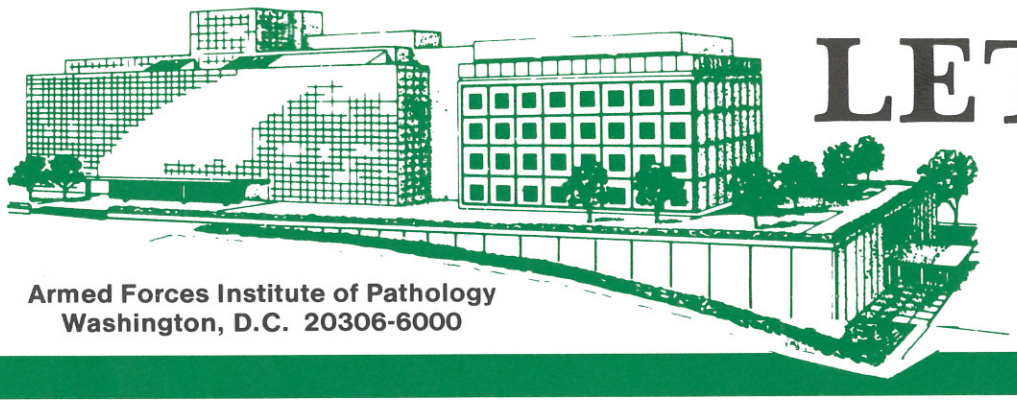
the AFIP LETTER



Armed Forces Institute of Pathology
Washington, D.C. 20306-6000

Vol. 149, No. 1
February 1991

The Director's Message

Our expanding fee for consultation program and other initiatives: The AFIP at work for you

One of our most significant initiatives of 1990, the establishment of the fee for consultation program, remains prominent as we begin a new calendar year. Coordinated with the American Registry of Pathology, our goal over the first half of 1991 will be to expand the program from 5 to 17 departments.

These additional departments are: Hematologic and Lymphatic Pathology, Pulmonary and Mediastinal Pathology, and Cardiovascular Pathology on March 1; Hepatic and Gastrointestinal Pathology, Neuropathology, and Endocrine Pathology on April 1; Otolaryngic Pathology, Oral Pathology, and Orthopedic Pathology on May 1; and, Genitourinary Pathology and Pediatric Pathology on June 1. You will be notified by letter as each department converts.

Maj Melissa Rosado de Christenson, USAF, MC, (right) demonstrates the radiologic features of mediastinal masses to residents in radiology. (See page 5)

Please Note: The AFIP wishes to continue receiving unusual cases that complement our education and research programs and help us to serve you better as a National Pathology Repository. These cases should be identified for these purposes and, of course, there will be ***no consultation fee charged.*** If there is a question regarding the appropriateness of the case fitting into these categories, please contact the specific department.

In this issue of the Letter, we've made note of two important recent changes. The Gastrointestinal and Hepatic Pathology Departments have been combined, and the Center for Advanced Medical Education (CAME) has moved to our Forest Glen, MD annex. Please note CAME's new telephone numbers inside.

On December 5-7, 1990, we held a special planning conference to discuss a number of ongoing initiatives and develop a futuristic view of the Institute. We reflected upon ways to improve the AFIP's contribution to leadership in pathology, and discussed programs which will strengthen our collaborative efforts with other governmental and civilian medical communities Other topics discussed included continued recruiting of distinguished scientists, development of national and international course offerings, and strengthening our mission as a repository for research utilization

The Office of the Armed Forces Medical Examiner (OAFME) continues to provide support for military pathology needs, especially in light of Operation Desert Storm. In December, OAFME performed autopsies following the USS Saratoga incident and responded following the deaths of three American soldiers in El Salvador. Our staff is prepared to assist in any way needed as Operation Desert Storm progresses.

A variety of "cutting-edge" programs, including image processing in the Department of Cellular Pathology, are ongoing at the Institute. We'll tell you more about them in the coming months. We're excited about what the AFIP has to offer, and we look forward to briefing you throughout the year on our committment to excellence in consultation, education, and research.

ROBERT F. KARNEI, JR.
CAPT, MC, USN
The Director

LTC Patrick Lorenz, MS, USA, Chief, Automation Management Services

LTC Patrick Lorenz was recently appointed Chief of the AFIP's Automation Management Services. He and his staff are responsible for all aspects of automation and data communication for the Institute. LTC Lorenz comes to the AFIP after serving 3 years at the HQ, U.S. Army Europe (USAREUR) as the Medical Information Mission Area Plans and Approvals Officer.

A native of North Dakota, LTC Lorenz graduated from St. John's University, MN, with B.A. degrees in Mathematics and Physics, and received an ROTC commission. He went to graduate school before entering active duty, and in 1974 completed a Ph.D. in molecular physics from Southern Illinois University.

LTC Lorenz began his military career as a research scientist at the Walter Reed Army Institute of Research (WRAIR) in Washington, DC. He was a researcher for the next 8 years, including a two-year postdoctoral position at the National Institutes of Health with Nobel Laureate Dr. Christian Anfinsen. LTC Lorenz lists a patent among his research accomplishments, as well as various publications and presentations.

