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LETTER

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Armed Forces Institute of Pathology
Washington, DC 20306-6000

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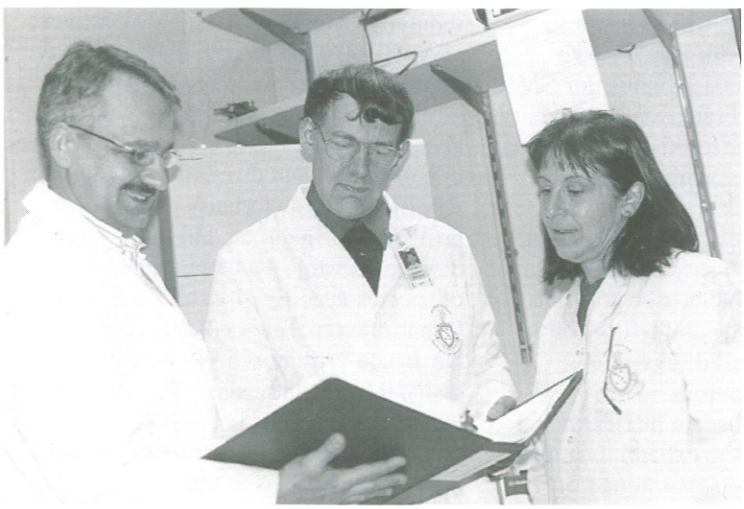
Department of Soft Tissue Pathology utilizes molecular medicine techniques in GIST research

by Christopher C. Kelly, AFIP Public Affairs Director

AFIP's Department of Soft Tissue Pathology, under the direction of Markku Miettinen, MD, PhD, is utilizing the tools of modern molecular medicine to generate information that will be clinically useful for cancer treatment and help to further understand the disease process. "In molecular medicine, we learn the biochemical pathways of tumors and how they pathologically activate cell proliferation," Miettinen said. "The molecular pathways and mechanisms of different tumors vary, and this may become the key for specific treatment in the future. There is a new drug on clinical trials for the treatment of gastrointestinal stromal tumor in several centers in the US and Europe."



GIST study team, from left, Jerzy Lasota, MD, PhD, Markku Miettinen, MD, PhD, and Virginia Achstetter, ASCP, examine DNA sequencing data.

The department is currently working on the pathology of gastrointestinal smooth muscle/stromal tumors (GISTs) together with AFIP's Division of Gastrointestinal Pathology, in collaboration with Leslie H. Sobin, MD, SES, and international collaborators. Miettinen and his staff have obtained unfixed and fixed tissue and analyzed phenotypic features of nearly 1,000 of these tumors. "We've learned from these studies how to define these tumors immunohistochemically, as specific KIT-positive spindle cell or epithelioid primary neoplasma anywhere in the GI tract, omentum, or mesentery. We have also discovered that some of these tumors have phenotypic variations at various sites. For example, the expression of muscle actin varies," Miettinen pointed out.

Working with him to investigate the specific pathways of the GISTs are research pathologists Dr. Jerzy Lasota and Dr. Mourad Majidi, experts in molecular pathology and signal transduction. The team is analyzing sequences of the KIT tyrosine kinase growth factor receptor—which turns into an oncogene by mutation. "It's a similar scenario to what we see in many other malignant tumors, for example, breast carcinoma, where human epidermal growth factor receptor (HER) turns into an oncogene. We have molecular data on more than 300 GISTS of different sites and are examining the clinical correlation and specific significance of each type of mutation. We've found that in each site the tumors have a clinicopathologic spectrum, from benign nodules to overt sarcomas, and we're in the process of investigating what makes the tumors malignant."

The chief technician, Ms. Virginia Achstetter, ASCP, has been instrumental in the logistics of large scale molecular evaluation. She takes care of DNA extraction, preparation of sequencing, and a number of crucial logistics issues.

Utilizing a GeneScan analyzer with sophisticated capillary electrophoresis capabilities, the investigators also rely on traditional histology, immunohistochemis-

Soft Tissue, *continued on page 10*

Director's Message

New challenges and opportunities for AFIP

The arrival of Spring this year brings a number of issues that have the potential to significantly influence the AFIP's functions, with a review by the Department of Defense to explore alternative funding options regarding our operating annual budget and facility renovation and construction costs. Last year, the AFIP accessioned close to 100,000 cases, with 80% of them from the federal sector (military, dependents, veterans, and other agencies). We rendered second opinions in 57,000 of these cases, focusing on oncology and infectious diseases. Of note, 51% of these cases resulted in the AFIP giving a primary diagnosis or changing the diagnosis.

The many pathology departments of the Center for Advanced Pathology, under the direction of Dr. Florabel Mullick, have focused their business practices on comprehensive diagnostic pathology, appropriate turnaround times, and applied research and development, particularly in molecular diagnostics and immunochemistry and histochemistry. The lead article in this edition of this edition of the Letter profiles the activities of the Department of Soft Tissue Pathology, under the leadership of Dr. Markku Miettinen,and their collaborations with the Division of Gastrointestinal Pathology, under Dr. Leslie Sobin, with GISTs (gastrointestinal smooth muscle/stromal tumors).

The AFIP is engaged in extensive educational activities, including on-site diagnostic seminars and workshops, distributed learning programs, short- and long-term subspecialty fellowships, and other continuing medical education programs. Last year, we conducted over 500,000 contact hours of education and training, and awarded over 30,000 hours of CME. The Department of Medical Education, under Dr. Chris Owner, hosted an all-day workshop for web developers at the 2001 Alliance for CME Conference in San Francisco last January. The workshop—our fourth such presentation—lasted 5 hours, with thirty-five professional attendees. Entitled "The Web Developer: Design, Development, and Dissemination Issues in the Web Education Environment," the program focused on marketing and returns on investment, technical design issues, usability, and evaluations.

The National Museum of Health and Medicine continues to expand its public interaction, with the appointment of James T. H. Connor as assistant director, Collections, and curator of its Anatomical and Historical Collections, and a continuing series of free public programs on women's health topics. The Museum receives over 100,000 visitors a year and is reportedly the most visited museum in Washington off of the National Mall.

Contributing significantly to AFIP's reputation of expertise is its Department of Veterinary Pathology, under COL William Inskeep, who is also AFIP's Army Deputy Director. The comprehensive and collaborative comparative studies in companion and domestic animals and wildlife by our veterinary pathologists provide significant insight into human disease, as well as a better understanding of species-specific diseases. The AFIP's Department of Telemedicine is chaired by Dr. Bruce Williams, a veterinary pathologist and ferret enthusiast. This edition of the *Letter* describes Dr. Williams as the "ferret pathologist" and reports on his many contributions to the medicine and pathology of ferrets.

The recent US and Canadian Academy of Pathology (USCAP) annual meeting in

Message, *to page 3*

Atlas of Tumor Pathology, Third Series, Fascicle 29

Tumors and Cysts of the Jaws

James J. Sciubba, DMD, PhD, Johns Hopkins Medical Center, Baltimore, Maryland
John E. Fantasia, DDS, and **Leonard B. Kahn, MBBCh, MMed Path, FRCPath,** Long Island Jewish Medical Center, New Hyde Park, New York
Armed Forces Institute of Pathology, Washington, DC
2000 • ISBN: 1-881041-62-X

This presentation of tumors and cysts of the mandible and maxilla discusses 71 separate pathologic entities. The authors, three pathologists with extensive experience in the interpretation of jaw lesions, have utilized 353 radiographs, photomicrographs, and sketches to illustrate the wide range and scope of bone pathology within this unique part of the skeletal system. Normal embryogenesis and development of the jaws and dentition, histology of odontogenesis, and classification of tumors and cysts are covered. A comprehensive and broad array of benign, malignant, and dysplastic lesions includes odontogenic, nonodontogenic, and fibro-osseous lesions of the jaws. Representative plain radiographs, computerized tomographic images, and color photomicrographs form the basis for clinicopathologic correlation. Routine diagnostic procedures and stains are stressed as the basis for establishment of a definitive diagnosis. As a result, this volume will be an essential resource for pathologists, radiologists, and clinicians charged with establishing a diagnosis and treatment plan for patients with tumors and cysts of the jaws.

