



Hematology and Coagulation Laboratory

Hematology constitutes one of the disciplines that supports the Core Laboratory of the Department of Pathology. Georgette Zoltani is the Assistant Administrator, Inge Hobbs is the Supervisor. Dr. Thomas S. Kickler is the Director of the Hematology and Coagulation Laboratory and Dr. Paul Bray serves as Medical Director to the Coagulation Laboratory. The Core Hematology Laboratory provides cell counting for blood and body fluids, urinalysis and screening coagulation. An important new role for the Core Laboratory is to participate in the performance of new tests for point of care testing. These include analysis of body fluids, urine, and coagulation testing for monitoring anticoagulation testing. In addition to the Core Hematology Laboratory, we also direct the Hematology Laboratory in the Oncology Center, where on site test performance facilitates the outpatient management of oncology patients and the performance of bone marrow aspirates. In addition to these functions, Hematology has two specialty laboratories. These

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In the Laboratory

Five Years in Review: Where We've Been, Where We Are, and Where We're Going

Fred Sanfilippo, MD, PhD

It's hard to believe that I've now been at Hopkins for five years. On some days it feels more like five months, and on others like five decades. While I'm usually busy looking forward to the next opportunity or problem, during the past few months I've found myself reflecting on how the department has fared over these past five years to get insights on the directions and priorities we should take for the next five years.

As many reading this will recall, our plan for the Department of Pathology was simple but high risk: we would try to enhance our productivity in research, service, and education by 1) integrating and optimizing them together rather than optimizing each separately; 2) expanding our activities in each of these areas rather than narrowly focusing them; and 3) assuming full responsibility for the operation, budget, and management of our hospital-based activities in each of these areas. Although these approaches were based on attractive hypotheses discussed at various faculty meetings, testing them was risky and counter to the prevailing trends in academic pathology, both then and now. I recall vividly after arriving that although many faculty and staff were skeptical, virtually all supported our doing the experiment. If it were to be done anywhere, Hopkins was certainly the place to try it.

During that first six months, a lot of time was spent by a lot of faculty and staff in developing a departmental structure and environment that would allow us to 1) integrate seemingly disparate activities such as anatomic pathology, lab medicine, and experimental pathology; 2) facilitate and reward productivity; and 3) support faculty achievement regardless of their current or future mix of activity. It was remarkable that in this early uncertain stage so many members of the department made a genuine effort to succeed.

It's also worth remembering what things were like five years ago. The Department of Pathology had an excellent core of faculty and staff, but virtually no reserve funds and a deficit operating budget. Research was excellent, but focused in a few areas, and overall the department was below the top 10 in NIH funding. Laboratory Medicine was a separate hospital-based department essentially responsible to the Vice President for Finance and without discretionary budgets or University funds to support academic activity. Resident selection and training in AP and CP was overseen separately by the two departments, with 3 years of AP training followed by 2 years of CP. Turn-around-time of test requests was poor on many services; for example, during the previous 20 years, there remained a steady state of over 100 autopsy reports that were delinquent for more than one year.

Nationally, most departments of pathology were under great stress. Success rates for NIH grants were at an all-time low, hospitals were consolidating and cutting support to pathology departments, and managed care was taking hold with sharp reductions in professional fee revenues. In response, many academic pathology departments had already

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Director's Corner

Fred Sanfilippo, M.D., Ph.D.

A Welcome Revival

This issue of *PathWays* marks a revival of the Department newsletter begun in 1990 and continued in 1993. The new *PathWays* builds on the same desire to communicate and disseminate information related to the mission and activities of the Department of Pathology and will be directed to the activities of both faculty and staff. There are many excellent and worthwhile endeavors by faculty and staff and this revival of *PathWays* will attempt to share that information both within the Department and to alumni and other interested parties. The editorial committee for the newsletter include Diane Booton, Jeannette Castronova and Carolyn Hill.

