The Federal Demonstration Partnership (FDP; http://thefdp.org/) was formed in 1988 by a number of research universities (mostly universities with high/very high research activity in the Carnegie classification) along with numerous federal funding agencies to boost research activity and to monitor administrative requirements. The FDP now comprises ~100 research universities and ~15 federal agencies. The FDP, and more specifically the Faculty Standing Committee (FSC; http://thefdp.org/Faculty_Committee.html), first surveyed faculty 15 years ago. In 2005, the FSC again surveyed faculty about the impact of administrative activities in carrying out their research. This narrative highlights select aspects of that latter report, which can be found in full at: http://thefdp.org/Faculty_Committee.html#P11_2305.

To cut to the chase, the survey found that faculty were increasingly spending significant amounts of time with pre- and post-award administrative activities, which appeared to impact primary research activity. The value of the related administrative research tasks was not directly assessed with this tool.

The survey comprised more than 6,000 faculty researchers although the authors recognize that this survey is limited since it is subject to bias and not representative of faculty overall. Most of the faculty were male (68%), tenured or tenure track (67% or 22%, respectively), full or associate professors (54% or 24%, respectively), and White, non-Hispanic (77%). On average, faculty spent almost 60% of their time doing research of which almost two-thirds was devoted to federally funded research. Importantly, 42% of research time was spent on research-related administrative activities.

Faculty at public universities and faculty in medical schools identified greater burden. In addition, those faculty with administrative activities (DEO, center director, etc.) reported a higher level of burden; women and underrepresented minorities also experienced significantly higher levels of burden.

The “average burden level” on a 5 point scale (1 low, 5 high) identified several issues with a score of at least 2.5, in descending order: grant progress report submission, personnel hiring, project revenue management, equipment and supply purchases, IRB issues, training personnel and students, and personnel evaluations; only the first (grant progress report submission) was rated above a 3. A deeper analysis of those faculty for whom specific burdens were noted, the survey (cont’d on page 6)
A Message from ASIP’s President ~
Mark L. Tykocinski, MD

As I assume the ASIP presidency, change is in the air. ASIP is proactively repositioning itself, as it defines its place in a new age of biomedical discovery and an ever-evolving Pathology landscape. For those of us privileged to serve on ASIP Council or on the ASIP office staff, we are not only charting a course for our society, but helping to shape the broader field of experimental pathology and its future direction.

In 2003, a strategic planning committee deliberated for close to a year, and a new action plan for ASIP emerged. Since then, the committee’s long-term strategic plan has been unfolding, with a number of deliverables already in hand. Perhaps most significant is the systematic roll-out of a new divisional model, with ASIP seeking out alliances with specialty societies that are intimately connected to its core mission. Three such societies have already been brought into the fold – first API, then ISBER, and this past year the Pulmonary Pathology Society – and more are in sight.

In addition to its new divisions, ASIP continues to actively manage other important societies from its ever-expanding Washington DC office. These include the intersociety Council for Pathology Information, the Association for Molecular Pathology, and the Association of Pathology Chairs. By nurturing these other societies under its ‘multi-society management umbrella’, ASIP is positioned to help foster bridges among them, and in so doing, to strengthen experimental pathology on the national scene.

Looking ahead, there are yet more possibilities for growth and development. First, we must try to more effectively tap into what is de facto ASIP’s main feeder – the over 120 academic departments of Pathology across the country. By virtue of my parallel role in the Association of Pathology Chairs, I hope to look for more effective ways to engage our Pathology Chairs and their respective departmental leadership teams towards bolstering ASIP’s core missions in the research realm. (continued on page 16)
Informatics as a Core Skill Set: Why Delaying this Transformation in Training Will Hurt Our Specialty
Ulysses J. Balis, MD, President, Association for Pathology Informatics

This past month, I had the privilege of addressing the general session of the annual APC meeting, in Colorado Springs. During my presentation, I took an informal poll concerning perceptions of departments having inadequate IT support from their respective host institutions. With a near-total showing of hands, the simple answer is that our specialty is already on the threshold of an operational crisis, where we are no longer able to deploy sophisticated information technology solutions at a pace matched to the growth in complexity associated with the new molecular and high-dimensional information that we are now being compelled to disseminate.

Central hospital IT departments can certainly be called upon to provide partial amelioration of these time-critical data stewardship and reporting needs, but this is only a temporizing solution, at best, as these centralized teams are being asked to be all things to all people, and in this flurry of over-subscription, sometimes can offer only the most generic of solutions.

Conversely, we could look amongst our own ranks of pathology informaticists, in self reliance, to make up for this technical shortfall. That would be a plausible solution if such an extant cohort of specialists existed, but the stark reality is that we have been very slow to recognize the growing need for operational informatics in pathology. Nearly 15 years ago, Ray Aller, Ed Ashwood and I reported our findings of a survey on the state of pathology residency informatics training in US programs [1], with our conclusion being that coverage of core informatics topics was inconsistent and usually absent, with no plan in place to ameliorate such deficits. Not surprisingly, now 15 years later, our current shortfall in informatics expertise can be directly predicted from those findings. Moreover, our present condition is worsened by the accelerating adoption curve of technologies and associated reporting requirements that absolutely demand pathology informatics expertise.

To address this concerning trend, it is important that our specialty’s leadership recognize pathology informatics as not being a luxury but rather a mission critical element of any complete operational model. With this realization comes the immediate requirement that we start to train adequate numbers of informaticians with the requisite skill sets to be active participants at the departmental and indeed, also the institutional level.

