and JMD (a benefit which currently costs the Society approximately $40,000 a year), as well as continuing to offer reduced costs for color figures (recently reduced by $200 per figure) to all authors in the journals.

Continued on page 3 - President
Welcome New Members!

Regular Members:
Leona Ayers MD, Ohio State University
Kathleen Green PhD, Northwestern University
E. Blair Holladay PhD SCT(ASCP)CM, American Society for Clinical Pathology
Alicia Olivier DVM PhD, University of Iowa
John Erby Wilkinson DVM PhD, University of Michigan
Yu Yang MD, Lerner Research Institute

Trainee Members:
Hilda Crispin, CUNY
Janaina Duarte PhD, Universidade Federal de São Paulo (UNIFESP)
Gina Griffith BS, University of Oklahoma Health Sciences Center
Courtney Johnson, Brown University
Jainee Lewis, San Francisco State University
Jiangxia Liu BS, University of Pittsburgh
Kun-Wei Liu BS, University of Pittsburgh
Xue Ma MD, Wake Forest University
Trine Tramm MD, Aarhus University Hospital
Kyle Wright, University of Pittsburgh

Call for Nominations for the 2011 ASIP Election

The deadline for submitting your nominations is Monday, October 4, 2010

The Nominating Committee is soliciting nominations for the following positions on the 2011 Ballot:

Vice President
Program Chair-Elect
Councilor-at-Large (2 positions)

Self-nominations are encouraged. You will be requested to provide your reason for nominating the individual. Submit your nominations online at www.asip.org/2011Ballot.htm
Deadline: October 4, 2010
Call for Nominations for the 2011 ASIP Election

Member involvement in ASIP is more important than ever. The upcoming months will present a number of opportunities to become more involved in ASIP. We are now accepting nominations of candidates for a variety of important committees, and senior leadership and Councilor positions within the society; elections will be held in January. Please submit your nominations for Vice President, Program Chair-Elect and Councilor-at-Large online at http://www.asip.org/2011Ballot.htm by Monday, October 4, 2010 to be considered by the Nominating Committee. Self nominations are encouraged. The Society welcomes and benefits from fresh perspectives and ideas offered by new leadership. There are also ample opportunities for junior members to become involved with the Society through service in a number of committees. Such committee membership not only helps the Society by developing new leaders within ASIP, but also facilitates academic promotion through national service.

Get Ready for the ASIP 2011 Annual Meeting!

Another important date that is rapidly approaching is the November 8 deadline for abstract submissions for the ASIP 2011 Annual Meeting at Experimental Biology (EB) 2011, which will be held in Washington, DC from April 9-13, 2011. The Program Committee has put together an outstanding scientific and educational venue that will be greatly enhanced by strong abstract submissions. Abstract submission is a great way to get involved and can be a centerpiece in promoting specific research interests within the society. I strongly urge our membership, especially division chiefs and chairs, to encourage their colleagues, students and trainees to participate in this year’s ASIP annual meeting. Over the past two years, abstract submissions have not increased as in previous years. Although the current economic climate as well as competing scientific meetings have likely contributed, it is more important than ever that we promote the discipline of experimental pathology through involvement in ASIP. I urge you to encourage your trainee to apply for one of the many awards that ASIP offers in conjunction with this meeting. Awards information and the ASIP meeting program can be found online at www.asip.org/mtgs/eb11/. In order to be eligible for awards, trainees must submit an abstract to the meeting. The abstract deadline for EB 2011 is Monday, November 8, 2010 and the awards application deadline is the following Monday, November 15th.

Scientific Interest Groups offer Networking Opportunities

The past few years have been highlighted by an increase in the activity of our Scientific Interest Groups (SIGs). In 2011 ASIP will once again host networking sessions for the Breast Cancer SIG, Liver Pathobiology SIG (Club Hepatomania) and Veterinary Pathology SIG. The informal social gatherings allow all EB attendees with an interest in the subject an opportunity to network with one another as well as to view selected posters in the discipline. ASIP actively supports SIGs and welcomes your participation.

I hope you will consider taking full advantage of your membership by becoming active in the Society. Whether you choose to run for office or attend our Annual Meeting in April, your participation supports the Society and the discipline of experimental pathology.

ASIP Members!

Invite your colleagues to apply for membership in ASIP, and save $25 on your 2012 annual dues for EACH new Regular* member you recruit!

For each NEW Regular* Member recruited by an ASIP member before December 31, 2010, the current member will receive a $25 reduction in their 2012 dues up to the total amount of the annual membership fee.

It’s easy!