A successful and longlasting newsletter depends on the active and thoughtful participation of faculty and staff to contribute newsworthy and interesting information. We are hopeful that the revived *PathWays* will continue to be a useful means of communicating information within the Department. I invite you to take part in this activity by sending news and interesting events to your Division representative or to the editorial committee directly. We invite your interest and your suggestions for future issues.

Gary March Named Employee of the Year

Over the last year, the Divisions of Surgical Pathology, Reference Histology and Autopsy have initiated an employee recognition awards program. This award is based on the quarterly nomination by peers, faculty and/or residents. The employee of the year was selected from the four individuals who had been awarded Employee of the Quarter.

Gary March was recognized by more than 25 members of the Department of Pathology for his outstanding contributions to surgical pathology, his willingness to always go above and beyond what is expected, his patient nature and professional demeanor, his sense of team work, and most importantly, his dedication. Gary was rewarded with a long weekend trip for two and a plaque (located on Pathology 7) which honors his achievement. Congratulations from the Department to Gary for a great job!

Hematology and Coagulation Laboratory

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laboratories include Molecular Hematology and Special Coagulation Laboratory. Molecular Hematology's major function is in characterizing hemoglobin disorders, such as sickle cell anemia and thalassemia. In addition measurement of hemoglobin variants and abnormal forms of glycosylated hemoglobin is done to monitor, respectively, therapy in sickle cell anemia disease and diabetes mellitus.

Special Coagulation provides comprehensive diagnostic testing for bleeding and thrombotic disorders. This specialty laboratory provides diagnostic services and specialized testing to monitor new forms of therapy used in treating patients with cardiovascular disease, congenital bleeding disorders, thrombotic disorders and strokes.

Research and development is being conducted in the following: investigation of coagulation markers in transplantation, methods to detect tissue factor activation of the clotting cascade, improved platelet counting methods and its impact on reducing platelet transfusions, evaluation of new technology for cell counting and decentralized coagulation testing.

Our education mission is directed toward training Pathology residents and Hematopathology fellows. In addition, we conduct training sessions for all Hematology subspecialty fellows from other departments in laboratory Hematology. The emphasis in our educational program is improving Laboratory Diagnosis in Hematologic Disorders. To accomplish this, we have recently authored a handbook in Laboratory Coagulation and will soon publish it on the Internet.



Drs. Thomas Kickler and Edward Weir (left)

New Technology in Digital Imaging and Computer Graphics

Pathology Photography, Digital Imaging and Computer Graphics in the Division of Informatics is keeping abreast of new computer technologies with the recent purchase of three advanced computer systems which will offer new possibilities of digital imaging to faculty, residents, fellows and staff.

- A new Vidar VXR-72 plus X-ray scanner, which scans film up to 14 inches by 51 inches in size and produces a high-resolution digital file, will perform multiple scans automatically and will greatly increase our capability in digital imaging.
- A new NT server running on 320 megabytes of RAM and a 76 gigabytes of storage using RAID array and expandable to 160 gigabytes replaces the old Novell server. We will be able to reopen the FTP-Site for users to upload and download files. The Internet address is 128.220.252.162 (Login of FTP and no password).
- A new Silicon Graphics (SGI) Octane workstation will carry out volume rendering of medical images and create 3-D Voxel-based models. A new Dec-Alpha will perform realistic 3-D animation to create broadcast-quality video.

New Staff and Projects

W. Patrick Cummings, a new trainee, graduated with a BFA degree in Photography from Savannah College of Art and Design. Patrick is a rowing enthusiast and an avid hiker. *Melissa Gill*, the new Photo Billing Assistant, will be happy to take your orders at the front desk. Melissa attends college part-time and plans a career in nursing. *Henri Hessels*, Instructor of Radiology, has joined the



Henri Hessels assumed the responsibility of the Radiology Photo Lab in CMSC B-201 and will renovate the space before its reopening in April. *Michael McElwaine* completed the two-year photography training program at Hopkins, receiving a certificate in Biomedical Photography, and has become a permanent staff member.