At present, there is no agreed upon core pathology informatics curriculum. The Association for Pathology Informatics and a number of interested pathology departments, who have active representation on the API Council, are actively working on such a core curriculum, which would hopefully serve as the edifice for creating an initial critical mass of content, which could be then further enhanced and expanded. While this effort’s success is by no means assured, there is no alternate approach in process by which such content could be adopted and integrated into existing training curricula.

If we fail in the above task, there is little doubt that we as a specialty will become further removed from the levels of leadership that plan and select our future healthcare IT architectures, including our laboratory information systems. Already, many pathology departments have been party to the highly undesirable circumstance of having their LIS being ‘selected’ for them by external interests, with little or no opportunity for input. Typically, such decisions are made out of expediency towards the goal of satisfying a greater hospital-wide single vendor initiative. Unfortunately, in the setting of having minimal local informatics expertise or authority, such departments are powerless to rebut these external mandates with a rational alternative and are thus made to suffer with poorly matched and deployed software.

Thus, in some respects, we have already failed to meet the training challenge predicted over a decade ago. Despite this reality, there is still much hope that added exposure of our current trainees to informatics will allow us to gracefully recover our specialty’s ability to properly oversee this important operational aspect of what truly has become a core competency.

Literature Cited:

About the Author: Dr. Balis is the current President of the Association for Pathology Informatics and Director of Clinical Informatics in the Department of Pathology at the University of Michigan. He may be contacted at ulysses@umich.edu.
“Tucker’s passing is a loss for the discipline of pathology, for our Society, and for his family, colleagues, and friends. His outstanding scientific accomplishments are a matter of record, but it was his personal relationships and approach to life in general that, to me, made him especially stand out from the crowd. He was such a reasonable man! Always considerate of different points of view, he used his compassion and ability for rational thinking to come up with solutions for problems both in the lab and at ASIP. I had the distinct pleasure of working with Tucker on the ASIP Council for many years, most notably when he succeeded me as President of ASIP and oversaw the transition when I became ASIP’s Executive Officer in 2001. It was gratifying for all of us that he was able to come to Washington DC for the 2007 annual meeting where he was fully engaged in the science and in talking with his colleagues. I had the pleasure of having dinner with him a month before he died, at which time we reminisced about our many joint activities. “Isn’t it ironic that I would be the one to have a highly vascularized tumor,” he said with his characteristic sense of humor. I knew then that Tucker was facing his fate with the same courage that he had demonstrated his whole life. He will remain in our thoughts with much fondness, respect, and admiration.”

Mark E. Sobel, M.D., Ph.D. Executive Officer, ASIP

“I became a new chair of ASIP’s Committee on Career Development, Women and Minorities during Tucker’s service as ASIP President. Tucker’s unwavering commitment to empowerment of this committee’s work, particularly our engagement of trainees within ASIP’s mission, stands out to me as one of many ways in which he leaves a legacy within this Society and the discipline at large.”

Nancy L. Thompson, Ph.D. Associate Dean for Graduate and Postdoctoral Studies Division of Biology and Medicine Brown University

“I shall always remember Tucker Collins as a thoughtful scientist, a compassionate colleague, and a very special friend. His legacy lives on through his trainees and colleagues – as they continue to contribute to the field of inquiry he loved so dearly.”

Mary J.C. Hendrix, Ph.D. President & Scientific Director Medical Research Institute Council Professor Children’s Memorial Research Center Northwestern University Feinberg School of Medicine

“Tucker was a giant of a man with a gentle voice and an inviting presence. His commitment towards the profession of pathology was ever evident and far-reaching as he didn’t back away from difficult problems encountered in investigative, clinical, or educational pursuits. Tucker was accomplished in all of these areas where he was easily able to span the spectrum of those within the discipline, from trainees to peers to stalwarts to skeptics. And, he always gracefully approached the professional dimensions of the present with respect and regard for the past and an eye to the future. Thus, he emphasized excellence and practiced patience. His long-standing participation in the leadership and activities of the ASIP were recognized and appreciated and will be sorely missed.”

Linda M. McManus, Ph.D. President-Elect, ASIP Professor The University of Texas Health Science Center

Tucker Collins, MD, PhD 1953 - 2007
ASIP's Meritorious Awards Committee Solicits Nominations for the 2008 Chugai Mentoring Award

This award, generously funded by Chugai Pharma USA, LLC, will be presented to a member of the American Society for Investigative Pathology to recognize senior investigators who have distinguished their careers with a dedication to mentoring and education. Sustained mentoring and productivity should exist at the time of the award. In recognition of this honor, the awardee will receive an honorarium and a plaque that will be presented at the ASIP Annual Business Meeting.

Criteria: For consideration by the Meritorious Awards Committee, the primary nominator should submit 1) the curriculum vitae and bibliography of the candidate; and 2) a minimum of four letters of recommendation, including at least two from members of the Society and two from former trainees who have established careers. Evidence for outstanding mentoring accomplishments of the candidate must be explicitly delineated in the nomination package.

Application: Applications must be submitted online at www.asip.org/awds/nominate.htm. Primary nominators will be required to provide the name and contact information of the nominee and a minimum of three other nominators. Letters of recommendation and the nominee's CV can be sent via email using the “Send Supporting Information” button included within the online application. These documents may be in the following formats: MSWord (.doc), WordPerfect (.wpd), PDF or RTF. Or if you prefer, you can send these documents directly to kcarmody@asip.org at anytime prior to September 17.