1. Tell your colleagues about ASIP
2. Send them to this link to download the special membership application**

   www.asip.org/mbr/ASIP-2010-App-M2M-WEB.pdf

*Regular Membership Criteria:
Successful candidates for regular membership have conducted, published, or supported the conduct of meritorious original research in pathology or a related discipline, support the mission of the Society, and hold a doctorate degree or have equivalent experience. Regular members have the right to hold office and vote for officers of the Society.

**New applicants must use this application for ASIP members to receive reduced annual dues in 2012.
ASIP Trainee Travel Awards

The following awards require submission of an abstract to the 2011 Experimental Biology Meeting. For details on abstract submission, visit: http://www.asip.org/mtgs/eb11/

Abstract Submission Deadline: November 8, 2010

ASIP Experimental Pathologist-in-Training (EPIT) Award and ASIP Experimental Pathologist-in-Graduate Training Award (EPIGT)

The EPIT is a prestigious award presented to an ASIP trainee member who is a postdoctoral fellow (including research and clinical fellows). The EPIGT is a prestigious award presented to an ASIP trainee member who is a graduate student in a PhD training program, MD/PhD training program or MD training program.

The EPIT and EPIGT awards are presented to trainees who have excelled in investigative efforts to study mechanisms of disease, as evidenced by an abstract submission to the ASIP annual meeting, an extended research report, and a letter of recommendation attesting to the candidate’s role in the work and potential as a biomedical research investigator. The awards each include: a certificate of achievement for the winning abstract presented at the ASIP Annual Meeting Awards Presentation at the Experimental Biology Meeting, a $1,500 honorarium and complimentary meeting registration.

Candidates for the EPIT and EPIGT Awards are also considered for ASIP Merit Awards ($1,250 plus complimentary registration). Each applicant must be a trainee member of ASIP. Prior recipients of the EPIT, EPIGT, and Merit Awards may reapply if the work submitted is clearly distinct from the work previously submitted for their winning application (not just a continuation of the same project). In such cases, the applicants should submit a copy of the previous winning application along with the new application.

Application Deadline: November 15, 2010
Apply online at: www.asip.org/awds/awds.htm

Trainee Travel Awards

To promote the entry of young scientists into the mainstream of the basic science community and to encourage the participation of young investigative pathologists in the Annual Meeting, the American Society for Investigative Pathology is offering a limited number of Trainee Travel Awards of $500 each to offset travel expenses to the Experimental Biology 2011 Meeting. Some of these awards are funded by the A.D. Sobel-ASIP Education Fund. The ASIP Program Committee will select the recipients based on the scientific abstracts. Abstracts will be selected for presentation in either poster sessions or in minisymposia (oral sessions). These abstracts need not be submitted strictly to ASIP categories. Award recipients will be recognized and presented with this award during the ASIP Awards Presentation and Reception at the meeting.

The ASIP Minority Trainee Travel Awards are funded by a grant from the National Institute of General Medical Sciences, National Institutes of Health [FASEB MARC Program: T36-GM08059-28].

Application Deadline: November 15, 2010
Apply online at: www.asip.org/awds/awds.htm

ICPI Trainee Travel Awards

The Intersociety Council for Pathology Information (ICPI) offers a limited number of ICPI Trainee Travel Awards ($500) for ASIP-member trainees to attend the ASIP Annual Meeting at EB 2011. Applications are available online at www.pathologytraining.org.

Application Deadline: March 9, 2011. (30 days prior to the ASIP 2011 Annual Meeting)

ASIP Launches New Membership Recruitment Initiatives

The Membership Committee is launching new initiatives to retain and recruit members, and we ask all current ASIP members to help make these efforts a success. An e-mail campaign targeted at trainees will be undertaken, and we need the assistance of the membership to distribute this message widely at their home institutions. We are particularly concerned that trainees who are not based in departments of pathology may be unaware of ASIP and the benefits that it provides to its younger members. A second campaign will reward current ASIP members for recruiting new regular members. The incentive will be a $25 reduction in membership dues for each colleague recruited, up to the total amount of the annual fee. The details of this campaign, as well as a recruitment e-mail that can be personalized, will be sent to all members in the near future. (See more information on page 3)

To help retain our trainee members as they progress in their careers, the ASIP Council has eliminated the expectation that regular members hold a faculty position or the equivalent. The criteria for regular membership are now that a candidate must have conducted and published meritorious original research in pathology or a related discipline, support the mission of the Society, and hold a doctorate degree or have equivalent experience. Trainees who are in a position to make the transition also will be offered a discounted fee of $95 for their first year of regular membership. Although trainees can serve on the Society's committees, only regular members have the right to hold office and vote for officers of ASIP.