Raymond (Pete) Lund, Director of Path Photo, will participate in a videoconference by satellite for the BIPP Study Day at the Glasgow Royal Infirmary, College of Scotland, UK, coordinated by Bill Paterson, Director of Medical

Staff. He has worked in the Hopkins Department of Radiology for 37 years and is expert in radiological imaging. The Division has

assumed the responsibility of the Radiology Photo Lab in CMSC B-201 and will renovate the space before its reopening in April. *Michael McElwaine* completed the two-year photography training program at Hopkins, receiving a certificate in Biomedical Photography, and has become a permanent staff member. *Raymond (Pete) Lund*, Director of Path Photo, will participate in a videoconference by satellite for the BIPP Study Day at the Glasgow Royal Infirmary, College of Scotland, UK, coordinated by Bill Paterson, Director of Medical Staff. He has worked in the Hopkins Department of Radiology for 37 years and is expert in radiological imaging. The Division has assumed the

Photography Gallery

Photographs of Egypt by *Jay VanRensselaer* are now on view in the first floor Photography gallery. Jay shot the photographs in Luxor, Egypt, while working for Professor Betsy Bryan of the Hopkins Department of Near Eastern Studies.

The past few months have been busy and rewarding for Path Photo and the Staff looks forward to exploring new image resources and to providing state-of-the-art image technologies to the Department.

*“...ready to meet
the 21st century.”*

Illustration. Participants, including the Melbourne Institute of Technology, Australia, will experience a video tour with a live voice-over of the Pathology Photo Lab. *Bob Morreale*, certified Medical Illustrator, is engaged in an Enrichment Grant project funded by the American Pediatric Surgical Association. Using the new SGI Octane workstation, he is reconstructing serial-sectioned human embryos, provided by the NIH, in order to examine the simultaneous growth and shift of the cloaca during embryogenesis. He will create 3-D models in an interactive volume rendering that will allow researchers to study human anatomy on an interactive basis. *Norman Barker*,

Marketing Notebook for Medical Labs

Services offered by the Johns Hopkins Medical Laboratories are described in a marketing notebook, scheduled for its first mailing to laboratory directors and managers at the end of February, 1998. Phase I includes eight sections. Phase II and its photographic page design are currently in preparation.

Anyone interested in reviewing a copy of the notebook in progress may stop by Customer Service (Meyer B130).

As sections are approved, the text will appear on the home page of the Johns Hopkins Medical Laboratories at www.pathology.jhu.edu/jhml.

Department News

Ed Pigo
Administrator for Finance

Physician Billing Service Undergoes Second Restructuring in Two Years

On January 12, the School of Medicine implemented its second billing reorganization in as many years. In the past, all physician-billing functions, except coding and charge entry, had been centralized at White Marsh in order to generate a single-patient bill and to save costs. Several departments, however, found that their clinical income was negatively affected, and a plan has recently been put in place to retain the

single-patient bill and to keep a core set of functions at White Marsh, but return the bulk of the billing functions to the clinical departments.

The new billing production unit for Pathology, now relocated to White Marsh, is directed by *Shirley Myers*, assisted by three staff formerly in East Baltimore and four staff assigned from the White Marsh group. Shirley Myers can be contacted at 410-933-1306. The Consult Service, which Shirley had previously managed, is now supervised by *Mike Huppenthal*, and has been relocated to the Customer Service division (Meyer B130).

New Assistant Administrator

In December, *Rick Paddy* accepted the position of Assistant Administrator for

Finance in the Department of Pathology. Prior to his acceptance, he was Associate Director of the Physicians Billing Service at White Marsh, and prior to this, he worked as Associate Administrator in the Departments of Neurology and Neurosurgery. Rick joins Vince Bitteringer, Financial Analyst, in managing JHH financial operations for the department.