Please note the online application covers all the ASIP Meritorious Awards; please select "Chugai Award" from the menu and provide the requested information for the nominee and four nominators.

If you have any questions or concerns regarding the award criteria or application process please contact Kathleen Carmody at (301) 634-7440 or email her at kcarmody@asip.org

Submit your nominations online at www.asip.org/awds/nominate.htm

Nomination Submission Deadline is SEPTEMBER 17, 2007

American Society for Investigative Pathology
9650 Rockville Pike, Bethesda, MD 20814-3993
Telephone (301) 634-7440 for further information.
The International Society for Biological and Environmental Repositories (ISBER) was established to serve as an international forum to address technical, legal/ethical, and managerial issues relevant to repositories of biological and environmental specimens.

As evidence of our commitment to meet this goal and to expand ISBER’s reach internationally, we held our 2007 meeting in Singapore from May 20 – June 2. We are happy to report that our first meeting in Asia was quite successful, attracting 263 participants from 26 different countries. We’ve received very positive feedback on the meeting and anticipate that the networking opportunities provided at the meeting will have spawned new and productive international collaborations among the attendees. We are actively planning the 2008 Annual Meeting, to be held in Bethesda, MD from May 18 – 21, 2008.

The coming year promises to be an exciting one for the society and its members. Growth and development in the field of biobanking has been striking over the past several years, and is likely to continue to accelerate with the recognition of the importance of high quality collections to scientific discovery in many areas of research, including biodiversity research and research to develop personalized medicine. There is intense interest and activity in developing standards for collections, both at the national level and internationally and ISBER and its members will continue to play a key role in these efforts. The draft of a second edition of the ISBER Best Practices, first published in CPT in March 2005, is nearly complete, and will soon be circulated for comment to the ISBER membership.

Over the coming year, we will seek to continue to expand ISBER’s reach internationally and explore how best to meet the needs of all of our members. We will continue to reach out to other organizations with interest in biological collections to help promote international dialogue and communication in areas of common interest and facilitate international harmonization of biobanking standards. We will finalize a strategic plan to help guide the efforts of the society and identify areas for continued growth and expansion. We will need input from ISBER members about where the society should be focusing its efforts so that ISBER continues to grow and prosper as the premier society for biological and environmental repositories.

Marianna Bledsoe, MA
President, ISBER

Report on Burden of Grant Administration
(continued from page 1)

identified IRB protocols and training, and IACUC protocols and training with average scores of ~3.5; HIPAA issues were also identified, although not as prominently.

Almost all (97%) respondents indicated that some of the research administrative activities could be carried out by other select personnel (not the PI); 36% believed that up to 50% of their time spent attending to grant administrative activities could be delegated. There did not however, appear to be a clear consensus about how this should be managed. For example, respondents indicated that federal and local institutional policies, procedures, guidelines, etc. impacted research administrative activities. Suggestions included a higher “indirect cost” to the institution to hire trained administrative personnel and redirection of direct costs by the PI to support administrative personnel.

The key conclusion of the FDP report was: “The data clearly show that the level of administrative burden is high enough to routinely take our nation’s most qualified scientists away from their research for significant amounts of time.” More specifically, the report notes that “Federal requirements…together comprise a substantial grant management burden for faculty” and “…institutional polices or procedures increased the burdens associated with managing research.” One astute faculty comment quoted in the report alludes to a (vicious) cycle, a catch-22, between allowable agency expenditures and indirect costs. Clearly, there is a shared responsibility for the issues and, more importantly the solutions.

Amongst the recommendations are demonstration projects by the FDP (redirection of direct costs, specific solutions for perceived high problem areas (IRB, IACUC), streamlining and standardization of federal agency requirements), and non-FDP solutions (adjustment of the cap on “indirect-cost” recovery and modification of a specific federal guideline (OMB A-21)). The report also recommends sharing best practices and resurveying faculty within 5-8 years.

Taken together, it is quite evident that the impact of “indirect” research activity is negatively impacting actual (“direct”) research. The FDP, a synthesis of institutions and federal agencies, is well positioned to lead an effort that allows for a greater faculty effort be directed on continuing technological and health benefits for this country. Finally, on a more optimistic note, more than 90% stated that “if I had it to do over again, I would still choose an academic research career.”

We encourage the readership, in fact the entire ASIP membership, to share their thoughts and ideas. We are especially interested in best practices that could be shared amongst ASIP faculty researchers. Please send comments to Priscilla Markwood at pmarkwood@asip.org.
It is clear from this book there is a market for “know-how”, and that biotechnology is a vast array of niche “know-how”. Hence, caused fragmentation of knowledge, and created an unnecessary proliferation of new firms.

For biotechnology, science is the business. A science-based business creates scientific knowledge, directly (in-house research) or indirectly (sponsored research), and extracts value from it. Pisano builds a conceptual framework involving characteristics of the biotechnology enterprise (uncertainty, complexity, heterogeneity, and change) which create organizational challenges (risk management; integration; new, imitated, or experiential knowledge) to business structure (role & strategies of participants, institutional arrangements, governance). He covers in detail the signal events in the evolution of the business of science, an overview of drug R&D, the organizational challenges of drug R&D, and the current research target areas being explored. He also details the roles for the six key players (universities/government laboratories, new biotech firms, established pharmaceutical companies, government agencies/private foundations, public investors, and venture capitalists) in the biotechnology sector. Each entity is seeking to access a broad ensemble of technical capabilities, infrastructure, and organizational assets on the most favorable terms with the highest likelihood of a profitable outcome, whether in money or health outcome.