His interests in technology led to a career field change, and subsequent automation-related assignments. He was reassigned to WRAIR as chief of the Biomedical Engineering Department, and concurrently completed a M.S. in Computer Sciences, with honors, from Johns Hopkins University. From 1985 to 1987 he served as chief of the Information Management Office at the Frankfurt Army Regional Medical Center in Frankfurt, West Germany, before being assigned to USAREUR.

Major Edwina Popek, MC, USA, Chair, Department of Pediatric Pathology

MAJ Edwina Popek, MC, USA, is the Chair of the Department of Pediatric Pathology. Her department serves as a consultation source for placental pathology, as well as for the study of fetal, neonatal and infant diseases, including congenital malformations, chromosomal defects, inborn errors of metabolism, and tumors both benign and malignant.

The Department of Pediatric Pathology specializes in placental pathology and autopsy pathology, reviewing over 350 autopsies annually. Current plans include the development of a Pediatric Pathology Education Center, which will serve to educate pathologists, pediatricians, neonatologists and fetal medicine specialists.

MAJ Popek, who was appointed Chair in 1989, is the only Army pathologist to be fully credentialed in Pediatric Pathology by the American Board of Pathology. A graduate of the University of Missouri, Kansas City, she received a D.O. from the University of Health Science College of Osteopathic Medicine, Kansas City, MO in 1981.

MAJ Popek completed her pathology internship and residency programs at William Beaumont and Letterman Army Medical Centers, respectively; a two year civilian fellowship in Pediatric Pathology at the Children's Hospital, Denver, CO, followed.

MAJ Popek co-directs the annual Perinatal and Pediatric Pathology Course, and is now directing a new course in Placental Pathology. Her research currently includes pediatric AIDS, placental pathology in AIDS, cystic renal disease and the malignant rhabdoid tumor.

Society affiliations include the American Osteopathic Association, American Society of Clinical Pathologists, American Medical Association, Society for Pediatric Pathology and the American Medical Women's Association.

Christopher Kelly Appointed Public Affairs Officer

Christopher Kelly was recently selected to head the AFIP's Public Affairs Office. In his new role, Mr. Kelly will oversee the Institute's comprehensive public affairs program, including community relations, public information and protocol activities.

Mr. Kelly brings seven years of public affairs experience to his position. The Pennsylvania native comes to the AFIP from Walter Reed Army Medical Center, where he served as Community Relations Officer. In 1986, he established the first full time Public Affairs Officer position at the Coatesville (PA) Veterans Affairs Medical Center, coordinating all aspects of public information, community relations and special events.

From 1984 until 1986, he served as a Staff Assistant to former U.S. Representative Bob Edgar, and performed a variety of public information and community outreach activities. He also has over three years of additional experience in management and sales.

Mr. Kelly graduated with a B.A. in History from Franklin and Marshall College in 1979, and holds a Master of Management in Public Administration from Penn State University.

Currently, he serves as a Vice President for the Washington, D.C. Chapter of the National Association of Government Communicators, and as a Vice President for the Walter Reed Toastmasters Club.

Mr. Kelly is married to Denise Neary, an attorney who coordinates education and training programs for federal judges at the Federal Judicial Center.

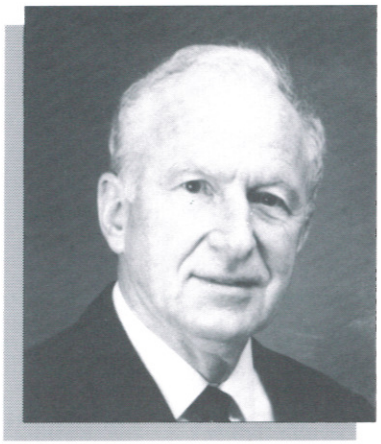
AFIP HAPPENINGS...

■ BG Ben Mels, Surgeon General of the Royal Netherlands Army, toured the world-famous Yakovlev Brain Collection during his 8 January visit to the AFIP. With him was Mohammed Haleem (center), the collection's curator, and LTC Hernando Mena, MC, USA, Asst. Chairman, Dept. of Neuropathology.

■ Dr. Ulrich Mohr (second from right) of the Fraunhofer Institute of Toxicology and Research, Hannover, Germany, and Mr. Gerd Morawietz (second from left), Director of the Fraunhofer Institute's Computer Center, lectured on "Tumor Registry Database Application In Modern Toxicological Pathology," at the AFIP on January 14, 1991. Also pictured: Deputy Director Col Vernon Armbrustmacher, USAF, MC, (left); Dr. Florabel Mullick, Associate Director, Center for Advanced Patholoy (center); and, Dr. Franz Enzinger, Soft Tissue Pathology.

■ Dr. Shyh-Ching Lo, Chief, Division of Geographic Pathology, Dept. of Infectious and Parasitic Diseases Pathology, received the 1990 Scientific Achievement Award from the Chinese Medical and Health Association. The award was presented at the Association's Chinese New Year Banquet on February 23.