Bayview AC Laboratories

The Department recently entered into an agreement with Bayview Physicians to take over medical direction and management responsibility for AC Laboratories, which is an independent laboratory located on Northpoint Boulevard. It provides laboratory testing services for the various clinic sites belonging to Bayview Physicians.

Pathology Residents Present Research at the IAP Conference, Boston

We are pleased to announce that 14 residents will present their research at the 87th Annual Meeting of the United States and Canadian Academy of Pathology in Boston during the first week of March 1998.

PM Alli, Y Kamata, M Iskander, JG Pattaras, LE Nochomovitz, and SG Silverberg. Precursors of prostatic carcinoma: A case-control study of previous "benign" biopsies.

DM Berman and SZ Ali. Gliosarcoma: Cytopathologic features on intraoperative touch imprints.

TY Chan, *AN Wolf*, and SZ Ali. Mollaret's meningitis: A clinico-cytopathologic analysis of fifteen cases.

R Green and JI Epstein. Use of intervening unstained slides for immunohistochemical stains for high molecular weight cytokeratin on prostate needle biopsies.

GF Holmes, PC Walsh, CR Pound and JI Epstein. Excision of the neurovascular

bundle at radical prostatectomy in cases with perineural invasion on the needle biopsy.

JD Kronz, WH Westra, and JI Epstein. Second opinion surgical pathology at a large referral center.

AE Smith and GM Hutchins. Problems with the proper completion and accuracy of the cause of death statement of the death certificate.

AE Smith, D Scott, C Faser, J Snell, S. Tabbarra, J Thompson, L Dworkin, J Olson, ME Sherman, and MH Schiffman. Review of The Bethesda System atlas does not improve diagnostic reproducibility or accuracy.

AM DeMarzo, S Halachmi, N Halachmi, *AW Smith*, JI Epstein, D. Sidransky, and M Schoenberg. Genetic alterations in bladder carcinosarcoma. Winner of the Stowell-Orbison Awards Competition for Pathologists-in-Training.

KM Ruska, PC Walsh, H Kahane, and JI Epstein. Prostate needle biopsy and adenocarcinoma in men less than 40

years of age.

A Staebler, SF Lax, and L Hedrick Ellenson. Altered expression of hMLH1 and hMSH2 protein in sporadic endometrial carcinoma with microsatellite instability.

D Taylor, WM Koch, SJ McQuone, M Zahurak, D Sidranski, and WH Westra. Immunohistochemical detection of p53 protein accumulation in head and neck cancer: Correlation with p53 gene alterations and tumor responsiveness to radiation therapy.

MP Viglione and GM Hutchins. Limb-body wall malformation complex caused by an extra-amnionic umbilical cord. Winner of the Vawter Pathologist-in-Training Award.

EG Weir and SZ Ali. Hepatoblastoma: Cytopathologic features in body cavity fluids.

RE Wilentz, DL Rosenthal, and TL Nicol. Accuracy of fine needle aspiration of palpable versus non-palpable breast lesions.

Technology Development

The growth of research in the Department of Pathology over the last few years has led to increasing opportunities in commercialization of our research and technologies. To meet this need, the Department has created two new positions to assist and promote corporate initiatives, the Director of Technology and Corporate Initiatives, and the Director of Technology Transfer and Development. This team will work with the faculty to identify research and technologies with commercial promise, assist in providing intellectual property protection, and proactively work with industry to bring these discoveries and services to market.

Deborah Day Barbara has recently accepted the position of Director of Technology and Corporate Initiatives. Deb joins the department with 11 years of academic, biotech and pharmaceutical industry experience with Amersham Pharmacia Biotech (formerly, Amersham Life Science, Inc.). She has been involved in many aspects of the biotech industry including sales, sales management, marketing and technology transfer. In addition to a MBA degree from Loyola College, Deb possesses a broad technical background in biochemistry, cellular and molecular biology.