Pisano exposes the limited financial and operating performance of the biotechnology industry, including an average of 11 years to achieve a positive cash flow, as well as the fact that the revenue per dollar of R&D is larger for pharmaceutical sector than for biotechnology sector. He concludes that biotechnology has not realized its commercial and economic potential, has not revolutionized the productivity of the pharmaceutical industry, and has gradually retreated from its radical and risky traditions into the world of the safe and predictable science. From a university and faculty standpoint, Pisano points out that any strategy or policy that reduces or stops the flow of basic scientific information is problematic, especially exclusive arrangements that move intellectual property to a single entity; the exception being technology whose value declines with access.

Don’t even thinking about entering the world of biotechnology business until you have read Pisano’s Science Business.

About the Author:

Dr. Smith is the Past Vice President of Science Policy for the Federation of American Societies for Experimental Biology. He is the Director of Laboratory Medicine in the Department of Pathology at the University of Alabama at Birmingham. He may be contacted at jas@uab.edu.
American Society for Investigative Pathology
2008 Joint Annual Meeting

with
American Association of Neuropathologists &
North American Vascular Biology Organization
at Experimental Biology

WORKSHOPS & SPECIAL SESSIONS
8th Annual Career Development Program & Lunch:
Clinically Oriented Pathology Careers for the Basic
Scientist
Chairs: Antonia R. Sepulveda (Hosp. of the Univ. of
Pennsylvania)
Sponsored by the ASIP Committee for Career
Development, Women & Minorities
Supported by educational grants from Cadmus and the
FASEB Minority Access to Research Careers (MARC)
Office

AANP Course: Molecular Embryology to
Malformations
Organizers: Robert Hevner (Brigham & Women's Hosp.)
and Jeffrey Golden (Children's Hosp. of Pennsylvania)

AANP Diagnostic Slide Session
Chair: Anthony Yachnis (Univ. of Florida)

ASIP/SCVP Workshop: Cell and Molecular Biology of
Heart Valve Disease
Chair: Avrum I. Gotlieb (Univ. of Toronto Fac. of Med.)
and Joyce Bischoff (Children's Hosp., Boston)
Sponsored by ASIP and the Society for Cardiovascular
Pathology

BLOOD VESSEL CLUB: Stem/Progenitor Cells -
Contributions to Blood Vessel Assembly and Repair
Chairs: David S. Milstone (Brigham & Women's Hosp.)
and Joyce Bischoff (Children's Hosp., Boston)
Sponsored by ASIP and the North American Vascular
Biology Organization

Highlights: Graduate Student Research in Pathology
Chairs: Vallie M. Holloway (Mayo Clinic of Jacksonville)
and Winston Y. Lee (Emory Univ. Sch. of Med.)
Sponsored by the ASIP Committee for Career
Development, Women & Minorities

NAVBO Highlighting Trainee Research
Chair: Joyce Bischoff (Children's Hosp., Boston)

Workshop: Applications of Stem Cells and Research
Chair: S. Paul Monga (Univ. of Pittsburgh)
Co-Chair: Carlos Moreno (Emory Univ.)

Workshop: How to Succeed in Big Science
Chairs: James R. Stone (Massachusetts Gen.
Coll. of Wisconsin)
Sponsored by the ASIP Committee for Career
Development, Women & Minorities

LECTURES
KEYNOTE LECTURE: Role of Micro RNA Genes in
Cancer
Carlo M. Croce (Ohio State Univ.)

AANP DEARMOND LECTURE
Virginia M-Y. Lee, (Univ. of Pennsylvania)

AANP MATTHEW T. MOORE LECTURE: Trafficking
Signals to Prevent Neurodegeneration
William Mobley (Stanford Univ.)

AANP PARISI/TEVA PHARMACEUTICALS LECTURE:
The Spectrum of CNS Inflammatory Demyelinating
Diseases: From Pathology to Pathogenesis
Claudia F. Lucchinetti (Mayo Clinic, Rochester)

AANP SAUL KOREY LECTURE: Brain Tumor
Classification: Little Steps and Big Jumps
David N. Louis (Massachusetts Gen. Hosp.)

ASIP AMGEN OUTSTANDING INVESTIGATOR
AWARD LECTURE: Pathogenesis of Chagas
Disease: From the Trypanosome to Host Cell
Invasion to Myocarditis
David M. Engman (Northwestern Univ.)
Supported by an educational grant from Amgen
BASIC RESEARCH - TRANSLATIONAL DISCOVERY - CLINICAL APPLICATIONS

ASIP ROUS-WHIPPLE AWARD LECTURE: Vascular Endothelium in the Post Genomic Era: New Insights into its Pathobiology
Michael A. Gimbrone, Jr. (Brigham & Women’s Hosp.)

NAVBO EARL P. BENDITT AWARD LECTURE
Shaun R. Coughlin (UCSF)

SYMPOSIA

AANP Presidential Symposium: Neurogenetics and Developmental Disorders
Chair: Jeffrey Golden (Children’s Hosp. of Pennsylvania)

AANP/NAVBO Symposium: Neurovascular Connections/Interactions
Chairs: Jeffrey Golden (Children’s Hosp. of Pennsylvania) and Christiana Ruhrberg (Univ. College London)

ACVP Symposium: Immunity: Bench, Business & Bedside
Chair: Elizabeth Galbreath (Lilly Res. Labs.)
Co-Chair: Elizabeth Whitley (Auburn Univ.)
Sponsored by ASIP and the American College of Veterinary Pathologists

ASIP Liver Pathobiology Symposium: Developmental and Regenerative Biology of Hepatic Cells
Chair: George K. Michalopoulos (Univ. of Pittsburgh Sch. of Med.)