Tumors and Cysts of the Jaws is available through the American Registry of Pathology, 14th and Alaska Avenue, NW, Bldg 54, Room 1077, Washington, DC. 20306-6000, Telephone (202) 782-2666/0370, FAX (202) 782-0941.

Department of Medical Education Faculty Hosts an All-Day Workshop for Web-Developers at the 2001 Alliance for CME Conference

Chris Owner, PhD, James Eastep, DVM, and Catherine Abbott, MS, from AFIP's Department of Medical Education, and Beverly Wood, MD, from the University of Southern California, conducted a 5-hour workshop at the Alliance for Continuing Medical Education's recent 2001 Annual Conference, held in San Francisco, in January. The Alliance's annual conference provides state-of-the-art information to CME professionals from around the United States and the world. This was the fourth time the AFIP staff conducted this workshop.

The program was directed toward educators at the leading edge of CME web development. Entitled *The Web Developer: Design, Development, and Dissemination Issues in the Web Education Environment*, the program included sessions on marketing and return on investment, a new web team paradigm, technical design issues, web design for usability, and evaluation. The information contained in the program was derived both from research and from the experience of the faculty. Considerable time was spent discussing why organizations might consider using the web, up-front development cost and the potential for recouping investment, how the traditional educational team model will be impacted, technical limitations confronted by the web developer, and how to design for a specific target audience. Other discussion topics included the adult learner and how to design the web interface to be both effective and efficient. Thirty-five individuals attended the session, and their comments underscore the importance of the information presented and the fact that the AFIP web-education effort continues to set the standard.

Catherine Abbott, MS, James Eastep, DVM, and Chris Owner, PhD.

Director's Message, from page 2

Atlanta, Georgia, in March, hosted a large number of AFIP poster presentations and workshop participants. USCAP provides a unique opportunity for the AFIP to market itself to the pathology community nationally and internationally, made possible through partnership with the American Registry of Pathology (ARP) and its executive director, Dr. Donald W. King.

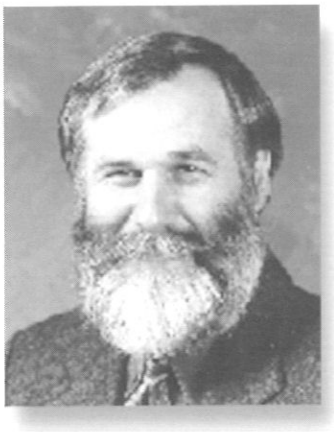
The AFIP encourages your input on how well we are doing and on what services or products you would like to see provided in the future. The field of pathology and laboratory medicine is rapidly changing, and the AFIP has been challenged with predicting the specialty focus and technologies in the coming decades.

Glenn N. Wagner
CAPT, MC, USN
The Director

Dr. Mullick at IAP Executive Committee Meeting

AFIP Principal Deputy Director Florabel G. Mullick, MD, ScD, SES, confers at the executive committe meeting of the International Academy of Pathology during the recent US and Canadian Academy of Pathology meeting in Atlanta, Georgia.

Dr. Mullick, who serves as Secretary of the IAP, is pictured here with David Hardwick, MD, (left) Vice President of the IAP for North America, and F. Stephen Vogel, MD, IAP President.



James Connor named assistant director and curator at National Museum of Health and Medicine

The National Museum of Health and Medicine has named James T. H. Connor,PhD, of Silver Spring, Md, the assistant director for Collections and curator of its Anatomical and Historical Collections. He is also currently an associated scholar with the Institute for the History and Philosophy of Science and Technology at the University of Toronto, in Canada.

He was executive director of the Hannah Institute for the History of Medicine in Toronto from 1992-1997. Prior to tha, he was curator/archivist of the Medical Museum and Archives at University Hospital in London, Ontario, from 1986 to 1992.

He has been an assistant professor of history at the University of Toronto since 1993 and, prior to that, was an assistant professor at the University of Western Ontario.

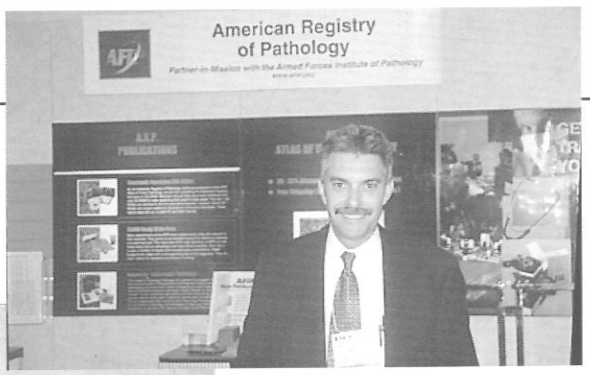
He is coeditor of McGill-Queen's University Press/Hannah Institute for the History of Medicine and was editor of *The Prescription*, the newsletter of the Medical Museums Association, from 1987 to 1989.

"It gives me great pleasure to welcome Jim Connor as the newest member of our museum family," said Adrianne Noe, PhD, museum director. "The depth and breadth of experience he brings with him as a museum professional and scholar are well appreciated as we move to accelerate our historical exhibition plans and collecting agendas."

He received a doctorate in history in 1989 from the University of Waterloo, in Ontario, a master's of philosophy degree in history in 1983 from the University of Waterloo, and a master's degree in history in 1980 from the University of Western Ontario in London, Ontario. He received a bachelor's degree in microbiology in 1974 from the University of Guelph, in Ontario.

Connor received an honor's certificate in history of medicine and science in 1979 from the University of Western Ontario, and was a special student of history and philosophy of science in 1977-1978 at York University, in Toronto. He received a certificate in museum methods and operations in 1979 from the Canadian Museums Association and a certificate in business organization and management in 1975 from Fanshawe College in Ontario.

He is a member of the American Association for the History of Medicine, the Canadian Society for the History of Medicine, and the European Association for the History of Medicine and Health. Connor has written two books: *Doing Good: the Life of Toronto's General Hospital* and *A Heritage of Healing: the London Health Association and its Hospitals.* He has authored numerous papers, book chapters, and book reviews, as well as made many presentations on medical history.



Jose Triana (left), Manager of the American Registry of Pathology Bookstore, and **Jonathan Johnstone**, Director of Marketing and Publications, had another successful sales event at the recent US and Canadian Academy of Pathology Meeting, held in Atlanta, in March. Bookstore offerings included the latest Series III AFIP Atlas of Tumor Pathology texts and electronic fascicles, as well as a variety of special publications. For more information or to purchase AFIP publications, see pages 7-8 of the *Letter* or contact the ARP Bookstore at 202.782.2666. Toll free (US only) — 1.888.838.1297.

AFIP's Telemedicine Chairman widely known as 'the ferret pathologist'

by Ann Ham, Public Affairs Office

Everyone has a secret life. But, the secret's out on Dr. Bruce Williams, chair of the AFIP's Department of Telemedicine. In addition to his responsibilities of running one of the world's largest teleconsultation practices, he's also recognized as one of the world's top experts on ferrets. Ferrets are important animal models for various human disesases – including gastric helicobacter and influenza, as well as possessing a number of unique spontaneous diseases in their own right.