The Membership Committee welcomes suggestions for ways in which we can enhance recruitment and retention. Please send your ideas to Elizabeth R. Unger, the Committee chair (eunger@cdc.gov).
ASIP Accepting Nominations for 2012 Meritorious Awards

Nomination Deadline: September 30, 2010
Submit Nominations Online at www.asip.org/awds/awds.htm

ASIP Gold-Headed Cane Award
The ASIP Gold-Headed Cane Award is presented in recognition of long-term contributions to pathology, including meritorious research, outstanding teaching, general excellence in the field and leadership in pathology. Nominations for the 2012 award require: 1) the candidate's curriculum vitae including bibliography; and 2) three letters of recommendation, including at least two from ASIP members. Awardees will receive a mahogany cane topped with a 14 karat gold head and engraved band at the ASIP Annual Meeting.

ASIP Rous-Whipple Award
The ASIP Rous Whipple Award is presented to a senior scientist with a distinguished career in research who has advanced the understanding of disease and has continued productivity at the time of this award. Awardees will receive an honorarium and a plaque and will present a lecture at the ASIP Annual Meeting that will form the basis of a publication in The American Journal of Pathology. IMPORTANT: There is no age eligibility requirement for this award; however, prior experience suggests that most successful awardees will be 50+ years old at the time of nomination. Nominations for the 2012 award require: 1) three letters of recommendation, including at least two from ASIP members; 2) the candidate's curriculum vitae including bibliography; and 3) ASIP membership in good standing for at least five (5) years prior to nomination.

ASIP Outstanding Investigator Award
This prestigious award (formerly the ASIP Amgen Outstanding Investigator Award from 2004-2008) recognizes mid-career investigators with demonstrated excellence in research in experimental pathology. Awardees will receive an honorarium and a plaque at the ASIP Annual Meeting and will present a lecture at the ASIP Annual Meeting that will form the basis of a publication in The American Journal of Pathology. IMPORTANT: There is no age eligibility requirement for this award; however, awardees will be several years beyond the initial faculty appointment and have received extramural grant support as a principal investigator (or equivalent) beyond the level of a career development award. Nominations for 2011 and 2012 require: 1) letters from two members of the Society describing the basis for recommendation; 2) the candidate's curriculum vitae including bibliography; and 3) ASIP membership in good standing for at least three years.

ASIP Robbins Distinguished Educator Award
Provided through the generous support of Elsevier
The ASIP Robbins Distinguished Educator Award recognizes individuals whose contributions to education in pathology have had a manifest impact at a regional, national, or international level. Examples of meritorious contributions include, but are not limited to:
- Design of innovative or improved educational platforms, curricula, or training programs
- Leadership in strategic planning or administration of educational initiatives
- Development of widely disseminated educational materials, such as textbooks, laboratory manuals, and software
- Development of training/education in investigative pathobiology at the undergraduate, graduate and post-graduate levels
- Documented achievements in mentoring, e.g., junior faculty, students, or postdoctoral research or clinical fellows
Awardees will receive an honorarium and a plaque that will be presented at the ASIP Annual Business Meeting. Nominations for the 2012 award require: 1) three letters of recommendation, including at least two from members of the Society; 2) the candidate's curriculum vitae including bibliography, and 3) ASIP membership in good standing for at least four (4) years. Evidence of exemplary contributions to education in pathology must be explicitly delineated in the nomination package.

ASIP Cotran Early Career Investigator Award
Provided through the generous support of Elsevier
The ASIP Cotran Early Career Investigator Award recognizes early career investigators with demonstrated excellence as an investigator who have recently established independence and a research focus leading to an improved understanding of the conceptual basis of disease. The award is named in honor of Dr. Ramzi Cotran. Awardees will receive the honorarium and a plaque at the ASIP Annual Business Meeting and will present a lecture at the ASIP Annual Meeting that will form the basis of a publication in The American Journal of Pathology. IMPORTANT: There is no age eligibility requirement for this award; however, awardees will be several years beyond the initial faculty appointment and have received extramural grant support as a principal investigator (or equivalent) beyond the level of a career development award. Nominations for the 2011 and 2012 award require: 1) letters from two members of the Society describing the basis for recommendation; 2) the candidate's curriculum vitae including bibliography; and 3) ASIP membership in good standing for at least three years.