ASIP Presidential Symposium: Frontiers in Experimental Pathology: Therapeutics, Non-linear Systems Pathobiology, and Beyond
Chair: Mark L. Tykocinski (Univ. of Pennsylvania Med. Ctr.)

ASIP Symposium: Genetics and Epigenetics of Cancer Initiation, Progression and Metastasis
Chair: Arul Chinnaiyan (Univ. of Michigan)

ASIP Symposium: Leukocyte-Endothelial Interactions
Chairs: Myron I. Cybulsky (Univ. of Toronto) and Tanya N. Mayadas (Brigham & Women’s Hosp.)

ASIP Symposium: The Renaissance in Complement
Chair: Peter A. Ward (Univ. of Michigan Med. Sch.)
Co-Chair: John Lambris (Univ. of Pennsylvania)

ASIP Trends in Experimental Pathology: Novel Technologies to Identify Disease-Associated Genetic Variants
Chair: Gavin J. Gordon (Brigham & Women’s Hosp./Harvard Med. Sch.)

Supported by an educational grant from the Robert E. Stowell Endowment Fund

ASIP/APS Symposium: Regulatory Mechanisms in Diseases of Epithelial Transport
Chairs: Asma Nusrat (Emory Univ.) and Jerrold R. Turner (The Univ. of Chicago)
Sponsored by ASIP and The American Physiological Society

ASIP/NAVBO Symposium: Molecular Engines that Regulate Epithelial and Endothelial Junctions
Chairs: William A. Muller (Northwestern Univ.) and Andrei Ivanov (Emory Univ.)

ASIP/SIP Symposium: Membrane Rafts: Implications in Human Disease
Chairs: Asma Nusrat (Emory Univ.) and Anna Gasperi-Campani (Univ. of Bologna, Italy)

NAVBO Symposium: The Immune System in Vascular Diseases
Chair: Klaus Ley (La Jolla Inst. For Allergy and Immunology)

NAVBO Symposium: Vascular Cell Dysfunction in Disease
Chair: Timothy Hla (Univ. of Connecticut Sch. of Med.)

PPS Symposium: New Frontiers in Pulmonary Fibrosis
Chair: Robert Homer (Yale Sch. of Med.)
Sponsored by ASIP and the Pulmonary Pathology Society

2008 Joint Annual Meeting
- American Society for Investigative Pathology (ASIP)
- American Association of Neuropathologists (AANP)
- North American Vascular Biology Organization (NAVBO)

Guest Societies

ASIP Division Guest Societies:
- Association for Pathology Informatics (API)
- International Society for Biological and Environmental Repositories (ISBER)
- Pulmonary Pathology Society (PPS)

Guest Societies
- American College of Veterinary Pathologists (ACVP)
- American Society for Matrix Biology (ASMB)
- International Society for Analytical and Molecular Morphology (ISAMM)
- Society for Cardiovascular Pathology (SCVP)
- Societa Italiana of Patologia/Italian Pathology Society (SIP)

www.asip.org
Milestones . . . in Investigative Pathology

Hypertension & the Kidney


This landmark publication by Harry Goldblatt (1) and colleagues at the Institute of Pathology at Western Reserve University in Cleveland revolutionized ideas about the pathogenesis of hypertension.

Credit for making the connection between hypertension and renal disease is usually given to Richard Bright, a physician at Guy's Hospital in London even though he worked in the early 1800s, a half century before the existence of hypertension was first recognized.

Bright observed that large, heavy hearts found at autopsy, in the absence of other explanations, often occurred in patients with abnormal kidneys. He exhibited incredible insight by suggesting that a blood chemical of renal origin might be the cause of the enlarged hearts. He speculated that heart enlargement reflected an elevated cardiac workload due to increased peripheral resistance. Although he never measured a blood pressure, in view of what we know today about hypertension and the kidney, Bright was pretty much on target.

Prior to Goldblatt's publication, a large body of experimental work had tested the idea that hypertension had a renal basis. The approaches used had the common outcome of impairing renal excretory function. They included variable degrees of renal ablation; renal vein constriction; and permanent bilateral ligation of the renal artery, vein and ureter. These manipulations sometimes resulted in a fleeting elevation of blood pressure, but usually did not.

Goldblatt took the approach of experimentally compromising renal arterial blood flow by placing a clamp on the main renal artery. He got the idea from the observation well-known to pathologists that intrarenal sclerosis of arteries and arterioles were commonly found at autopsy in patients dying with hypertension. Recognizing that no experimental procedure existed for creating the vascular pathology seen in human hypertensive kidneys, he reasoned that if impaired renal blood flow was the fundamental cause, this could be mimicked by constricting the main renal artery.

Silver clips, especially fabricated for these experiments were set for varying degrees of constriction and placed on the renal artery of dogs. Goldblatt observed that mild constriction of the main renal artery was sufficient to induce a rise in blood pressure within 24 to 72 hours. In control experiments constriction of the splenic or femoral arteries did not result in elevated blood pressure.