"Believe it or not, ferrets are considered to be the third most popular pet in the country, behind dogs and cats," said Dr. Williams. They adapt well to apartment life, which makes them popular urban pets. "They rarely cause allergies in people who are allergic to dogs and cats, and they have engaging personalities," he said. He added that most owners have more than one pet ferret – some as many as 10 or more.

Dr. Williams should know – he and his family have owned ferrets for years, as many as eight at one time. In fact, that was how he became involved in ferret pathology.

"Before I joined the Telemedicine Department here at the Institute, I was a staff veterinary pathologist for 9 years," said Dr. Williams. As a pathology resident who kept ferrets, he was soon contacted by a number of practicing veterinarians who desperately needed help with some of their difficult ferret cases. "At that time, very few pathologists knew much at all about the species, so they couldn't get answers from any of the local labs," he said

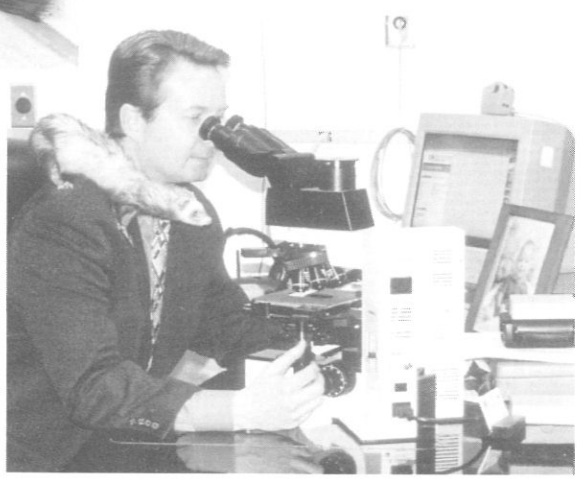
What started as a passing interest in the pathology of an uncommon species soon took on a life of its own. As word spread, Dr. Williams became "the ferret pathologist" and submissions poured in from all over the US, and soon from other countries. "The number of cases was great at first, because it allowed us to compile the world's largest collection of tissues from ferrets," said Dr. Williams, "But, after a couple of years, I became so overwhelmed by the consultation aspect that I had no time to go back and survey all the material that we had accumulated." Today, Dr. Williams still reviews ferret cases, but on a case-by-case basis. "It has to add valuable information to the archive, and that still accounts for a fair number of cases each year."

Since 1992, Dr. Williams has been a prolific author in the area of ferret medicine and pathology, with articles in leading veterinary journals such as *Veterinary Pathology, Journal of the American Veterinary Medical Association, Journal of the American Animal Hospital Association, Veterinary Clinics of North America*, and many others. He has written book chapters on various aspects of clinical medicine and pathology of the ferret, such as bone marrow examination, microbiology and virology, and therapeutics. He is currently working on a book chapter on diagnosis and treatment of neoplasia for the 2nd edition of Hillyer and Quesenberry's *Medicine and Surgery of Ferrets, Rabbits and Rodents*. "I think my experience as a pathologist really helps when I'm publishing on clinical topics," he said. "I've had the opportunity to study the impact of disease and treatment on ferrets in ways that so many full-time clinicians have not. As a result, I feel very comfortable writing articles on clinical topics, and I think I bring a more encompassing approach to these subjects."

In 1993, Dr. Williams had the opportunity to do research on a new disease in this species – one that had a profound impact on the ferret industry and caused tremendous losses in the pet ferret population. "The so-called green diarrhea broke out literally miles from the Institute," he said, "so I was in a very fortunate position to help out." His work with this disease resulted in the identification of a coronavirus as the causative agent, and his outreach program to veterinarians around the country helped save countless animals. "This disease was as devastating to ferret owners as the parvovirus epidemic was to dog owners in the mid-80s. Ferret owners love their pets as much as any other pet owners, and to see three, four, or more healthy pets killed by this disease was devastating to many families." Dr. Williams, who now collaborates with Purdue University on this project, hopes that his ongoing research will eventually result in a vaccine and rapid diagnostic tests for coronavirus in ferrets.

Ferrets, *continued on page 14*

Painting by Dr. Williams



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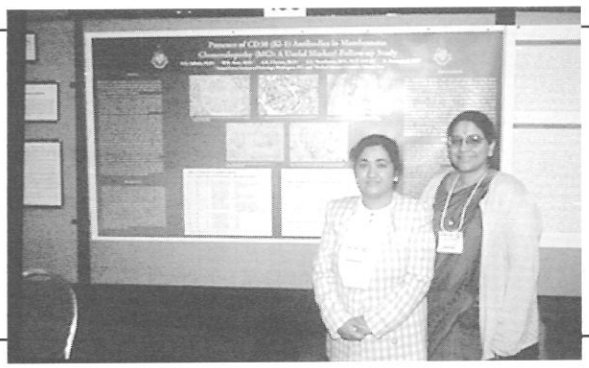
AFIP Poster Presentations at 2001 US and Canadian Academy of Pathology Meeting

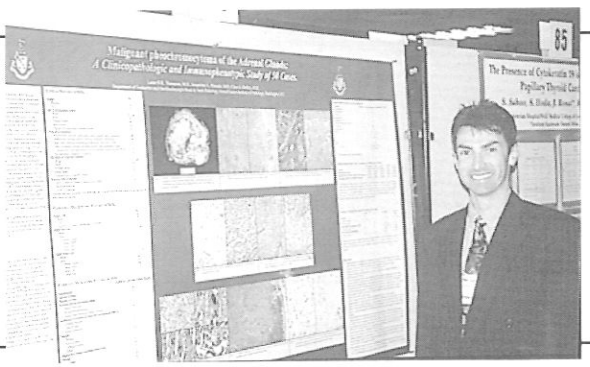
Here are some of the many outstanding poster presentations given by AFIP staff members at the recent US and Canadian Academy of Pathology Meeting, held in Atlanta, Georgia, March 3-9 2001:

Florabel G. Mullick, MD, DSc, SES, AFIP Principal Deputy Director and Acting Chair, Department of Environmental and Toxicologic Pathology (left), and Elena R. Ladich, MD, Department of Environmental and Toxicologic Pathology, at their poster, *A Histopathologic Study of Head and Neck Specimens from a Cohort of Persian Gulf War Military Veterans*. Fellow department staff members Charles Specht, MD, Michael Lewin-Smith, MD, Albin Moroz, and Victor Kalasinsky, PhD, also coauthored the poster.



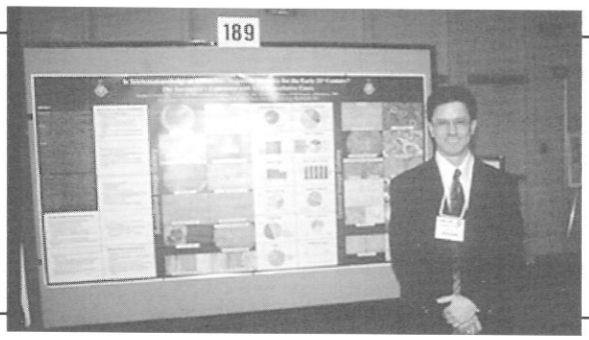
Ashwini R. Chavan, MD, (left) and Sharda G. Sabnis, MD, Chief, Division of Nephropathology, Department of Genitourinary Pathology, at their poster, *Presence of CD30 Reactive Deposits in Membranous Glomerulopathy: A Useful Marker? A Followup Study*. William B. Ross, CAPT, MC, USN, Chair, Department of Scientific Laboratories, and Gary Bratthauer, senior technical and research associate, also coauthored the poster.