Dr. Frank Kuhajda has assumed the role of faculty Director of Technology Transfer and Development. Frank has been extensively involved in technology transfer over the last ten years in the realm of biotechnology. His experience includes technology assessment, biotechnology development in small companies, and authorship of numerous patents and inventions, Frank is a practicing pathologist with an active research program in experimental therapeutics.

Deb and Frank will be working together to prioritize departmental activities to maximize the value of opportunities. Deb will also act as the department's liaison with the Office of Technology and Licensing and will coordinate activities with the Fund for Johns Hopkins Medicine. These positions are designed to expedite the process of invention identification, development of corporate relationships and the actual licensing / commercialization of a technology to maximize University and departmental revenue. Deb will formally join the department on March 23, 1998. However, she is now available by E-mail at dbarbar@pds.path.jhu.edu. Frank has recently moved to the Bayview campus at fkuhajda@bayview.bayviewjhu.edu. Feel free to drop them a line!

In Other News....

Flow Cytometry

A SAD LOSS. *Kenneth Hall*, Oncology Physician's Assistant since 1981, died Thursday, February 2, 1998. He will be greatly missed by Pathology, Flow Lab, and Oncology staff. His knowledge, sense of humor, concern for the patients' well-being, and attention to detail made him a much sought-after and well-respected part of Oncology and Johns Hopkins Hospital. A memorial service will be held February 21 at 4 pm in St. Mark's Lutheran Church, 1900 St. Paul Street. "Thank you, Ken, for enriching all our lives"

Please welcome NEW STAFF *Sylvia Cherry*, who recently joined the Flow Cytometry Staff.

Molecular Pathology

Raymond Cheong, a recent summer student in Dr. Gary Pasternack's laboratory was a semi-finalist in the Westinghouse Science Talent Search. His science project was partly based on an independent project carried out in Dr. Pasternack's lab.

Neuropathology

Please welcome new faculty member *Martin Schiller, Ph.D.*, who is pursuing research projects in molecular neuro-oncology. He will be involved in teaching residents and fellows in molecular biology techniques.



Martin Schiller, Ph.D.

Dr. Schiller received his Ph.D. in Biochemistry from Utah State University, and until recently, had worked with Drs. Betty Elpper and Dick Mains in the Department of Neuroscience at Hopkins.

We encourage your participation in *PathWays*. There are Newsletter representatives throughout the Department, but if you have information that you would like to share and do not know your representative, please contact Jeannette Castronova or Carolyn Hill at 5-9790 or e-mail Jeannette at jcastro@pathlan.path.jhu.edu or e-mail Diane Booton at dbooton@pathlan.path.jhu.edu. We also welcome your comments and suggestions concerning *PathWays*.

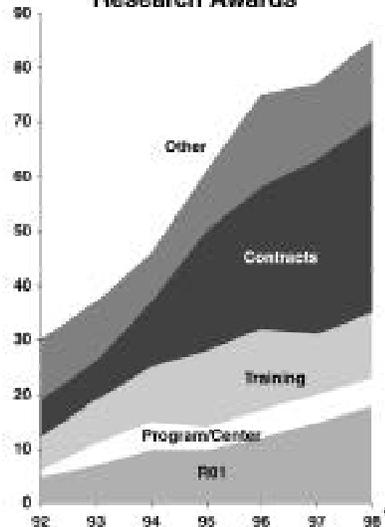
Where We've Been...

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begun down-sizing, so our approach was viewed by many, especially on the outside, as counter-intuitive.

With this grim scenario, what has happened to Johns Hopkins Pathology over the past five years? As reviewed in detail at the faculty and senior staff retreat in Wilmington last fall, we have more than doubled our faculty and more than tripled the number of clinical and research fellows. We have more than tripled our clinical revenue and generated a significant reserve fund that represents almost a year and a half of our discretionary funds (UEF) budget. Our extramural research funding has more than tripled, such that among Pathology departments we were 5th in total NIH funding this past year, and this year should move into 3rd.