ASIP Excellence in Science Award
Provided through the generous support of the A.D. Sobel Education Fund
The ASIP Excellence in Science Award recognizes outstanding and sustained achievements at the earliest stages of a career in biomedical research. Accomplishments include, but are not limited to, publications and presentations as well as volunteer service to the ASIP or other professional societies, institutional committees, and the pathology community. At the time of nomination, awardees must have engaged in no more than 5 years of postgraduate research (not including non-research fellowships) since receiving the PhD, MD, or equivalent degree. Awardees will receive an honorarium and a plaque that will be presented at the ASIP Annual Business Meeting and will present a paper based on their award-winning work. Nominations for the 2012 award require: 1) three letters of recommendation, including at least two from members of the Society; 2) the candidate’s curriculum vitae including bibliography; and 3) ASIP membership in good standing for at least two (2) years as a trainee or regular member.
Kyle Wright investigates the role of the receptor for advanced glycation end products (RAGE) in NF-kB activation

My name is Kyle Wright and I am a rising senior at Emory University. This summer I was able to participate in undergraduate research at the University of Pittsburgh thanks to FASEB and ASIP. During my time at the University of Pittsburgh, I was in the laboratory of Dr. Tim Oury. While in the lab, I learned many techniques including electrophoresis, western blot analysis, protein assay analysis, filter plate assay, and cell culture. My research experience consisted of many different projects; however, my main project involved looking at the role of the Receptor for Advanced Glycation End products (RAGE) in NF-kB activation. To do this, we treated RAGE knockout and wild type mice intrathecally with E. coli and LPS (and saline for the controls). These mice were sacrificed; their lungs were collected and homogenized. These homogenized mixtures were separated into nuclear, cytoplasmic, and membrane samples. I then completed multiple westerns in order to make sure the samples were properly separated. After checking for proper separation, we hoped to look at the activation of NF-kB by comparing IκB and P-IκB levels in treated RAGE knockout and wild type cytoplasmic samples through western blot analysis. After working out the conditions, the preliminary results looked promising but I was unable to get clear images for the majority of our samples. It is believed that the samples may have been freeze-thawed too many times and this may have denatured the proteins of interest. Near the end of my time in the lab, I completed a NF-kB filter plate assay using the nuclear samples. Unfortunately, I was not able to properly analyze the data before the end of my summer research experience.

If given the opportunity, I would have liked to repeat this experiment again to use samples that were not freeze-thawed so many times. It also would have been interesting to learn how western blot images are quantified and how the data are then made into charts and graphs. I would like to thank Dr. Oury for hosting me in his lab this summer. Not only did Dr. Oury make himself available for questions, but he also came into the lab multiple times throughout the day in order to see if I had any questions. Dr. Oury's lab is the third research lab that I have been in and I can easily say that he is the most involved PI that I have ever worked with. I believe that Dr. Oury's involvement in his lab is the reason why I was able to have such a productive and insightful experience this summer. I would once again like to thank the FASEB MARC Summer Research Opportunity Program and ASIP for giving me the opportunity to participate in research this summer.

Jainee Lewis researches Chagas Disease - analyzes the lipolytic and apoptotic pathways in acute T. cruzi infection in the mouse

Over the summer at Albert Einstein College of Medicine I worked under the mentorship of Dr. Herbert Tanowitz and Dr. Nagajothy in the Department of Pathology. This laboratory focuses on the pathogenesis of Chagas disease, caused by the protozoan parasite Trypanosoma cruzi. T. cruzi is endemic in Mexico, Central and South America, where it causes significant morbidity and mortality. This infection is a major cause of heart disease in endemic areas. Obesity and diabetes is an emerging problem in the tropical world. This observation has raised questions regarding the interactions of the parasite and adipose tissue. Previous work done in the laboratory demonstrated an upregulation of cytokines, chemokines, MAPKs, TLRs, components of the Notch pathway and cyclins in cultured adipocytes and in adipose tissue obtained from infected mice. These are important observations because it demonstrates the role of glucose metabolism and the fat cell in the pathogenesis of both acute and chronic Chagas disease.

My project was to investigate a cause for the reduction in fat mass in infected mice by analyzing the lipolytic and apoptotic pathways in acute T. cruzi infection in the mouse. An immunoblot (Western blot) is an analytical technique used to detect specific proteins in a given sample of tissue homogenate. I probed for proteins that were involved in either the lipolysis or apoptotic pathway in the adipose tissue obtained from mice 15 days post infection with the Brazil strain of T. cruzi. I demonstrated that lipolysis is a major contributor to the reduction of fat mass than the apoptotic pathway. Along with conducting research I also had to be able to manage my time in order to finish all of my duties in regards to my research project.