Lester D.R. Thompson, MD, Chief, Division of Otorhinolaryngic/Head-Neck Pathology, in front of his poster, *Malignant Pheochromocytoma of Adrenal Gland: A Clinicopathological and Immunophenotypic Study of 50 Cases.* Jacqueline A. Wieneke, MD, staff pathologist, and Clara S. Heffess, MD, Chief, Division of Endocrine Pathology, also coauthored the poster.



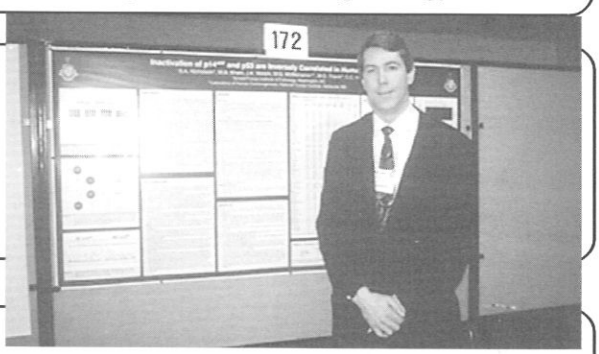
Jien Chen, MD, Callender-Binford Fellow, Nadine S.I. Aguilera, MD, Assistant Chair, and Susan L. Abbondanzo, Chair, Department of Hematopathology, at their poster, *c-Kit (C-19) Immunoreactivity in Granulocytic Sarcoma/ Extramedullary Myeloid Tumors: A Study of 32 Cases*. Rudy Yanuck, III, MD, Callender-Binford Fellow, and Wei-Sing Chu, MD, supervisor, Immunology Laboratory, also coauthored the poster.

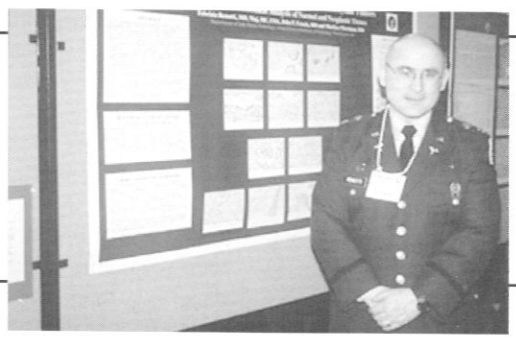
Takeshi Fujii, MD, fellow, Department of Pulmonary and Mediastinal Pathology, at his poster, *Pulmonary Synovial Sarcoma: A Real-Time Reverse Transcriptase-Polymerase Chain Reaction Assay for Detection of SYT-SSX Fusion Transcripts in Formalin-Fixed, Paraffin-Embedded Tissue.* The poster was also coauthored by Karen E. Bijwaard, MS, medical technologist, Jeffery K. Taubenberger, MD, PhD, Chief, Division of Molecular Pathology, Jack H. Lichy, MD, PhD, staff pathologist and director, Molecular Diagnostics Laboratory, Department of Cellular Pathology, and with Teri Franks, MD, staff pathologist, and William D. Travis, MD, Chair, Department of Pulmonary and Mediastinal Pathology.



Stephen I. Fischer, Maj, USAF, MC, staff pathologist, Department of Hematopathology, at his poster, *Is Telehematopathology An Efficacious Diagnostic Modality for the Early 21st Century? One Institution's Experience with Sixty Consultative Cases.* The poster was also coauthored by Meenakshi A. Nandedkar, CDR, MC, USNR, staff pathologist, Department of Hematopathology, Bruce H. Williams, DVM, Chair, Department of Telemedicine, and Susan L. Abbondanzo, MD, Chair, Department of Hematopathology.

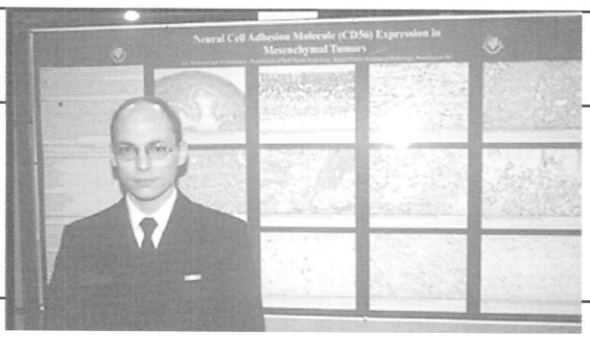
William D. Travis, MD, Chair, Department of Pulmonary and Mediastinal Pathology, at his poster, *Inactivation of p14ARF and p53 Are Inversely Correlated in Human Cell Lines.* Joining him as a coauthor was Siobhan A. Nicholson, MD, Callender-Binford Fellow, Department of Pulmonary and Mediastinal Pathology.

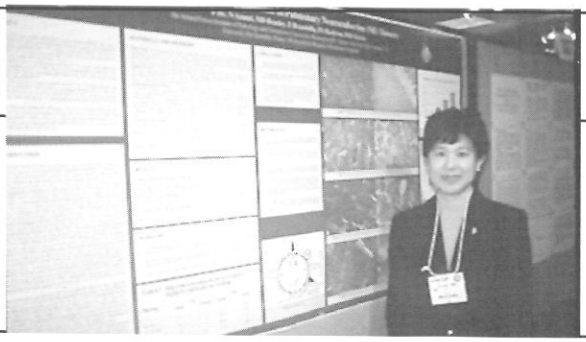




Fabrizio Remotti, MAJ, MC, USA, staff pathologist, Department of Soft Tissue Pathology, at his poster, *Keratin 1 Expression in Endothelial and Mesenchymal Neoplasia.* John F. Fetsch, MD, Assistant Chair, and Markku Miettinen, MD, PhD, Chair, Department of Soft Tissue Pathology, also coauthored the poster.

Carl L. Millward, CDR, MC, USN, staff pathologist, Department of Soft Tissue Pathology, at his poster, *Neural Cell Adhesion Molecule (CD56) Expression in Mesenchymal Tumors.* Markku Miettinen, MD, PhD, Chair, Department of Soft Tissue Pathology, also coauthored the poster.





Ping He, MD, Callender-Binford Fellow, at her poster, *Significance of p27 Expression in Pulmonary Neuroendocrine Tumors.* William D. Travis, MD, Chair, Department of Pulmonary and Mediastinal Pathology, also coauthored Dr. He's paper.

Soft Tissue, *from page 1*

try, and molecular and cell biologic analysis to conduct their research into specific allelic losses in GISTs to further understand the changes that benign and malignant variants have. "We are also analyzing the possible oncogene amplifications with gene chip technology," added Miettinen. " This technology can potentially analyze enormous numbers of gene expression levels. The geneosensor is a microarray reader for DNA or c-DNA and RNA. It allows us to gather an vast amount of information in a compact fashion. We can have several thousand gene probes on a single filter and gather a large volume of information in a single experiment."

The Department of Soft Tissue Pathology is collaborating with LTC Denzil Frost, chief of the Research Branch, Department of Veterinary Pathology, in comparative studies of GISTs in animals. "This is really a true example of comparative pathology at work," Frost said. "It establishes, for the first time, that GISTs are a distinct soft tissue entity in animals as they are in man. We are able to use the techniques established by Dr. Miettinen and his staff and apply them to different animal species, and are finding the same diagnostic features." His research includes new GIST findings in dogs, cows, and mice, along with a guinea pig, chicken, chimpanzee, walrus, and rabbit.

A new line of investigation in the department includes the work of Dr. Majidi, who is exploring the signal transduction pathway in GISTs. Miettinen notes that these studies are necessary to further explore the pathologic mechanism and understand the pathogenesis of this tumor. "GIST research is our single largest volume of work, and we have published over 20 original papers in top journals of pathology on the subject along with two review articles, and numerous academic lectures on three different continents."