Once hypertension was established, removal of the clip resulted in return of blood pressure to normal levels, a finding suggesting that the ischemic kidney maintained the elevated blood pressure. In some experiments, instead of removing the clip, the clipped kidney was removed. This resulted in a return of blood pressure to normal levels. Subsequently placing a clip on the main renal artery of the remaining kidney resulted in reelevation of blood pressure.

In Goldblatt’s early studies hypertension in most animals lasted from 4 to 6 weeks and then blood pressures returned to normal levels, even though the clamps were still in place. An astute anatomical pathologist, Goldblatt noticed that the return to normal blood pressure was associated with conspicuous development of collateral arterial circulation to the kidney, particularly through the renal capsule. In subsequent experiments he decapsulated the kidney and enclosed it in a membrane to prevent revascularization. When the renal artery of such animals was constricted, hypertension occurred and persisted.

Goldblatt’s discovery was soon followed by similar experiments by other investigators using sheep, goats and rats. Interestingly, some argued that Goldblatt’s model had little relevance to human hypertension because of the belief, subsequently shown to be erroneous, that renal artery stenosis rarely occurred in humans. It took careful autopsy observation and the development of sophisticated radiological imaging of arterial vasculature to establish that in 2-5% of cases of human hypertension, patients have a “Goldblatt kidney.”

In 70% of these patients renal artery narrowing is due to an atherosclerotic plaque. In the other 30%, typically young females, the narrowing is due to fibromuscular dysplasia of the renal artery. A critical feature of these lesions is that they are correctable. Considering the incidence of hypertension in the general population, hypertension caused by renal artery narrowing is not an uncommon disease.

The experiments of Goldblatt and colleagues further buoyed the idea that the kidney produced a chemical substance that elevates blood pressure. Their findings launched studies by investigators around the world. These led to the purification and characterization of renin; identification of the juxtaglomerular apparatus as its site of synthesis; and biochemical characterization of renin’s target effects on the angiotensin system, blood pressure and aldosterone secretion by cells in the adrenal cortex.

Three quarters of a century of physiology and pharmacology research flowed from the Goldblatt discovery, research that led to extraordinary advances. The clock is still ticking. Their classic paper is another example of the tremendous impact that observations made at autopsy have in posing critical questions and guiding the design of laboratory experiments that elucidate disease pathogenesis. The history of medical advances is replete with examples.

(continued on page 11)
The 2007 Biennial Meeting of the Pulmonary Pathology Society took place at the El Dorado Hotel and Spa in Santa Fe, New Mexico on June 20 through June 22. This Biennial Meeting was the first as a Division of the ASIP and, in conjunction with this, achieved a number of other firsts for the PPS Biennial Meeting.

Total registration at the PPS Biennial Meeting was 149 participants, our largest attendance to date for a Biennial Meeting in the U.S. Participants came from a total of 10 different nations. The registrants included 20 trainees, our largest group of trainees to attend a Biennial Meeting to date.

We had our first vendors and sponsors for a PPS meeting -- a total of 6 vendors with exhibits plus additional sponsors: The Methodist Hospital Physicians Organization and the College of American Pathologists. In addition, Olympus provided equipment for a meeting of the International Mesothelioma Panel on Friday. The CAP co-sponsored the meeting providing its reach to 16,000 members and sponsoring the first joint CAP-PPS committee (chaired by Allen Gibbs and Victor Roggli).

The meeting was a success based on the evaluations. CME evaluations scored Overall Speaker Presentations Excellent, average 3.7 out of a possible 4, and Overall Quality of Program Excellent, average 3.8 out of a possible 4. The Santa Fe location received overall average of 3.9 out of a possible 4.

The next PPS Biennial Meeting is planned for Portland, Oregon, in the summer of 2009.

Philip Cagle, MD
President, PPS

---

**Letter to the Editor:**

May 30, 2007

Dear Dr. Lynch,

I can not tell you how much I appreciated your Milestones article and tribute (in the May issue of ASIP Pathways) to my departed mentor, and very dear and close friend and colleague Richard S. Farr. You indeed crystallized the essence of Dick's visionary and groundbreaking studies that paved the way and formed the basis for all subsequent primary binding immunoassays; indeed many of us felt Dick should have at least shared the Nobel Prize. Dick did not like his procedure to be referred to as 'The Farr Technique' but rather called it the 'Ammonium sulfate method to measure antigen-binding capacity'. Those of us who had the fortune to study under Dick's tutelage will never forget the onerous task of reading and understanding 'The Yellow Peril' which was a lengthy treatise detailing all of the theoretical and practical aspects of the Farr Technique. He truly was the scientist's scientist. Thank you again for such a fine tribute to a remarkable clinical scientist.

Sincerely yours,

R. Neal Pinckard, Ph.D.
Professor of Pathology & Medicine
University of Texas Health Science Center
San Antonio, Texas

---

**Milestones . . .**

(continued from page 10)

It is mind boggling that today's physicians, including many pathologists, seem to have forgotten the incredible power of the autopsy in advancing public health. Tragically, all the evidence I have seen suggests that this memory deficit results from system-wide attitudinal lesions that may not be reversible.
Read the Articles...
Take the Exams...
Earn CME Credit!

The JMD CME Program in Molecular Diagnostics provides The Journal of Molecular Diagnostics (JMD) readership with an opportunity to earn CME credit while renewing and updating their knowledge in the latest advances in molecular diagnostics. This program consists of a series of questions based on selected articles in the 2007 issues of JMD.