One of the many challenges that I encountered while performing research has been time management. I was a very busy scientist this summer as I had to conduct research, engage in activities with Einstein students and SURP students alike, and manage two high school students. Everyday that I came in I was managing two high school students which took up a lot of my time, but this has allowed me to become more confident in my scientific communication and mentoring skills. SURP had also prepared for us many outside activities allowing us to explore New York City and the surrounding area. This was important because it allowed for me to see the many attractions of New York City along with the opportunity to interact with graduate students in the PhD program as well as the
other SURP students. I can honestly say that during this summer I was living the life of a graduate student, which has given me even more motivation to go for the PhD. If given the opportunity to do this all over again, I would not change anything.

The other area I would have liked to explore more if given extra time in the program is the contribution of the apoptotic pathway in the reduction of adipose tissue in our model. The technique that would have allowed for me to perform this experiment is the TUNEL assay, which is a common method for detecting DNA fragmentation that results from apoptotic signaling cascades. The assay relies on the presence of nicks in the DNA which can be identified by terminal deoxynucleotidyl transferase, an enzyme that will catalyze the addition of dUTPs that are secondarily labeled with a marker. This would have been a better way of looking at DNA fragmentation instead of using immunoblot analysis.

Overall this experience has been life changing as it has opened my eyes to another pathogenic disease that affects millions in Latin America. Before joining the Tanowitz laboratory I had never heard of Chagas disease, nor was I aware that it was linked to the increased rate of diabetes and obesity in Latin America. Therefore, I believe that the questions examined by the Tanowitz laboratory are important because they explore the mechanisms by which the parasite persists in different organs. As more research is done to explore these mechanisms, the closer researchers can come to finding a vaccine that will protect all of Latin America against Chagas disease.

**Hilda Crispin investigates bone marrow stromal and stem cell characterization and FOXO3a expression**

This summer, I had the amazing opportunity to conduct laboratory research under the mentorship of Dr. Rajan Dewar. My research project focused on bone marrow stromal and stem cell characterization and FOXO3a expression. We also collaborated with Dr. Kenneth Ndebele, in a project towards identifying novel therapeutic targets in pancreatic carcinoma and deciphering signaling pathways.

Dr. Dewar works as a hematopathologist, and I had the amazing opportunity of learning about the exciting field of pathology. I realized how pathologists make a diagnosis and play a crucial role in the care of patients. One of the weekends that Dr. Dewar was on call, I had the opportunity to see how the clinical team was waiting for his diagnosis before making treatment decisions on their patient who had acute leukemia. Pathologists also interface with science successfully since they observe morphological changes in cells and tissues. I was able to see this first hand, by sitting in signout and observing tissue sections of acute leukemia (bone marrow biopsies) and pancreatic carcinoma (pancreatectomy specimen - Whipple surgery).

In the research laboratory, Dr. Dewar taught me how to dissect mice, harvest organs and specifically, bone marrow stem cells and stromal cells. I worked in setting up primary bone marrow stromal cell cultures. We performed multi-color flow cytometry and analyzed them using a software called FacsDiva. In addition, we also set up cultures of K562 cell lines and analyzed expression of FOXO3a by immunofluorescent staining. Immunofluorescence studies were also performed to see the expression of FOXO3a and Ki67 on K562 and HCT116 cells. Light microscopic techniques were also employed in this characterization.

As a second project, we collaborated with Dr. Ndebele - who was working on pancreatic carcinoma. We verified the endogenous protein expression of CD55, MRCL3, and Legumain in various cancer cell lines and knocked them down by siRNA. To validate the results, we correlated them with western blots and immunohistochemistry (IHC), techniques that I learned in the laboratory. Our initial observations show that CD55 was expressed in two of our cell lines, PANC-1 and ASPC-1, but not the control. MRCL3 was expressed in PL45, PANC-1, and the control; but a robust expression was seen in BxPC3 cells. In the case of Lugemain, there was expression in Capanc-1, ASPC-1, and BxPC3 cells, but not in the control. After observing the endogenous expression of these targets, we performed loss of function studies using siRNA. First, we knocked down CD55 in Capanc-1 and ASPC-1 cell lines. What we observed was that CD55 protein repression increased the proliferation of both cell lines. However, when we knocked down MRCL3 in BxPC3 cells, we found out that MRCL3 knockdown inhibited cell proliferation. In the case of Legumain, our knockdown was sub-optimal. There were no any significant differences in cell proliferation between the control and the siRNA BxPC3 cells.

Dr. Dewar and I began doing IHC longing to find out whether CD55, MRCL3, Legumain, and VDR are expressed or not in pancreatic carcinoma of human patients. We obtained archival specimens from patients with pancreatic carcinoma with IRB approval, and performed validation studies on these samples. Although preliminary, these markers appeared to be expressed in ductal epithelia and carcinoma. CD55 and MRCL3 appeared to be positive markers for pancreatic ductal carcinoma. However, these preliminary studies need further confirmation.