For more information about GIST research, contact Dr. Miettinen at 202.782.2793, or by e-mail at miettinen@afip.osd.mil

National Museum of Health and Medicine offers free 2001 calendar featuring items in collections

The National Museum of Health and Medicine has a limited supply of Armed Forces Institute of Pathology 2001 calendars available to the public on a first-come, first-served basis. Images for the calendar represent some of the special items in the museum's collections, which were designated as a National Historic Landmark by Congress in 1968, and number more than 1 million objects.

"We are delighted to be able to share a calendar with pictures of some of the artifacts, photographs, and documents in our collection that reflect our role as the nation's repository for the history of health and medicine and our specialty in American military medicine," said Adrianne Noe, PhD, museum director. "We hope that everyone will enjoy the calendar in good health."

Monthly themes covered by the calendar are microscopy, pathology, vaccines, the Civil War, infectious diseases in the military, public health, World War I, rehabilitation and prosthetics, World War II, imaging, surgery, and medical education. Published by the American Registry of Pathology, the calendar includes full-color images of human physiology and anatomy. For a single free copy, call 202-782-2200 or write to NMHM, 6900 Georgia Ave, NW, Washington, DC, 20306, Attn: Calendar.

Museum offers free public program on Women's Health

The National Museum of Health and Medicine has announced a series of free public programs on women's health topics, in conjunction with "The Changing Face of Women's Health," an exhibit that will be on display through August 31. Call 202-782-2200 for information.

Of particular interest will be "A Day of Prevention and Discovery," offered from 10 a.m. to 3 p.m., April 14, to explore and identify health risks that accompany specific lifestyle choices, genetics, and environmental conditions. Howard University and the National Museum of Health and Medicine will host a health fair encouraging women and men to check up on their health. Medical professionals will conduct workshops and lectures on several topics to help participants identify and alleviate health risks.

"The Changing Face of Women's Health" exhibit features interactive and multimedia techniques, companion programs, educator outreach materials, and a complementary website — www.whealth.org. The interactive exhibit is organized into four central themes—detection, prevention, risk, and control—and includes a resource center.

The National Museum of Health and Medicine, founded as the Army Medical Museum in 1862 to study and improve medical conditions during the American Civil War, is an element of the Armed Forces Institute of Pathology. Open daily, except Christmas, from 10 a.m. to 5:30 p.m., the museum is located at Walter Reed Army Medical Center, 6900 Georgia Ave. and Elder Street, NW, Washington, DC. Public telephone number is 202-782-2200. Admission and parking are free.

Department of Medical Education
2001 Continuing Medical Education Courses

11th Annual ANATOMIC PATHOLOGY

- May 6–12, 2001/Holiday Inn, Silver Spring, Md
- The AFIP designates this educational activity for a maximum of 70 credits.

The anatomic pathology course focuses on current concepts and diagnostic problems. Select staff from the various AFIP departments will provide didactic lectures. Each lecture will be complemented by an extensive syllabus and "hands-on" microscopic study sessions. A CD-ROM (PC) set of two disks containing selected digitized Kodachromes of the study slides will be provided to participants.

The course objectives are to:

- Prepare pathology residents in their final 2 years of training for their boards.
- Train practicing pathologists seeking a short, intense update and review.
- Enable pathologists to maximize their overall anatomic pathology skills.
- Thoroughly brief pathologists on updated and current anatomic pathology procedures and methods.

For further information, contact course coordinator SSgt. Stephen Huntington. Telephone numbers, E-Mail, and Web site located in the green box below.

14th Annual FORENSIC ANTHROPOLOGY

- May 14–18, 2001
- Uniformed Services University of the Health Sciences, Bethesda, Md

Forensic anthropologists apply their skills to body search and recovery techniques, taphonomic analysis, trauma interpretation, bone DNA, and mass disaster victim identification. This course uses hands-on laboratory sessions to teach basic techniques of skeletal analysis. Lectures provide the methodological basis of the osteological techniques and introduce additional applications of the field. Forensic pathologists, medicolegal investigators, forensic dentists, attorneys, and others involved in death investigations will find this course an excellent introduction to the field.

For more information, contact course coordinator CMSgt. Ontee Biggs. Telephone numbers, E-Mail, and Web site located in the green box below.

DME

Department of Medical Education
Armed Forces Institute of Pathology
14th Street & Alaska Avenue, NW
Washington, DC 20306-6000

FOR MORE INFORMATION CONTACT:
Telephone: 202.782.2634
Toll Free: 1.800.577.3749 (U.S. only)
FAX: 202.782.5020
Toll Free FAX: 1/800.441.0094 (U.S. only)
International FAX: 1/877.891.3482
Email: came@afip.osd.mil
URL: http://www.afip.org/edu/

THE DERMATOPATHOLOGY WORKSHOP

- May 18–19, 2001/The Ritz Carlton, Pentagon City, Arlington, Va
- Course Director: George P. Lupton, MD

This microscopic workshop includes the examination of slides from the unparalleled files of the Armed Forces Institute of Pathology. There will be 240 eye-popping cases to be examined each day, and the majority will be new cases not shown at the previous workshops. Each slide will be accompanied by a multiple-choice question. On the flip side of the question sheet with each case will be the diagnosis and a comprehensive discussion. The slide review sessions will be punctuated by faculty presentations focusing on a wide variety of dermatopathologic entities, with special attention being targeted to melanocyctic lesions. A detailed syllabus will also be provided. Register early. This course has sold out every year, and attendance is limited to 120.

For more information, contact course coordinator Isaac Miller. Telephone numbers, E-mail, and Web site located in the green box below.

(2nd Offering May 2001)
35th ANNUAL UROLOGICAL PATHOLOGY COURSE

- May 20–25, 2001/Holiday Inn, Bethesda, Md
- The AFIP designates this educational activity for a maximum of 60 hours in Category 1 CME credit.

This pathology course is designed for UROLOGISTS preparing for their BOARD EXAM; however, PRACTICING PATHOLOGISTS and CLINICIANS may also find the material valuable. For practicing urologists and pathologists, the course presents modern concepts of urologic pathology, including the recently revised WHO classifications of kidney, bladder, prostate, and testis. The program will comprise lectures, workshops (involving the individual study of 150 slides and small group instructions), and Kodachrome reviews and quizzes. In addition, each registrant will be given a set of 100 KODACHROME SLIDES illustrating the various kidney, bladder, prostate, penis, and testes, and adrenal diseases, and a detailed syllabus including COLOR PHOTOMICROGRAPHS of the important lesions of the genitourinary tract.

For more information, contact course coordinator SSgt Stephen Huntington, Telephone numbers, E-Mail, and Web site located in the green box below.

10th Annual DESCRIPTIVE VETERINARY PATHOLOGY

- June 5–8, 2001/Armed Forces Institute of Pathology Washington, DC
- The AFIP designates this educational activity for a maximum of 30 hours of CME, which may be applied to state requirements.

This course is designed to teach attendees how to describe both gross and microscopic lesions in a variety of major organs in numerous animal species. Both written and oral descriptive techniques will be taught. The course will also include lectures on interpretation and description of electron micrographs and immunohistochemical preparations. Practice tests (gross and microscopic) will be given and graded to provide feedback. Microscopes will be provided, and gross lesions will be demonstrated by means of digital images.

The objective of the course is to increase the attendees' skills at describing gross and microscopic lesions in animal tissues. Descriptive skills are necessary for success on certifying examinations in North America and Europe. Attendees may opt to take a graded practice test in multiple-choice format covering general pathology and areas of veterinary pathology. Participants desiring to take the optional examination for general and veterinary pathology may pay an on-site fee of $50.