- **Objectives** - Participants of the JMD CME Program in Molecular Diagnostics should be able to demonstrate an increase in, or confirmation of, their knowledge of the latest advances in molecular diagnosis and prognosis and understanding of molecular pathogenesis of disease after reviewing specific articles in The Journal of Molecular Diagnostics (JMD).

- **Participants** - This program is specifically developed for trainees, clinicians and researchers interested in the molecular basis of disease and the application of nucleic acid and protein assays for diagnostic and prognostic analysis of disease.

- **Examinations** - Each issue of JMD will include an Examination comprised of 10 questions based on articles appearing in that particular issue.

The ASIP Journal CME Program in Pathogenesis provides The American Journal of Pathology (AJP) readership with a unique opportunity to earn CME credit while renewing and updating their knowledge in the mechanisms of disease. This program consists of a series of questions based on selected articles in the 2007 issues of AJP.

- **Objectives** - Participants of the ASIP Journal CME Program in Pathogenesis should be able to demonstrate an increase in, or confirmation of their knowledge of, the pathogenesis of disease after reviewing specific articles in The American Journal of Pathology (AJP).

- **Participants** - This program is specifically developed for trainees, clinicians and researchers investigating the mechanisms of disease who wish to advance their current knowledge of the cellular and molecular biology of disease.

- **Examinations**
  Each monthly issue of AJP will include an Examination comprised of 3-6 questions based on articles appearing in that particular issue.

These activities have been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Federation of American Societies for Experimental Biology (FASEB) and the American Society for Investigative Pathology (ASIP). FASEB is accredited by the ACCME to provide continuing medical education for physicians. FASEB designates these educational activities for 50 credit hours each in category 1 credit towards the AMA Physician’s Recognition Award.

Registration Rates*:
- AMP (for JMD only), ASIP, API, ISBER, PPS Member Rates - $95/year, Non-Member Rates - $125/year

Register online at www.asip.org/CME/journalCME.htm

*Note: The ASIP Journal CME Program in Pathogenesis and the JMD CME Program in Molecular Diagnostics are separate programs, and must be registered for individually.
By Maria Eisemann, Managing Editor

In July, the most recent set of Impact Factors was released by Thomson Scientific. ASIP is pleased to announce that The American Journal of Pathology is once again the #1 ranked journal in the field of Pathology, earning a 2006 Impact Factor of 5.917. This represents 4,367 citations received in 2006 to AJP papers published in 2004 and 2005. Overall, AJP articles were cited more than 32,000 times last year, which makes it not only the highest-ranked journal in Pathology, but also the most frequently cited. Our thanks go to the authors whose work these citations represent, as well as the Editorial Board and ad hoc reviewers who commit their time and expertise to ensure that articles appearing in the AJP are of the highest quality and relevance.

Impact Factor is but one measure of the satisfaction of readers and the journal’s relevance to the scientific community at large. Content on the AJP website has been accessed more than 2.5 million times so far this year, which represents a growth of 15% over this same time period in 2006. In addition, full-text articles now appear on PubMed Central’s repository six months after final publication (the same point at which all content becomes freely accessible on the Journal website). All told, AJP content is receiving more exposure to readers than ever before. Some features of the website were recently enhanced to provide better service to readers and authors. The biggest feature on the improved Journal website (www.amjpathol.org) is the introduction of fastPATH, the AJP’s online pre-publication program. Updated weekly, articles appear on fastPATH up to 4-6 weeks prior to their final publication. In order to serve authors and readers responsibily, these are not simply raw accepted manuscripts, but first versions of the articles, which have undergone formatting and preliminary copyediting. Articles are fully citeable (listed in PubMed as e-Pub-ahead-of-print), establish publication priority, and remain archived on the Journal website once they are superseded by the final published version.

The newly-expanded “For Authors” link on the journal’s website provides detailed and updated information on preparing manuscripts for submission, as well as specifics regarding the newly formalized Journal Scientific Integrity Policy. This policy, introduced by Editor-in-Chief Jay McDonald in the July 2007 issue of the Journal, covers responsibilities and expectations not only of authors, but also reviewers, Editors and Editorial staff. In preparing articles for consideration by the AJP, potential authors may also wish to visit the “For Reviewers” section, which specifies what major points we will be asking reviewers to consider when evaluating manuscripts. This section also provides information on reviewers’ rights and responsibilities when undertaking an AJP review assignment. Other enhancements to the website include easier links to information regarding permission requests, an archive of recent press releases, and society and other news of interest to our readers.

Earlier this year, Dr. McDonald announced his decision to step down as Editor-in-Chief at the end of his term. The search is underway for the next Editor-in-Chief of The American Journal of Pathology. The Search Committee is headed by ASIP Publications Chair Jon Morrow. The Committee received a number of qualified and thoughtful responses, and hope to appoint the next Editor-in-Chief by the beginning of 2008.