Thus, my summer research at BIDMC-HMS has been one of the greatest experiences of my life. It not only allowed me to conduct research at a cutting-edge biomedical laboratory, but it also helped me to keep pursuing what I love: doing research. Although initially I was a little bit afraid, since I was not experienced in many of these techniques, my mentor Dr. Dewar assured me right from the beginning that my major aim was to learn and patiently taught me these techniques. In a few days I was proficient in these and started working almost independently towards the end of summer. In the morning, I would start running my western blots; and then I would go to the cell culture room to feed, split, and freeze my cell lines. Once I needed to validate my results by IHC, my usual days were mainly working with many unstained slides, immunostaining them, and analyzing them through the microscope.

Overall, this has been an amazing summer experience. I have not only learned new research techniques but I also had fun doing it. Everyone in the laboratory, including my mentor, were very helpful and always there for me - I am really going to miss this. If I could do this again, perhaps I would try to stay longer or start earlier. This experience has confirmed what I discovered during my last years.
of college - I do love doing research and how this gets translated into patient care. I also love pathology and am considering an active career in medicine or research (ideally both). Being treated like anyone else in the laboratory (presenting my results, attending laboratory meetings, and updating a lab notebook) made me feel important as if I was one of them too. This has been an unforgettable summer that will always stay in my memory. I cannot thank my mentor enough for helping me to become a more independent and knowledgeable person.

Sylvia Eberhardt researches effects of calcium current activity and voltage sensitivity in hypertrophied hearts

This summer research opportunity program provided me with an excellent experience and exposure to the medical field and some insight into my future endeavors. I had a first-hand interaction with the basic research in heart failure, which remains prevalent in African American communities. Under the mentorship of Dr. Georges Haddad, I have learned the importance of research techniques emphasizing consistency, dexterity, and perhaps most importantly, persistence. We incorporated such methods such as animal surgery to induce aorto-caval shunt leading to cardiac hypertrophy and failure, cardiomyocyte isolation using retrograde perfusion via the Langendorff perfusion system and patch-clamp technique to measure ion channels activities. It was a challenging experience to learn all these skills but it was fantastic once we started getting results and analyzing new data on hypertrophied myocytes. Trial and error led us to the following conclusions:

- Cardiac hypertrophy was manifested by an increased relative heart weight in all 4 chambers (atria and ventricles).
- Cardiac hypertrophy was associated with an increase in the amplitude of the slow calcium current.
- There was a negative shift in the peak amplitude during the development of eccentric cardiac hypertrophy.

The significance of my summer research: This enhanced calcium current activity and voltage sensitivity in hypertrophied hearts may play a major role in sustaining a greater force of contraction and contractility to improve cardiac work efficacy.

Given the chance to do this research again, I would do more readings prior to coming to the research facility. This would have given me an extra edge on my understanding of the whole picture of the project. Many questions remain still unanswered due to the nature of the research conducted, especially pertaining to changes in contractility of the heart during hypertrophy. However, I feel like I made the most of my research experience during this period of time. Given more time to do my research I would continue to sort out the relationship between the intracellular calcium dynamics and cellular contractility profile during cardiac hypertrophy. I would definitely work also on perfecting my research bench skills. Finally, I would like to thank Dr. Haddad for his leadership and guidance throughout the entirety of this research process. His patience and understanding alleviated the pressures of entering a new setting, but also enhanced a positive mind-set to complement the experience. I am sincerely grateful to him and the ASIP/SROPP.
SAVE THE DATE!
April 9-13, 2011
Washington, DC (USA)
Abstract Submission Deadline: November 8, 2010
CME Accredited

GUEST SOCIETIES
- American College of Veterinary Pathologists (ACVP)
- International Society for Analytical and Molecular Morphology (ISAMM)
- International Society for Biological and Environmental Repositories (ISBER)
- Società Italiana di Patologia/Italian Pathology Society (SIP)
- Society for Cardiovascular Pathology (SCVP)

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Or visit:
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Preliminary Scientific Program

- **ASIP EXCELLENCE IN SCIENCE AWARD LECTURE:** Turning Off Scarring: “Stop” Signals That Operate During Wound Repair
  Award Recipient: CECELIA YATES

- **ASIP OUTSTANDING INVESTIGATOR AWARD LECTURE:** The Molecular Pathogenesis of Alzheimer Disease: Facts and Fictions
  Award Recipient: MARK A. SMITH