Johns Hopkins Department of Pathology Research Awards



* projected

It is noteworthy that this has been done with less research space than some of the other leading departments. With this growth we have been able to strengthen and diversify existing areas of research, and add many new research programs, both fundamental and applied, in key disciplines that complement our clinical services.

During this period the hospital has increased its support of our clinical faculty and staff by almost 70%, and we have seen a significant increase in the number and diversity of highly qualified resident applicants. We have significantly increased hospital volumes through our outside referral work, and we have reduced the unit cost of our pathology and laboratory services to 9% below the average of our 'competitor' hospitals and the state average, even though the total cost for Hopkins Hospital is 25-30% above our competitors. What's most remarkable is that this has been done with an increase in the quality and number of services offered.

The reasons for our overall success are simple; it is the direct return on our 'investment' in outstanding faculty and staff, and our development of an environment that facilitates productivity.

So what should we do now? Do we conserve resources for difficult times ahead? Do we distribute them to those who got us here? Or do we re-invest in even more growth, productivity, and diversification of our research, service, and educational activities? For me, another way of asking this question is whether our vision is focused on the past, present, or future. In looking forward, available research funding for the next five years is likely to be greater than it has been for decades. In addition, we anticipate continued significant growth in our outside clinical revenue, especially through our recently created referral services, Johns Hopkins Medical Laboratories, which we have begun to market aggressively. Clearly, the opportunities available and our ability to take advantage of them are much greater now than they were five years ago. Therefore, and somewhat ironically, it seems that we can achieve the greatest protection by once again investing our resources of time, effort, space, and funds wisely to generate the greatest value.

We've gotten where we are with hard work by all and attention to our shared core values of collegiality, excellence, and innovation and our academic mission. If we sustain these principles, especially with our many new faculty and staff, the next five years should be an even more exciting and productive time for Johns Hopkins Pathology.

New Faculty to the Department

Please welcome the following individuals as faculty members to Department of Pathology effective July 1, 1998:

Pedram Argani, M.D.

Division of Pediatric Pathology

Patrizio Caturegli, M.D.

Division of Immunology

Angelo De Marzo, M.D., Ph.D.

Division of Kidney and
Urologic Pathology

Theresa L. Nicol, M.D.

Bayview Medical Center

Mark Silberman, M.D.

Division of Hematopathology and
Surgical Pathology

FACULTY AWARDS AND ACTIVITIES

Awards

Patricia Charache, M.D.	Fellow, American Academy of Microbiology
James Nichols, Ph.D.	Past-Chair Award, Capitol Section, American Association for Clinical Chemistry Best Abstract Award, Clinical Chemistry 1997 Conference (with Karen Dyer, MT, Dai Li, M.D., Ph.D., Dorothy Nyberg, MS, RN, Lori Sokoll, Ph.D., and Patricia Charache, M.D.)
Noel R. Rose, M.D., Ph.D.	University Medal, University of Caracas, Venezuela 9/97
Sangram Sisodia, Ph.D.	Metropolitan Life Foundation Award for Medical Research

Sponsored Research, Education

Peter R. Mouton, Ph.D.	American Health Assistance Foundation (AHAF) Commissioned by JHU Press to write the book, "Unbiased Stereology for Bioscientists," to be published in 1999
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Named or Invited Lectures

J. Stephen Dumler, M.D.	Seventh International Kilmer Memorial Conference on the Sterilization of Medical Products, Phoenix, 1998
Tibor Nadasdy, M.D., Ph.D.	Renal Pathology and the Binford-Dammin Society, USCAP, Boston, 1998
Gary Pasternack, M.D., Ph.D.	Distinguished Visitory Scientish Lecturer, Albany Medical College
Lorraine Racusen, M.D.	Symposium, Surrogate Markers of Transplant Rejection, Basel, 1997