Dr. Wayne Meyers named 1990 Damien-Dutton Award Winner



Wayne Meyers, M.D., Ph.D., received the 1990 Damien-Dutton Award at a ceremony held on November 12, 1990 in Port Jefferson, NY. The award, presented annually since 1953 by the Damien-Dutton Society for Leprosy Aid, Inc., Bellmore, NY, honors an individual or group of individuals who have rendered outstanding service to the cause of leprosy through medical care, research, rehabilitation, education, social welfare, or philanthropy.

The thirty seven previous recipients, from fifteen different countries, have included John F. Kennedy (1965), the Peace Corps (1966), the American Leprosy Missions (1981), and Mother Theresa (1984). Dr. Meyers is the second awardee to have ties to the AFIP; the late Dr. Chapman H. Binford was honored in 1971.

Dr. Meyers' collaborative research in tropical diseases with the AFIP began in 1961 when he served in Burundi and Zaire as a missionary physician with the American Leprosy Missions. He was an NIH / Leonard Wood Memorial Fellow in Research Pathology of Leprosy at the AFIP in 1968-69 between tours of duty in Africa. The collaborative studies continued until 1975 when Dr. Meyers joined the AFIP staff as Chief, Division of Microbiology, and Registrar for Leprosy.

Dr. Meyers serves as the Branch Chief of Mycobacteriology, Division of Microbiology in the Department of Infectious and Parasitic Disease Pathology. His current research interests include experimental leprosy in animal models and the long-term followup of antileprosy chemotherapeutic regimens in Africa, India and Pakistan.

F.Y.I. . . .

Department of Hepatic and Gastrointestinal Pathology Formed

The Department of Hepatic Pathology and the Department of Gastrointestinal Pathology merged on January 1, 1991. The Chairman of the newly formed Department of Hepatic and Gastrointestinal Pathology is Dr. Kamal G. Ishak.

The new department now consists of the Division of Hepatic Pathology, Dr. Zachary D. Goodman, Chief; and, the Division of Gastrointestinal Pathology, Dr. Leslie H. Sobin, Chief.

Resources of Biomedical and Zoological Specimens Directory Available

The second edition of the directory, "Resources of Biomedical and Zoological Specimens" is now available from the Registry of Comparative Pathology. There is no charge for the directory and it may be obtained from the Registry of Comparative Pathology, AFIP, Washington, D.C. 20306-6000. (Telephone (202) 576-2452).

Center for Advanced Medical Education (CAME) Moves to Forest Glen: New Telephone Numbers Assigned

The Center for Advanced Medical Education (CAME) has moved to our Forest Glen, Maryland, annex. Please make a note to use the following new telephone numbers when calling CAME for information.

Main numbers: (301) 427-5208 or 427-5618
FAX: (301) 427-5001

Distinguished Visiting Scientist and Distinguished Scientist Emeritus Positions Established

The AFIP has established two new positions in order to broaden our consultant area of expertise. Dr. Elson Helwig, the former Chairman of the Department of Gastrointestinal Pathology, has been named Distinguished Visiting Scientist in the Department of Dermatopathology. Dr. Hyman Zimmerman, a former Distinguished Scientist, has been named Distinguished Scientist Emeritus in the Department of Hepatic and Gastrointestinal Pathology. Plans call for expanding these positions to other departments in the future.

News from the American Registry of Pathology

The ARP will host a luncheon during the International Academy of Pathologists meeting in Chicago on March 18 at 12 noon at the University Club, 76 East Monroe. All members of the Friends and Alumni Society of the AFIP are welcome ($10.00 each), as well as their spouses and guests ($25.00 each). The speaker will be Richard Epstein, James Parker Hall Professor of Law at the University of Chicago, who will give an address on the "'Right' of Access to Health Care."

On December 11, 1990, the ARP Board, Registrars, AFIP staff and guests met at the Bethesda Naval Officers Club for their annual dinner. Honored were Elgin Cowart, retired Executive Director of ARP; Elson Helwig, retired Registrar of the Department of Gastroenterology and Dermatology; and, Vernie A. Stembridge, retired President of ARP. Mr. Edward C. Whitehead, Chairman of the Board of the Whitehead Institute, gave the major address on "Research America."

Initiatives reported at the ARP Board meeting on December 12 included a White Paper on plans for a new AFIP building, and a new Environmental Pathology program in conjunction with SAB-ARP-UAREP and the staff of the AFIP.

Dr. Donald West King, ARP's Executive Director, reported on the highly successful sale of fascicles, the initiation of the pilot consultation fee program, and the significant support given by members of the newly formed Friends and Alumni Society of the AFIP.

Dr. Donald A. Senhauser, Chairman of the Nominating Committee, presented a new slate of officers for the ARP. As unanimously endorsed by the Board, ARP officers for 1991 are Doctors William D. Dolan, President; Jerome I. Kleinerman, Vice President; and, Hugo V. Rizzoli, Secretary. The other members at large of the Executive Committee are Doctors Russell L. Corio, Mark M. Mishkin and Vernie A. Stembridge.