---

Italian Society of Pathology

XXIX National Congress

In collaboration with the American Society for Investigative Pathology

University of Calabria, Rende-Cosenza, Italy

September 10-13, 2008

Topics Will Include:
- Innate Immunity and Inflammation
- Tumor Immunity and Microenvironment
- Redox Reactions in Human Pathophysiology
- Host Pathogens Interactions
- Signal Transduction and Approach to Molecular Therapies
- Nutrition and Cancer
- Novel Biomarkers in Oncology

Participants will have the opportunity to reside at, and take full advantage of the modern facilities of the University of Calabria Campus. The Meeting will also provide opportunities for international attendees to network with each other and to enjoy the scenic and historical highlights of Calabria.

http://www.unifi.it/istituzioni/sip
CALL FOR NOMINATIONS FOR 2009 AWARDS

ASIP's Meritorious Awards Committee is soliciting nominees for the 2009 Gold-Headed Cane, the Rous-Whipple and the Amgen Outstanding Investigator Awards. Rules for making nominations for these awards are as follows:

AMGEN OUTSTANDING INVESTIGATOR AWARD - This prestigious annual award for excellent research in experimental pathology is sponsored by Amgen and is administered by the American Society for Investigative Pathology. The awardee will receive an honorarium and a plaque at the 2009 Annual Meeting. At that time, s/he is invited to present a paper based upon the award winning work, which will be published in The American Journal of Pathology. IMPORTANT: Age eligibility requirements for this award have been changed. Nominees must be ASIP members who are 45 years or younger in 2007 (must be born after December 31, 1961). Nominations for the award require: 1) letters from two members of the Society describing the basis for recommendation; 2) the candidate's curriculum vitae; and 3) the candidate's bibliography.

ROUS-WHIPPLE AWARD - The Rous-Whipple Award is given to a senior pathologist with a distinguished career in research and continued productivity at the time of this award. IMPORTANT: Age eligibility requirements for this award have been changed. Nominees must be ASIP members who are 50 years or older in 2007 (must be born before January 1, 1958). The awardee will receive an honorarium and a plaque and will present a lecture at the 2008 Annual Meeting of the American Society for Investigative Pathology, which will be published in The American Journal of Pathology. Nominations for the award require: 1) three letters of recommendation, including at least two from ASIP members; 2) the candidate's curriculum vitae; and 3) the candidate's bibliography.

GOLD-HEADED CANE AWARD - The Gold-Headed Cane Award is given 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 award require: 1) three letters of recommendation, including at least two from ASIP members; 2) the candidate's curriculum vitae; and 3) the candidate's bibliography. The awardee will receive a mahogany cane topped with a 14 karat gold head and engraved band at the 2009 Annual Meeting.

Criteria: For consideration by the Meritorious Awards Committee, send the appropriate supporting information for each award as described above.

Application: Applications must be submitted online at www.asip.org/awds/nominate.htm. Nominators will be required to provide the name and contact information of the nominee and the required number of nominators. Letters of recommendation, the nominee’s CV and bibliography can be sent via email using the "Send Supporting Information" button included within the online application. These documents may be in the following formats: MSWord (.doc), WordPerfect (.wpd), PDF or RTF. Or, if you prefer, you can send these documents directly to awards@asip.org at anytime prior to September 15.

Please note the online application covers all the ASIP Meritorious Awards; please select the appropriate award from the menu and provide the requested information for the required number of nominators as well as the nominee.

If you have any questions or concerns regarding the award criteria or application process please contact Kathleen Carmody at (301) 634-7440 or email her at kcarmody@asip.org

Submit your nominations online at
www.asip.org/awds/nominate.htm

Nomination Submission Deadline is SEPTEMBER 17, 2007

American Society for Investigative Pathology
9650 Rockville Pike, Bethesda, MD 20814-3993
Telephone (301) 634-7440 for further information.
Scientists need to decide what’s best for science...

FASEB can help YOU speak out for science!

Become a member of FASEB’s e-Action list, and make your voice heard in Washington!

Members of the e-Action list receive:
- Timely alerts to take action on breaking legislative issues
- Updates and analyses of important science policy issues
- Subscription to the FASEB Washington Update, providing you with the latest events on Capitol Hill relevant to scientists.

To join, visit the Legislative Action Center:
http://opa.faseb.org

You’ll also find advocacy tools to help you take action, free downloadable materials, educational resources, and in-depth analyses of biomedical research policy issues.
President’s Message  (continued from page 2)

Beyond invigorating ASIP’s membership roster, this could promote dialogue between our profession’s experimentalists, educators, and clinical service providers.

Another possibility is to nurture the budding alliances with our peers abroad. ASIP has already co-sponsored a meeting with the Italian Society of Pathologists, and a new European Association of Pathologists is planning its first meeting. Reaching out to our international colleagues can only serve to strengthen ASIP and the field as a whole.

These and other future directions are now being considered by a newly constituted Long-Range Planning Committee, which is following up on its 2003 predecessor. Charting a course for the society’s flagship journal, The American Journal of Pathology, is also very much in the purview of this committee. The committee’s strategic analysis is especially timely, with the search for a new editor-in-chief for the journal underway.

As we strategize, we repeatedly challenge ourselves to redefine ‘experimental pathology’. While some would see the society splinter into sub-specialty societies, we envision a different path. Our driving conviction is that experimental pathology constitutes a discipline in its own right, and that it is indeed something tangible. Our discipline is pathogenesis, spanning humans and animal models. Our discipline has its roots as an observational science, with experimental design informed by clinical observation, and later, clinical practice informed by experimental findings. Indeed, our discipline can be intuited from the research ‘story-lines’ which in a sense define it – story-lines which reflect a ping-pong interplay between clinical observation and basic research.

But the future is even richer in possibility. There is the bio-computation angle and the non-linear systems biology angle. The visual is at our core, and hence there is the advanced imaging angle. As we reach for the future, these newer ways of thinking and never tools will enrich the observation:experimentation interplay. You, our membership, will be drivers of this future.

~ MLT