For more information, contact course coordinator TSgt. Isaac Miller. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

DIAGNOSTIC SURGICAL PATHOLOGY

- June 26–30, 2001/ National Cancer Institute, Milan, Italy
- Tuition $595 (includes reception, luncheons, coffee breaks, and handout)
- The AFIP designates this educational activity for a maximum of 23 hours in Category 1 CME credit.
- Course directors: Cesar A. Moran, MD (USA), Florabel G. Mullick, MD (USA), Juan Rosai, MD (Italy)

This course is designed to cover a wide variety of diagnostic dilemmas, newly described pathologic entities, and updated findings that have impacted current practice. The faculty—all experts within their own subspecialty—will emphasize differential diagnoses, the utilization of special techniques (immunohistochemistry, electron microscopy, molecular biology) in the diagnostic process, and recent advances in therapy and prognosis. The course is designed to be of interest to PRACTICING PATHOLOGISTS, PATHOLOGY RESIDENTS, ONCOLOGISTS, and CLINICIANS.

The course will emphasize controversies in surgical pathology, including unusual conditions and pitfalls that surgical pathologists and clinicians often confront. When completed, you should be able to:

- Demonstrate improved knowledge and skills in critical areas of surgical pathology.
- Discuss newer and controversial issues in surgical pathology.
- Identify some of the more important, difficult aspects in surgical pathology.

For more information, contact course coordinator Carlos H. Moran at (202) 782-2556, Fax (202) 782-7166, E-mail: <Moran@afip.osd.mil>.

4th Annual European DESCRIPTIVE VETERINARY PATHOLOGY

- September 3–6, 2001/Ecole Nationale Veterinaire, Nantes, France
- The AFIP designates this educational activity for a maximum of 30 hours of CME, which may be applied to state requirements.
- Tuition is $350 (US dollars).

This course is designed to teach attendees how to describe both gross and microscopic lesions in a variety of major organs in numerous animal species. Both written and oral descriptive techniques will be taught. The course will also include lectures on interpretation and description of electron micrographs and immunohistochemical preparations. Practice tests (gross and microscopic) will be given and graded to provide feedback. Microscopes will be provided, and gross lesions will be demonstrated by means of digital images.

The objective of the course is to increase the attendees' skills at describing gross and microscopic lesions in animal tissues. Descriptive skills are necessary for success on certifying examinations in North America and Europe. Attendees may opt to take a graded practice test in multiple-choice format covering general pathology and areas of veterinary pathology.

For more information, contact course coordinator TSgt. Isaac Miller. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

6th ANNUAL CURRENT LABORATORY ANIMAL SCIENCE SEMINAR (CLASS)

- August 5–6, 2001
- Doubletree Hotel, Rockville, Md

The Armed Forces Institute of Pathology, American Registry of Pathology, and the C.L. Davis DVM Foundation jointly sponsor this seminar. This intensive 2-day seminar provides a comprehensive review of selected topics in laboratory animal science and medicine. It is intended to serve the needs of veterinarians across a broad spectrum: entry level laboratory animal medicine, clinical veterinarians, researchers, residents, training program directors, and facility directors. The seminar includes lectures on animal models, occupational health issues, regulations, laws and guidelines, statistics, facility design and management, and research methods.

For more information, contact course coordinator TSgt. Isaac Miller. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

47th ANNUAL PATHOLOGY OF LABORATORY ANIMALS (POLA)

- August 7–10, 2001
- Doubletree Hotel, Rockville, Md

The Armed Forces Institute of Pathology, American Registry of Pathology, and the C.L. Davis DVM Foundation jointly sponsor this course. The course is designed primarily for veterinarians and other allied scientists who are responsible for the recognition and interpretation of lesions in laboratory animals. It is intended to help attendees interpret spontaneous diseases that might affect experimental results or alter the health of laboratory animals. Pathology will receive major emphasis in the course, but other features of diseases such as etiology, diagnosis, and control will also be given attention. The course will encompass a wide range of diseases, including infectious, neoplastic, iatrogenic, nutritional, and metabolic conditions in a variety of laboratory animal species.

For more information, contact course coordinator TSgt. Isaac Miller. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

Visit our Web site and register: http://www.afip.org

OPHTHALMIC PATHOLOGY FOR OPHTHALMOLOGISTS

- August 26–31, 2001/Armed Forces Institute of Pathology Washington, DC
- The AFIP designates this educational activity for a maximum of 43 hours for Category 1 credit.

This course is designed to enhance the basic education of ophthalmologists (residents, general practitioners, and specialists) with respect to the normal and pathologic structure of ocular tissues in health and disease. This 6-day course consists of a comprehensive survey of pathologic conditions affecting the eye and ocular adnexa. The lectures will be richly illustrated by clinical pictures, x-rays, scans, gross photographs, photomicrographs, electron micrographs, etc, and supported by outlines and references. The course participants will benefit by gaining:

- Enhanced knowledge of the pathology of common ocular diseases.
- Updates on basic concepts and factual data concerning the pathologic anatomy of the eye and ocular adnexa.
- Improved understanding of basic histopathologic characteristics and histochemical, immunohistochemical, and ultrastructural features of ophthalmic disorders.
- Deeper insight into clinicopathologic correlations, imaging-pathologic correlations, and electron microscopy, and immunohistochemistry of normal and pathologic tissues of the eye.
- Improved performance on OKAP and related ophthalmologic examinations.

For more information, contact course coordinator SSgt. Stephen Huntington. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

30th Annual Course & Tutorial ORTHOPEDIC PATHOLOGY

- September 9–14, 2001
- Location: Orthopedic Course - AFIP, Elias P.G. Theros Radiologic Pathologic Education Center, Washington, DC
- September 17–28, 2001
- Location: Tutorial Session - AFIP, Owens Conference Room Washington, DC
- The AFIP designates this educational activity for a maximum of 56.5 hours for "The Course" and 75 hours for "The Tutorial" in Category 1 credit.

The 30th Annual AFIP/ARP Orthopedic Pathology course and tutorial is open to all military, federal, and civilian orthopedic and pathology related specialties. In addition to orthopedists, pathologists, radiologists, rheumatologists, and podiatrists should find this course of benefit. This 6-day didactic course in Orthopedic Pathology is limited to 80 applicants. The week-long didactic session will be followed by a 2-week optional tutorial in bone and joint pathology at no extra cost. Tutorial participation this Fall is limited to 20 applicants. The course objective upon completion of this course is to improve diagnostic skills in clinical, radiologic, and pathologic evaluations, and treatment of orthopedic-related disorders through our experience by:

- Creating a conceptual approach to understanding the primary mechanisms of diseases affecting bones and joints and relationships to the growth, development, maintenance, and aging of the skeleton.
- Describing normal skeletal morphology and diseases utilizing orthopedic pathology study sets (250+ histologic glass slides and approximately 1000 Kodachromes) and unknown case discussions.
- Establishing a morphologic basis for plain film (x-ray) radiographic changes pertaining to diagnosis (location and matrix patterns) and biologic behavior (margins and periosteal reactions).
- Providing a basic understanding of the pathophysiologic principles underlying bone scans, CAT scan and MRIs: Their reliability, diagnostic significance, and importance to clinical staging.

For more information, contact course coordinator TSgt. Isaac Miller. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

12th Annual Review GASTROINTESTINAL SURGICAL PATHOLOGY: And Endoscopic Biopsies of the GI Tract

- October 1–2, 2001/ Lister Hill Auditorium, National Library of Medicine, Bethesda, Md
- The AFIP designates this educational activity for a maximum of 19.5 hours for Category 1 credit.

This 2-day course consists of a practical review of selected subjects in diagnostic surgical and endoscopic pathology of the gastrointestinal tract for pathologists, pathology residents, gastroenterologists, and gastroenterology fellows (preparing for boards). In addition to lectures on neoplastic and non-neoplastic diseases of the gastrointestinal tract, the course includes over 10 hours of microscopy (microscopes provided) based on a unique collection of hundreds of endoscopic biopsies.