29th Annual Neuropathology Review Course held in Bethesda, February 4-8

Over 200 neurologists, neurosurgeons, pathologists and radiologists attended the Department of Neuropathology's 29th Annual Neuropathology Review Course, held February 4-8 at the Bethesda Hyatt Regency.

James S. Nelson, COL, MC, USA, Chairman, Department of Neuropathology

The four and one-half day course provided a comprehensive review of neuropathology for individuals interested in the neurosciences and pathology. A faculty of national experts lectured on subjects which included strokes, AIDS, multiple sclerosis, head injuries, Alzheimer's disease, tumors, and, neuromuscular disorders. The course stressed recent developments in the pathophysiology of neurological diseases.

The Neuropathology Review Course immediately followed the fifth annual AFIP/ARP Neuroradiology Review Course, also held at the Bethesda Hyatt Regency on February 2-3, where 300 professionals were in attendance.

Radiology Pathology Course Trains Hundreds Annually

The Registry of Radiologic Pathology was founded in 1947 when it was anticipated that there would be an increase in radiology training in the post-war era.

Today, 808 radiology residents participate in 6 six-week courses each year. The course curriculum includes lectures on radiologic pathologic correlation in all organ systems relevant to radiology, as well as case discussions by the residents and staff. The course is part of the residency curriculum of all Department of Defense and Department of Veterans Affairs programs in the United States. Civilian residents from 207 United States residency programs, and from 30 foreign programs also attend. The ever-growing popularity of the Radiologic Pathology Course has resulted in full registration for every course offered through academic year 1992-93.

Histotechnology Notes

Modified Oil Red O Method for Demonstration of Polymeric Debris

In order to better identify fragments of polymers, (polyethelene, polymethyl methacrylate and silicone), used in prosthetic implants, the Orthopedic Histology Laboratory subjected sections cut at 6 micrometers that were placed on glass slides to a modified Oil-Red-O staining procedure. The modification consisted of increasing the staining time in the Oil-Red-O staining solution from 24 hours to 5 days and increasing the time in the counterstain from 2 minutes to 10 minutes. This resulted in exceptionally well-defined polymers easily identified within the paraffin embedded tissue sections.

FIXATION: 10% buffered neutral formalin.
TECHNIQUE: Cut paraffin sections at six microns.
SOLUTIONS:

Oil Red O in Propylene Gylcol Solution

Oil Red O ..... 0.5 gm
Propylene glycol, 100% ..... 100.0 ml

Add a small amount of propylene glycol to the Oil Red O and mix well, crush larger pieces. Gradually add the remainder of the propylene glycol stirring periodically. Heat gently until the solution reaches 95°C. Do not allow to go over 100°C. Stir while heating. Filter through coarse filter paper while still warm. Allow to stand overnight at room temperature. Filter through Seitz filter with the aid of vacuum. If solution becomes turbid, refilter. When using the Seitz filter, put rough surface of filter up.

85% Propylene Glycol Solution

Propylene glycol, 100% ..... 85.0 ml
Deionized water ..... 15.0 ml

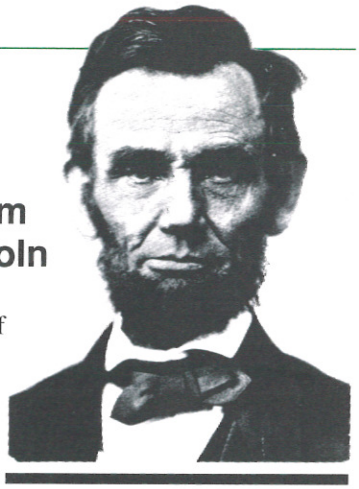
STAINING PROCEDURES:

1. Deparaffinize and hydrate to deionized water.
2. 100% propylene glycol - 5 minutes.
3. Oil Red O in propylene glycol. Filter before use. Leave slides in solution for 5 days.
4. Differentiate in 85% propylene glycol solution for 2 .. minutes. Agitate slides.
5. Wash in several changes of tap water.
6. Harris hematoxylin solution for 10 minutes.
7. Wash in tap water for 4 minutes.
8. Differentiate in 1% acid alcohol 1 dip.
9. Wash in tap water - 4 minutes.
10. Saturated lithium carbonate 1 dip.
11. Wash in tap water 4 minutes.
12. Coverslip in water based medium, (alvenall).

RESULTS:

Polyethylene wear particles ..... cherry red
Nuclei ..... blue

Medical Museum Sponsors Program on Abraham Lincoln



The National Museum of Health and Medicine Foundation and the American Medical Association co-sponsored a special program about the health of Abraham Lincoln on Saturday, February 9th. Entitled "The Patient is Abraham Lincoln," the program featured a Lincoln scholar and a medical scientist, each of whom discussed an area of Lincoln's life that has remained shrouded in mystery - his health.

The featured historian was Lincoln scholar Mark Neely, Jr., Ph.D., Director of the Louis A. Warren Lincoln Library and Museum in Ft. Wayne, Indiana, while Marc S. Micozzi, M.D., Ph.D., Director of the Museum, spoke about Lincoln from a medical and scientific standpoint. Dr. Micozzi is the author of over 50 scholarly papers and nearly 100 scientific articles, chapters and books.