Review Groups

Gary Pasternack, M.D., Ph.D.	Study Section, Army Prostate Cancer Research Program
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Advisory Boards

Thomas Kickler, M.D.	Advisory Board, International Society of Hemostasis and Thrombosis
James Nichols, Ph.D.	Chair, Therapeutic Drug Monitoring and Toxicology LIP Committee, American Association for Clinical Chemistry, 1999
	Vice-Chair, Point-of-Care Testing Division, American Association for Clinical Chemistry, 1998
	Advisory Panel, AVL and Boehringer Mannheim Diagnostics
Lorraine Racusen, M.D.	Medical Advisory Board, National Kidney Foundation, Maryland Affiliate

Editorial Boards/Journals/Books

Michael Borowitz, M.D., Ph.D.	Section Editor, <i>Leukemia</i>
Daniel Chan, Ph.D.	Editorial Board, <i>Clinical Chemistry</i> , <i>Journal of Immunoassay</i> , <i>Journal of Clinical Immunoassay</i> , and <i>Diagnostic Endocrinology and Metabolism</i> (Chair)
J. Stephen Dumler, M.D.	Editorial Board, <i>Emerging Infectious Diseases</i>
Thomas Kickler, M.D.	Editorial Board, <i>Transfusion</i>
Lorraine Racusen, M.D.	<i>Kidney Transplant Rejection</i> , 3rd edition
Noel R. Rose, M.D., Ph.D.	Editorial Board of the <i>Circulation Research</i> and <i>Clinical and Diagnostic Laboratory Immunology</i>

Society Officer

Tibor Nadasdy, M.D., Ph.D.	Member, Education Committee, Renal Pathology Society
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Calendar

- Feb. 28-March 6 USCAP Conference, Sheraton Boston
- March 2 Alumni Reception, Hampton Room, 5:30 - 7:30 pm, Sheraton Boston
- May 8 - 9 Seminar, "*Critical Issues in Surgical Pathology*," Renaissance Harborplace Hotel, Baltimore
- May 15 Departmental Awards Dinner, The Maryland Club, Baltimore
- May 21 JHU Commencement (Holiday)
- May 25 Memorial Day Observed (Holiday)
- October 30 - 31 Seminar, "*Gynecologic Pathology: Approaches to Common Problems with Emphasis on New Entities and Techniques*," Renaissance Harborplace Hotel, Baltimore

Pathology Grand Rounds

- March 12 Vinay Kumar, M.D., The Vernie A. Stembridge Chair in Pathology, University of Texas Southwestern Medical School (Distinguished Visiting Professor)
- March 19 Raymond E. Lund, RBP, RBPA, and Jerry R. Arnold, Associate Professor and Director, Pathology Photography; and Manager, Graphic Arts, Pathology
- March 26 William Travis, M.D., Armed Forces Institute of Pathology
- April 2 G. Steven Bova, M.D., Assistant Professor, Pathology
- April 9 David Page, M.D., Professor and Director, Anatomic Pathology, Vanderbilt University (Distinguished Visiting Professor)
- April 16 Richard Schlegel, M.D., Ph.D., Professor and Interim Chairman, Department of Pathology, Georgetown Medical Center, Washington, DC
- April 23 Joel Saltz, M.D., Ph.D., Associate Professor, Pathology
- April 30 Ibrahim Ramzy, M.D., Professor of Pathology and OB/GYN, Baylor College of Medicine

Department of Pathology
 Johns Hopkins Medical Institutions
 600 N. Wolfe Street, Carnegie 417
 Baltimore, MD 21287-6417
 (410) 955-9790

Fred Sanfilippo, M.D., Ph.D.
 Baxley Professor and Director

Editorial Committee:
 Diane Booton
 Jeannette Castronova
 Carolyn Hill

Technical Advisor:
 Jerry Arnold

Photographer:
 Jim Durham

Department of Pathology Web Site:
www.pathology.jhu.edu