- **ASIP ROUS-WHipple AWARD LECTURE:** Normalization of Tumor Vasculature and Microenvironment for Cancer Treatment: From Bench to Bedside to Biomarkers
  Award Recipient: RAKESH JAIN

- **ACVP Symposium:** Stems to GEMS: Impact of Stem Cell Technology on Engineered Animal Models
  Sponsored by ASIP & ACVP
  Chairs: Wendy Sandler & Elizabeth Uhl

- **Blood Vessel Club**
  Chair: Francis W. Luscinskas

- **Breast Cancer Workshop:** Breast Cancer Stem Cells
  Sponsored by the ASIP Breast Cancer Scientific Interest Group
  Chairs: Ashley Rivenbark & William B. Coleman

- **Cancer Genomics and Epigenomics**
  Chair: David Mu

- **Cardiac Pathology:** Cardiac Myocyte Dysfunction in Ischemia and Heart Failure
  Sponsored by ASIP & SCVP
  Chairs: Avrum Gotlieb & L. Maximilian Buja

- **11th Annual Career Development Program and Lunch:** Fundamental Basics for Success: How to Give Great Presentations
  Sponsored by the ASIP Committee for Career Development, Women & Minorities
  Chairs: Tara Sandler & Jayne Reuben

- **Compartmentalization of Endothelial Signaling**
  Chairs: Tanya Mayadas & Francis W. Luscinskas

- **Inflammation and Disease**
  Chair: Steven Kunkel

- **ISAMM Symposium:** Molecular Pathology of Circulating Tumor Cells
  Chairs: Raymond Tubbs & Larry De Bault
  Sponsored by ASIP & ISAMM

- **Hepatic Stem Cells:** A Blessing or a Curse from Prometheus!
  Chairs: Douglas Hixson & Dorothy French

- **Mechanisms of Cellular Stress in Disease**
  Chairs: Andrew Neish & Monte Willis

- **Metabolic Syndrome: Links Between Insulin Resistance, Inflammation, and Vascular Pathobiology**
  Chairs: Jonathan Homeister & Peter Lucas

- **Micro Environment and Tumor Progression**
  Sponsored by ASIP & SIP
  Chairs: Sebastiano Andò & Adriana Albini

- **Antigen Presenting Cells:** Conductors of the Mucosal Immune Orchestra
  Chairs: Timothy Denning & Nicholas Lukacs

- **Monitoring and Managing:** Epithelial Interactions with the Microbiota
  Chairs: Andrew Neish & Thaddeus Stappenbeck

- **Presidential Symposium:** Innate and Adaptive Immunity at the Mucosal Barrier
  Chair: Charles Parkos

- **Regenerative Medicine**
  Sponsored by ASIP & SIP
  Chairs: Sebastiano Andò & George K. Michalopoulos

- **Trends in Experimental Pathology:** Imaging Organisms/Experimental Trends - “Brave New World”
  Supported by an unrestricted educational grant from The Robert E. Stowell Endowment Fund
  Sponsored by the ASIP Biophysical Pathology Scientific Interest Group
  Chairs: John Tomaszewski & Anant Madabhushi

- **11th Annual Workshop on Graduate Education in Pathology**
  Sponsored by the ASIP Education Committee

- **Career Development Workshop & Breakfast:** Transition to Principal Investigator
  Sponsored by the ASIP Committee for Career Development, Women & Minorities
  Chairs: Ashley Rivenbark & Avrum Gotlieb

- **Liver Workshop:** Hepatic Fibrosis and Hepatocellular Cancer: Inevitable Consequences of Chronic Liver Injury
  Chairs: S. Paul Monga & Arlin Rogers

- **Workshop:** Discovery of Molecular Markers and Pathways through Biobanking
  Sponsored by ASIP & ISBER
  Chairs: Peter Riegman & Mark E. Sobel

- **Highlights:** Graduate Student Research in Pathology
  Sponsored by the ASIP Committee for Career Development, Women & Minorities
  Chair: Edward A. Medina

In addition to the Scientific Program the meeting feature a variety of networking opportunities. Visit www.asip.org for complete program information.
Milestones... in Investigative Pathology

by William K. Funkhouser, MD, PhD

Asbestos and Mesothelioma

(1) Wagner JC, Sleggs CA, and Marchand
P. Diffuse Pleural Mesothelioma and
Asbestos Exposure in the North Western

As you endure another ad extolling the virtues of legal counsel for mesothelioma patients, you could assume that we've known since the Industrial Revolution that asbestos causes mesothelioma. Au contraire. We didn't know that asbestos pneumoconiosis was associated with increased risk of mesothelioma until Dr. Wagner suggested it in 1960. The above article, available at http://imig.org/wp-content/uploads/2010/03/Wagner_Historic-Meso-Article_1960.pdf is the first in a series of critical contributions that demonstrated the causal association of asbestos fibers and mesothelioma.