Over 100 guests attended the program, which was presented as a public service to scientific, educational, media and governmental leaders.

Abraham Lincoln was a key figure in the life of the National Museum of Health and Medicine of the AFIP. The museum was founded during the Civil War as the Army Medical Museum, because military forces were losing more troops from disease than from combat. In 1865, museum doctors were given the sad task of performing Lincoln's autopsy. Ironically, Ford's Theatre, the site of Lincoln's assassination, housed the Museum from 1866 to 1887.

For the next 81 years, the famous "Old Red Brick" building housed the Museum on the Mall at 7th and Independence Avenues. In 1968, the Museum moved to its present site at the AFIP to clear space on the Mall for a modern art museum. Now, with the combined momentum of a newly incorporated foundation, a visionary planning effort, and the commitment of prestigious national leaders, plans are underway to create a new and expanded National Museum of Health and Medicine of the AFIP.

Otis Historical Archives (OHA)

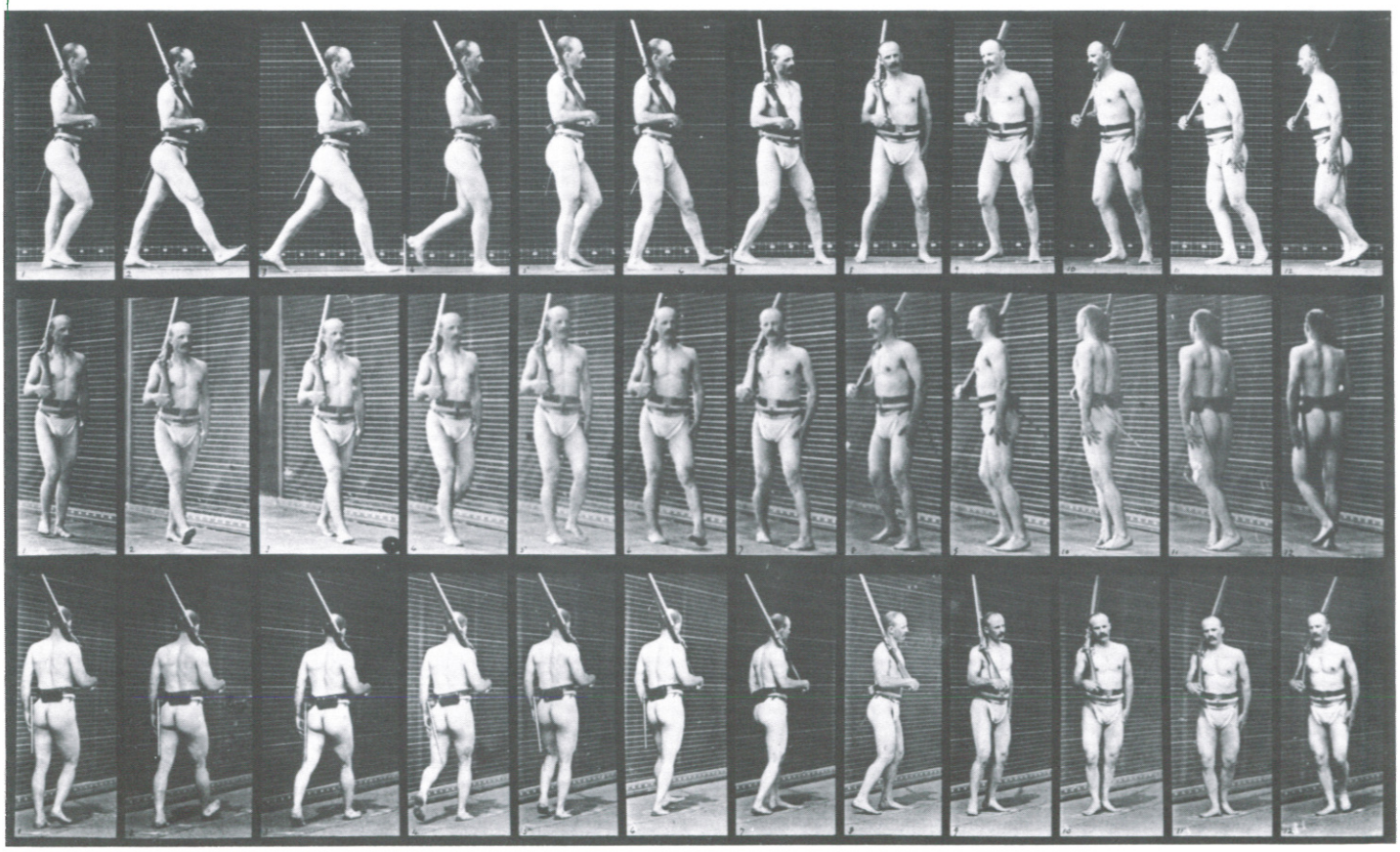
Due to the generosity of Colonel Balduin Lucke, who was a consultant with the AFIP, the OHA holds a selection of photographs by the famed Eadweard Muybridge (1830-1904). Muybridge was born in England but became a photographic surveyor for the U.S. government. Governor Leland Stanford of California commissioned Muybridge to make the famous photograph showing the horse galloping with all four feet off the ground to settle a controversy. Muybridge continued experimenting with sequential action photography, using friends, atheletes, and borrowed hospital patients with physical disabilities for human models. After an eight year study of animal and human motion, he published *Animal Locomotion: An Electro-Photographic Investigation of Consecutive Phases of Animal Movement 1872-1885* under the sponsorship of the University of Pennsylvania, from which our examples are drawn. Muybridge's pioneering work laid much of the basis for anatomically precise motion studies as well as motion picture technology. In 1888, Muybridge met with Thomas Edison to discuss combining his moving photographs with phonograph sound, but technology was not developed enough yet to produce the talking picture.