At the conclusion of the course, the participants will have a better grasp of endoscopic biopsy interpretation, clinical pathologic correlations, and up-to-date information on a variety of gastrointestinal diseases and lesions such as polyps, dysplasia, Barrett esophagus, chronic gastritis, infections, inflammatory bowel disease, lymphomas, stromal tumors, and neuroendocrine lesions. The Hepatopathology 2001 course follows this course and is held at the same location. The Hepatopathology 2001 course is October 3–5, 2001.

For more information, contact course coordinator SSgt. Stephen Huntington. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

21st Annual Course HEPATOPATHOLOGY 2001: The Interpretation of Liver Biopsies

- October 3–5, 2001/Lister Hill Auditorium, National Library of Medicine, Bethesda, Md.
- The AFIP designates this educational activity for a maximum of 31 hours for Category 1 credit.

This course provides a review of commonly encountered problems in diagnostic liver pathology at a level suitable for pathologists and pathology residents as well as hematologists, gastroenterologists, and gastroenterology/hematology fellows. Areas to be covered include hepatitis and other infectious diseases, toxic injury due to alcohol and drugs, cholestasis, developmental and metabolic liver diseases, and neoplasms. The participants will have ample opportunity for microscopic review of material drawn from the files of the AFIP. There are over 300 cases, predominantly needle biopsies. The cases will be available for study, and AFIP staff members will be on hand to assist and answer questions. Participants who wish may also bring cases of their own to review with members of the faculty. At the conclusion of the course, the participant will have a better grasp of liver biopsy interpretation and an experience equivalent to spending a month in the Hepatic Pathology Division of the AFIP. The Gastrointestinal Surgical Pathology course precedes this course and is held at the same location. The Gastrointestinal Surgical Pathology course is October 1–2, 2001.

For more information, contact course coordinator SSgt. Stephen Huntington. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

ORAL AND MAXILLOFACIAL SURGICAL PATHOLOGY: With Microscopy Workshop

- November 11–13, 2001/The Menger Hotel, San Antonio, Texas
- The AFIP designates this educational activity for a maximum of 23 hours for Category 1 credit.

This course is designed to provide a comprehensive review of the pathologic processes that affect the oral and maxillofacial areas, including major and minor salivary glands, jaws, and oral mucosa. Neoplastic, inflammatory, odontogenic, fibro-osseous, developmental, and metabolic diseases are discussed with emphasis being placed on diagnostic criteria that would aid the practicing pathologist in establishing a diagnosis. Both lecture and microscopic slide review with case discussions will be utilized. This course is appropriate for practicing general pathologists, oral pathologists, residents, and fellows in general pathology or oral pathology, and other medical and dental practitioners or residents interested in the histopathology of oral and maxillofacial diseases. The participants of this course will benefit by gaining:

- Enhanced knowledge of the pathology of common and unique lesions of the oral and maxillofacial region.
- Familiarization with new tumor entities and pathologic processes.
- Improved understanding of basic histopathologic characteristics, along with histochemical and immunohistochemical features of

PLACE-HOLDER REGISTRATION

The Education Department is now offering ***Place-holder Registration. Place-holder registration only applies to CME courses with a tuition fee over $500.*** When you use a credit card to register, you will be immediately charged $50 (Place-holder); the balance will be charged 2 weeks prior to the course at the early bird rate. All Place-holder registrations must be received **before the expiration of the early bird rate.** In the event of a cancellation, the $50 charge will be retained to cover administrative costs. **Place-holder registration is not available to those who pay by check.**

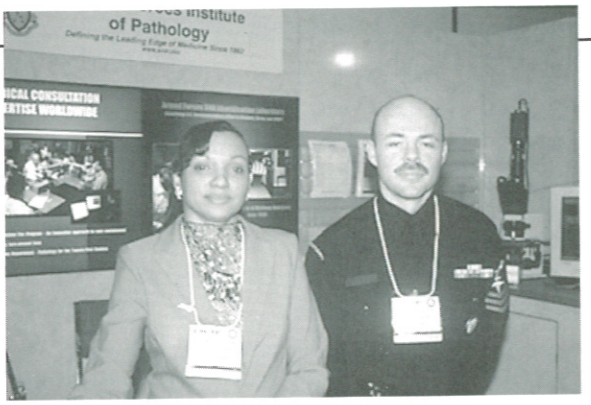
oral and maxillofacial tumors and disorders.
- Deeper insight into clinicopathologic correlations and updated prognostic data of head and neck tumors.

For more information, contact course coordinator SSgt. Stephen Huntington. Telephone numbers, E-Mail, and Web site located in the green box on page 11.

MARK YOUR CALENDAR

3rd Annual SOFT TISSUE TUMORS (A Microscopy Workshop)

Date: September 13–15, 2001
Location: Holiday Inn, Silver Spring, Maryland
E-mail: sutton@afip.osd.mil



Rene M. Sutton, Marketing Coordinator, Department of Medical Education, and **HM1 Dan Butler**, Systems Administrator, Department of Telemedicine, represented their departments at the AFIP exhibit in Atlanta, in March, at the US and Canadian Academy of Pathology Meeting. Scores of pathologists attending the meeting stopped by to learn more about the latest in medical education and telepathology programs available at the Institute. For further information about AFIP courses contact Rene at 202.782.2634, and for telemedicine assistance, contact Dan at 202.782.2884.

Epidemiology, Repository and Research Services

A note about AFIP's policy on returning case materials

All of our contributors are reminded that it is the policy of the AFIP to keep all slides received. These are stored permanently in our repository of over three million cases dating back to 1917. Contributors requesting the return of case material must do so at the time the case is submitted to AFIP for review. We will return paraffin blocks and other tissues only after we have final reported the case.

Please note that requesting that all materials be returned, or specifically requesting the slides be returned, will delay the case accessioning process. We must contact the sending organization to explain our materials retention policy and get permission to retain the slides before we can accept the case and complete the case accessioning process. The AFIP materials retention policy is included on the back of the AFIP Form 288-R, Contributor's Consultation Request.

Extra shipping containers available for military and VA hospitals

Military Health System facilities and Department of Veterans Affairs medical centers: We receive many more slide shipping containers than we can use. If you are interested in having a box of these used containers shipped to your facility so they can be recycled, please contact SGT Relle, Receiving and Accessions Division, at 202-782- 1630. We cannot sort the containers by specific or preferred type but will forward a mixed box of containers for reuse, consisting mostly of plastic flip-top containers that can hold up to five slides.

Ferrets, from page 7

All of this work and his continuing work with veterinarians around the country on a daily (and nightly) basis have made Dr. Williams a "celebrity" in the ferret world. "I probably spend at least an hour or two a day answering e-mail about challenging cases from veterinarians and owners around the country," he says. The notoriety does have its perks, however. "I get a lot of invitations to speak at veterinary conferences and ferret shows." In addition to numerous lectures in the US, Williams has also lectured in Great Britain and Canada. "Unfortunately, I don't have the time to go to all of the events," says Williams, "because I do have my full-time telemedicine job, as well as a rewarding family life. But, as long as there is a little time left over, I'll probably spend it with ferrets."