Pathologists of the 1930s and '40s were sorting out the biphasic morphologic potential of anecdotal cases of mesothelioma (reviewed in (1)). In these early case reports, etiology was not measured in decades. There is any risk-free exposure to asbestos dust. As expected, increasing exposure led to increasing fiber load in the lungs. Interestingly, there were marked differences in steady-state fiber load following inhalation of similar amounts of crocidolite and chrysotile dust, indicating difference in dust clearance rates. Although chrysotile was cleared much better than crocidolite, the incidence of mesothelioma (6%) was similar to that seen with high-fiber burden crocidolite (6%). Most mesotheliomas developed after 6 months of dust exposure but, astounding, 2 rats exposed for only one day each (one to amosite and one to crocidolite) developed mesotheliomas. Assuming careful control of experimental conditions, these data beg the question of whether there is any risk-free exposure to asbestos dust.

Dr. Wagner recognized that pleural inoculation experiments were unrealistic, so he followed up his pleural inoculation experiments with dust aspiration experiments. Exposures mimicked 7 hour/5 day per week work hours. Asbestos was the least fibrogenic of the three. Without increasing exposure led to increasing fiber load in the lungs. Interestingly, there were marked differences in steady-state fiber load following inhalation of similar amounts of crocidolite and chrysotile dust, indicating difference in dust clearance rates. Although chrysotile was cleared much better than crocidolite, the incidence of mesothelioma (6%) was similar to that seen with high-fiber burden crocidolite (6%). Most mesotheliomas developed after 6 months of dust exposure but, astounding, 2 rats exposed for only one day each (one to amosite and one to crocidolite) developed mesotheliomas. Assuming careful control of experimental conditions, these data beg the question of whether there is any risk-free exposure to asbestos dust.

J.C. Wagner was a pathologist working in South Africa from 1951-62. The story goes that the initial observation is traced to an autopsy on an asbestos miner in 1956, in which he identified asbestos fibers in a gelatinous pleural neoplasm (http://imig.org/about/wagner-award-recipients-2/j-christopher-wagner-biography). He sought out other cases of mesotheliomas, and reported a cluster of patients with mesothelioma who had been physically close to asbestos mining or milling. In this initial paper, he gives a history of asbestos mining and milling in South Africa, indicating a transition from manual separation of fibers ("cobbing") to automated milling in around 1915. 32 of the 33 patients he presented were either miners, millers, or children exposed to dusts from these industries 20-40 years prior. His initial paper was observational, and hypothesized a higher-than-expected probability of mesotheliomas in individuals exposed to asbestos.

Dr. Wagner recognized the need to prove an etiologic relationship between asbestos and mesothelioma. His work was confirmed by the exposure of humans involved in industries involving insulation and fire retardant materials. Careful history-taking was critical to making the observation, as the delay from exposure to signs/symptoms is measured in decades.

The scientific demonstration of asbestos as the major etiologic agent in mesothelioma prompted marketing of legal recourse to patients receiving this diagnosis. Asbestos has no medicinal value.
to the human, so our legal system recognized a skewed risk:benefit ratio to asbestos exposure, and proceeded to bankrupt the asbestos industry. Isn’t this interesting, that we’ve witnessed destruction of a legitimate insulation/fire retardant materials industry because its dusty product leads to around 90% of the cases of a rare disease, when we’ve knowingly tolerated tax revenue subsidy of the growth, processing, and marketing of tobacco, whose dusty product leads to around 90% of the cases of the tobacco-associated common diseases, COPD and primary lung carcinoma?

References:


ASIP Launches

Biophysical Pathology Scientific Interest Group

ASIP is pleased to announce the formation of the Biophysical Pathology Scientific Interest Group (SIG). ASIP members who are interested in participating in this new Scientific Interest Group listserve are encouraged to go to: [www.asip.org/mbr/Biophysical.htm](http://www.asip.org/mbr/Biophysical.htm) to register.
Current Council Members
Charles Parkos, MD, PhD – President
Martha Furie, PhD – President-elect
Elizabeth Unger, MD, PhD – Vice President
Stanley Cohen, MD – Past President
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For complete information about ASIP Governance, Committees, Task Forces, and Scientific Interest Groups, go to:
www.asip.org/gov/gov.htm

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