Below: Three batteries of 12 cameras each photographing from three points produced the action sequences of marching man.

Research and Repository Services

Accepted and accessioned case material is the property of the Armed Forces Institute of Pathology. Paraffin blocks can be returned to the original contributor upon request with the concurrence of the chairperson of the department that rendered the final report on the case. Original slides are not returned, although occasionally recuts will be made from the blocks by the AFIP and forwarded to the contributor for their use.

Upon receipt of an authorized request from a contributor or patient representative, the Institute may loan designated pathological materials to various individuals and/or organizations. Our normal loan period is for 30 days, which can be extended upon written request. Both pathologic glass slides and paraffin blocks can be loaned. We would appreciate the timely return of all pathologic materials at the end of the designated loan period. All requests for release or loan of materials, as well as all materials being returned, should be forwarded to the following address: Records Repository Division, ATTN: Medical Release Section, Armed Forces Institute of Pathology, Washington, DC 20306.



Reprints

Brains, Bodies and Metabolism

Este Armstrong

The interrelationship of brain and body sizes has been the subject of investigations for over a hundred years. These studies have demonstrated that variation in brain weights is much smaller than that in body weights; consequently, scaling studies are ones of negative allometry. Furthermore, the variability in brain weight is greater when comparisons are between species rather than among individuals of the same species, and the degree of variability in brain size differs among orders. The largest shifts in brain sizes relative to changes in body weights are found when comparing different ontogenetic stages. Debate continues as to the importance of metabolism in determining the interrelationship of brain-body weights for interpreting differences in relative brain size. Although past advances in the study of brain-body size associations have come by increasing the size of the data bases and by improved statistical analyses, the recent utilization of transgenic animals may provide new insights into the mechanism of this association.

Brain Behav Evol. 1990;36:166-176.

Magnetic Resonance Appearance of Fibromatosis. A Report of 14 Cases and Review of the Literature

Mark J. Kransdorf, LTC, MC, USA, James S. Jelinek, MAJ, MC, USA, Richard P. Moser, Jr., COL, MC, USA, Joseph A. Utz, MD, Terry M. Hudson, MD, Joseph Neal, Col, USAF, MC, and B. Hudson Berrey, LTC, MC, USA

We reviewed retrospectively the magnetic resonance (MR) images of 14 soft-tissue lesions of fibromatosis (desmoid tumors) encountered in 11 patients. The lesions were typically inhomogeneous in texture and round to oval in configuration. Margins were well-defined in 78% of the lesions at presentation and were infiltrating in all recurrences. On T_1-weighted spin echo MR images, the predominant signal intensity was either isointense or minimally hyperintense when compared with skeletal muscle. on T_2-weighted MR images the predominant signal intensity was typically intermediate between skeletal muscle and subcutaneous fat or isointense to fat. Linear and curvilinear areas of decreased signal intensity were distributed throughout the lesions on both pulse sequences in 86% of cases. This pattern strongly suggested fibromatosis. Speculation concerning possible etiologies of this appearance are discussed, and the relevant literature on previously reported cases is reviewed.

Skeletal Radiol 1990;19:495-499.

Retinoblastoma. The Relationship of Proliferating Cells to Blood Vessels

Miguel N. Burnier, Ian W. McLean, Lorenz E. Zimmerman and Saul H. Rosenberg

In 150 retinoblastomas the authors found a uniform thickness of the cuff of viable retinoblastoma cells that surrounds blood vessels. The mean thickness was 98.7 micrometers with a standard deviation of ll.9 micrometers. The cross-sectional area of the cuff was negatively correlated with the mitotic activity in the cuff and positively correlated with the diameter of the central vessel. The mitotic activity in the cuff of cells was inversely related to the distance from the central blood vessel. When the cuff was divided into three concentric rings, the inner ring contained a mean of 6.2 mitotic figures, the middle ring contained a mean of 2.9 mitotic figures, and the outer ring contained a mean of 0.6 mitotic figures. This pattern of growth is similar to that observed in other rapidly growing neoplasms in humans and experimental animals. In these tumors this pattern results from reduction in oxygen tension with increased distance from the central blood vessel.