Abstracts of Recent Publications by AFIP Staff

Fibrohistiocytic lipoma: twelve cases of a previously undescribed benign fatty tumor

Cristina Marshall-Taylor, MD, and Julie C. Fanburg-Smith, MD

A lipoma with a spindled proliferation within it, resembling known (myo)fibroblastic lesions such as fibrous histiocytoma or dermatofibrosarcoma protuberans, (ie, fibrohistiocytic lipoma), has not been previously reported. This tumor varies from other dassic lipoma variants, including spindle cell lipoma, myolipoma, angiolipoma, and fibrolipoma. We examine the clinicopathologic findings of this new lipoma variant. The Soft Tissue Pathology Registry of the Armed Forces Institute of Pathology was searched for patients with "lipoma with fibrohistiocytic proliferation." Lesions that were better classified as other entities were excluded. Patient slides and clinical history, including associated lesions, family history, duration of symptoms, history of trauma, natural progression, and treatments, were reviewed. Immunohistochemistry was performed on cases with available material (n = 6). Twelve patients with fibrohistiocytic lipoma were included. All tumors revealed a well-distributed quilt-like proliferation or solid focus of slightly plump to relatively bland spindled cells with collagenous stroma in short fascicular and storiform growth patterns. These spindled cells resembled those seen in either fibrous histiocytoma or dermatofibrosarcoma protuberans. However, the spindled proliferation was all within a well circumscribed lipoma. The lesions lack the dermal involvement or plump pleomorphism of fibrous histiocytoma and the dermal involvement or infiltrative growth pattern of dermatofibrosarcoma protuberans. The fatty component demonstrated heterogeneously sized adipocytes, as those seen in other lipomas. Inflammation and hemosiderin were minimal. Mast cells were not identified. The tumors were typically found in the subcutis of the trunk of men (10 of 12; one each on the wrist and leg, mean age, 31 years). The average size of the lesions was 3.0 cm, and they were present for a mean duration of 10 months prior to surgical excision. One patient had two concurrent lesions; all others had solitary tumors. Another patient had a intracranial dermoid cyst removed during childhood. Four patients had a personal or family history of hypercholesterolemia, hypertension, or myocardial infarction. There was no history of antecedent trauma. Cases studied were positive for vimentin, calponin (5 of 5), CD34 (3 of 5), and occasionally KP-1 or lysozyme in the spindled component, and all cases studied were negative for the actins, caldesmon, S-100 protein, desmin, cytokeratins, and epithelial membrane antigen. Although the actins were negative in our laboratory, the more sensitive calponin positivity suggests myofibroblastic phenotype of the spindled component of this lesion. CD34-positive fibroblasts were present in three of five cases. Of eight patients with follow-up, there were no recurrences; all patients were alive and free of disease over a mean of 10 years (range, 2 months to 31 years). We have identified a lipoma variant, fibrohistiocytic lipoma, that has not been previously described. In our experience the morphology and calponin positivity suggest myofibroblastic phenotype for the spindled cells, within a lipoma. This entity can be distinguished from fibrous histiocytoma, fibromatosis, dermatofibrosarcoma protub-erans, spindle cell lipoma and other lipoma, and liposarcoma variants.

Ann Diagn Pathol. 2000;4:354-360.

Central neurocytomas express photoreceptor differentiation

Hernando Mena, MD, Alan L. Morrison, MD, Robert V. Jones, MD, Kymberly A. Gyure, MD

BACKGROUND. Central neurocytomas are composed of mature neuronal elements, frequently arranged in rosettes similar to those present in pineocytomas. This suggests the possibility of similar patterns of differentiation, including photoreceptor differentiation. The authors analyzed the immunoreactivity of central neurocytomas for retinal S-antigen, neuronal, glial, and neuroendocrine markers.

METHODS. Thirty-three central neurocytomas were analyzed with reference to their clinicopathologic characteristics, immunoreactivity, and the possibility that anaplastic histologic features correlated with aggressive clinical behavior.

RESULTS. There were 18 male and 15 female patients. The median age at diagnosis was 30 years (range, 3-69 years). All of the tumors with specified location were related to the ventricles. Thirty-two tumors were diagnosed at surgery and 1 at autopsy. Histologic features included mineralization (20 of 33), foci of necrosis (4 of 33), chronic inflammation (4 of 33), ganglion cell differentiation (1 of 33), and lipomatous differentiation (1 of 33). None of the lesions had significant nuclear pleomorphism, mitotic activity, or vascular endothelial proliferation. Immunohistochemistry included expression of synaptophysin (33 of 33), neuron specific enolase (31 of 33), S-100 protein (25 of 33), retinal S-antigen (14 of 24), somatostatin (8 of 27), glial fibrillary acidic protein (4 of 33), neurofilament protein (3 of 22), and leucine enkephalin (1 of 27). At follow-up, 15 of 23 patients were alive an average of 8.1 years (range, 0.91-35.9 years) after surgery.

CONCLUSIONS. Central neurocytomas behave as slowly growing neoplasms that remain confined within one or several supratentorial ventricles and are associated with long survival after surgical excision. Malignant forms with aggressive clinical behavior were not found. The neoplastic cells can express photoreceptor differentiation possibly relating central neurocytomas to pineocytomas. Adipocyte differentiation may be present, and the possibility of a relation between the central neurocytoma and cerebellar liponeurocytoma should be entertained.

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Hemosiderotic fibrohistiocytic lipomatous lesion: ten cases of a previously undescribed fatty lesion of the foot/ankle

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We address the clinicopathologic features of a previously undescribed heavily-pigmented spindle cell proliferation within a circumscribed benign lipomatous lesion that occurs mainly in the ankle region of older females. Patients with "lipoma with fibrohistiocytic proliferation" were retrieved from our files. Slides and clinical information were reviewed, and immunohistochemistry was performed (n = 5). Ten patients with hemosiderotic fibrohistiocytic lipomatous lesions were identified. All cases demonstrated a well-circumscribed fatty lesion with random focal proliferations of plump, slightly pleomorphic spindled cells, scattered inflammatory cells, and abundant iron pigment. The spindled cells had vesicular nuclei with indistinct nucleoli; occasional hyperchromatism was observed. No nuclear cytoplasmic inclusions were identified. The spindled component had a reactive appearance. In most cases, the fatty component, with homogeneously sized adipocytes, predominated. The lesions occurred in the foot/ankle region (8/10, one each cheek and hand) of primarily females (8/10) with a mean age of 50.6 years (range 42-63 years), size of 7.7 cm (range 2.5-17 cm), and prior duration of 3.1 years. Seven of eight patients had a history of prior trauma The spindled component was positive for vimentin, calponin, CD34, and occasionally KP-1 or lysozyme and negative for caldesmon, S100, and desmin. Follow-up on eight patients revealed four with recurrences or residual disease over three years, requiring re-excision. No cases metastasized or caused patient death (mean 12 years, range 1-23 years). We describe a predominantly fatty lesion that is hemosiderin rich with a "fibrohistiocytic" proliferation, composed of histiocytes, myofibroblasts, and C34-positive fibroblasts, which occurs predominantly in the ankle region of middle-aged females. We believe that this is a reactive process due to antecedent trauma, the inflammatory cells, hemosiderin, mixed spindled cells, and homogenous non-neoplastic appearance of the fat. HFLL can be distinguished from previously described lesions. Correct identification of hemosiderotic fibrohistiocytic lesion is important, as it may locally recur.

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3. Marshall-Taylor C, Fanburg-Smith JC. Hemosiderotic fibrohistiocytic lipomatous lesion: ten cases of a previously undescribed fatty lesion of the foot ankle. *Mod Pathol.* 2000; 13:1192- 1199.
4. Mena H, Morrison AL, Jones RV, Gyure KA. Central neurocytomas express photoreceptor differentiation. *Cancer.* 2001;91:136-143.
5. Slor H, Batko S, Khan SG, Sobe T, Emrnert S, Khadavi A, Frumkin A, Busch DB, Albert RB, Kraemer KH. Clinical, cellular, and molecular features of an Israeli xeroderma pigmentosum family with a frameshift mutation in the XPC gene: sun protection prolongs life. *J Invest Dermatol.* 2000;115:974-980.