Invest Ophthalmol Vis Sci. 1990;31:2037-2040.

Interrelation of Formalin Fixation, Chromatin Compactness and DNA Values as Measured by Flow and Image Cytometry

Robert L. Becker, Jr., MD, PhD, Lt Col, USAF, MC and Ulrika V. Mikel, BS, MGA, CMIAC

The severity and consistency of the effect of formalin fixation on the quantitation of DNA by flow cytometry (FCM) and image cytometry (ICM) were studied. As compared to ethanol, formalin fixation substantially decreased the propidium iodide fluorescence from mouse hepatocyte nuclei analyzed by FCM; it was also associated with an altered 4n-to-2n signal ratio and with false aneuploid peaks by FCM, but not by ICM (microspectrophotometry). ICM, on the other hand, suffered from a dependence of the DNA signal on nuclear size, which was not seen with FCM. The DNA signal variation was related to variations in the chromatin state, as shown by differences between monocytes and lymphocytes, and between RAJI cells fixed under various ionic strengths. The dependence of the DNA signal on the chromatin state indicates a need for caution in interpreting aneuploidy in formalin-fixed cells. For FCM, pseudoaneuploidy appears avoidable by using a Feulgen fluorescence staining technique. New imaging modes may be necessary to solve the problem of cell size dependence for ICM DNA determination.

Anal Quant Cytol Histol. 1990;12:333-341.

Postgraduate Short Courses in Continuing Education
Academic Year 1990-91

Course Title	Scheduled Dates	Application Deadline	Non-Federal Fee	Federal Fee
Infectious and Parasitic Diseases Pathology	18-22 Feb 91	18 Jan 91	$435/485	$45
Hyperbaric Chamber Awareness	16-17 Mar 91	16 Feb 91	$175	$50
Gastrointestinal Radiology Review	23-24 Mar 91	23 Feb 91	$250	$20
# Gastrointestinal Pathology Review	25-27 Mar 91	20 Feb 91	$250	$60
Diagnostic Immunopathology & Molecular Pathology	8-10 Apr 91	11 Mar 91	$350	$25
Perinatal & Pediatric Pathology	8-12 Apr 91	11 Mar 91	$400	$30
Forensic Dentistry	15-19 Apr 91	18 Mar 91	$350	$35
Comparative Pathology	22-24 Apr 91	25 Mar 91	$200	$25
Microbial Adaptation to Oxidant Stress	27 Apr 91	29 Mar 91	$85	$45
Forensic Anthropology	29 Apr-3 May 91	1 Apr 91	$450	$75
Melanocytic Lesions of the Skin	1-3 May 91	3 Apr 91	$350	$75
Pathology of Lymph Nodes & Hematopathology	7-10 May 91	9 Apr 91	$500	$75

Reflects change in course dates

Course Descriptions

Infectious Parasitic and Tropical Diseases
Designed for physicians, pathologists, parasitologists, and veterinarians who have an interest in study and control of infectious, parasitic, and tropical diseases, and want further knowledge in pathology, pathogenesis, clinical manifestations, diagnosis, treatment and prevention of those diseases. Course held in Birmingham, AL.

Course enrollment limited to 150. Approximately 41 CME credit hours.

Hyperbaric Chamber Awareness Course
Introductory orientation to researchers, physicians, nurses, technicians and sport SCUBA divers on hyperbaric chambers with emphasis on application in rescue operations, clinical hyperbaric oxygen therapy, research in oxygen physiology, and diving. Course includes lectures, demonstrations, and two hyperbaric chamber dives. (Participation in dives is not mandatory for course completion.) Certification of Medical Examination and recent chest x-ray required for dive participation.

Enrollment limited to 40. Approximately 14 CME credit hours.

Gastrointestinal Radiology Review Course
In a comprehensive review of GI tract radiology, the faculty will lecture on radiologic presentation of diseases affecting the esophagus, stomach, small bowel, and colon. Radiologic-pathologic correlation will be emphasized.

Enrollment limited to 150. Approximately 14 CME credit hours.

Gastrointestinal Pathology Review
A comprehensive, practical review in diagnostic surgical pathology of the gastrointestinal tract. Course includes didactic lectures on neoplastic and non-neoplastic diseases of the gastrointestinal tract and a slide seminar of cases from AFIP files. Microscopes will be available throughout course.

Enrollment limited to 100. Approximately 22 CME credit hours.

Diagnostic Immunopathology and Molecular Pathology
Symposium will include discussions on immunoperoxidase and immunofluorescence techniques; flow cytometry; in-situ hybridization; clinical importance of oncogene amplification, surface markers and gene rearrangement in diagnosis of lymphoma; and molecular techniques for diagnosis of genetic diseases. Hands-on experience in DNA extraction, in-situ and filter hybridization, southern blotting, and polymerase chain reaction techniques will be provided. Attendees may present poster sessions in their own research in clinical immunopathology and molecular pathology. Course is held in Orlando, Florida.

Perinatal and Pediatric Pathology
Course will emphasize tumors, infections, and metabolic diseases unique to childhood. Common malformation syndromes, congenital anomalies and cytogenetics, acquired and iatrogenic conditions related to technological advances in the nursery and improved survival of premature infants, sudden infant death, and child abuse will be covered. The technique of pediatric autopsy and examination of the placenta as a reflection of fetal and maternal disease will be discussed.

Enrollment limited to 100. Approximately 22 CME credit hours.

Forensic Dentistry
Course consists of lectures, panel discussions, illustrative situations and student participation in laboratory exercise involving identification of human remains by dental means. Aspects of forensic dentistry include nature and sources of the law, recording and use of dental data in human identification and criminal detection procedures, professional conduct and liability of dentists, and legislation affecting the federal dental services will be covered.

Enrollment limited to 150. Approximately 36 CME credit hours.

Comparative Pathology
Course for scientists interested in comparative pathologic aspects of disease in animals and man is specifically designed to bring attention to disease processes in animals in which a similar entity occurs in humans. Differences and similarities of lesions as well as biological behavior of specific entities will be discussed. Pathologic entities cover a wide variety of species, including man, and will be compared by organ system and to specific cause.

Enrollment limited to 90. Approximately 23 credit hours.

Microbial Adaptation to Oxidant Stress
Day-long symposium examines the mechanisms employed by microorganisms to avoid the harmful effects of oxidative stress. Resistance to oxidant stress is critical for microbial survival and pathogenesis. Oxygen radicals generated by phagocytic cells may kill microorganisms by damaging membranes, generating toxic lesions in DNA molecules, and by inactivating microbial antioxidant enzymes. Microbial adaptation to oxidant stress includes induction of antioxidant enzymes and activation of DNA repair systems.

Enrollment limited to 100. Approximately 6 CME credit hours.

Forensic Anthropology
Overview course of basic principles of forensic anthropology consists of series of lectures covering various topics in the field, followed by lab sessions emphasizing hands-on analysis of skeletal remains. Prior knowledge of physical anthropology is not assumed.

Enrollment limited to 35. Approximately 33 CME credit hours.

Melanocytic Lesions of the Skin
This course will cover benign and malignant cutaneous melanocytic lesions, and histologic criteria to differentiate these lesions will be emphasized. Known and unknown microscopic slides will be available for review with formal discussion of the unknown cases. Separate lectures will be presented on the clinical appearance of melanoma, and recent advances in the medical therapy of malignant melanoma.

Enrollment limited to 150. Approximately 20 CME credit hours.

Pathology of Lymph Nodes and Hematopathology
An in-depth review of diagnostic pathology (including immunopathology and molecular biology) of the lymph nodes. Selected topics in hematopathology and pathology of the spleen, and a workshop on lymph node pathology will be included.

Enrollment limited to 150. Approximately 33 CME credit hours.

Instructions for Filling Out Application Form for AFIP Courses

1. **Course Fee:** Payments for all courses are to be made payable to the American Registry of Pathology (ARP). To safeguard your course space, we strongly encourage advance fee payment when application form is submitted, but not later than the Application Priority Deadline (does not apply to non U.S. citizens).
2. **Application Priority Deadline:** Fifty percent of the course spaces are reserved for federal applicants and 50% for non-federal applicants until the Application Priority Deadline Date. After that date applications will be considered on a first-received, first-accepted basis.
3. **Federal Personnel Please Note:** To insure a space will be held for you, submit an application for each course you desire to attend directly to the Education Division, AFIP. Do this regardless of any funding action.
4. **Accreditation:** The Armed Forces Institute of Pathology is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.
5. **Registration Procedures for International Applicants:**

Civilians:

Mail letter of application to:

Chief, Program Resources Branch
E/VCP
United States Information Agency
301 4th Street, S. W.
Washington, D.C. 20547
Telephone: (202) 619-5228
FAX: (202) 619-4655

Letter of application should include:

1. Title of Course
2. Inclusive dates of course
3. Your present position
4. Your home and office mailing address
5. Your date and place of birth
6. Your country of citizenship
7. Your financial arrangements for stay at this course (U.S. Government cannot be responsible for any expenses incurred while you are in the U.S.)

With letter of application, attach a copy of course application form, a check drawn on a U.S. bank or International Money Order, payable to the American Registry of Pathology, in U.S. dollars in the amount required.

Military:

Request the desired training through your military training channels to the Security Assistance Office of the U.S. Mission in your country.

International Applicants Employed by an Agency of the U.S. Government

Attach to letter of application (see above) a letter certifying employment from your servicing personnel office and mail to:

International Training Program Manager,
U.S. Army Health Professional Support Agency
Attn: SGPS-EDI, Room 595
5109 Leesburg Pike
Falls Church, VA 22041-3258
Telephone:(703)756-8273
FAX: (703) 756-0243

Residents and fellows deduct 25% of Course Fee ● Friends of AFIP deduct 10% of Course Fee

APPLICATION FORM - AFIP COURSES

Course Title & Dates _____

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Mailing Address _____

City, State, Zip _____

Phone _____ Specialty _____ Board Status: ☐ Certified ☐ Eligible

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