

# The Referring VETERINARIAN

VETERINARY MEDICAL TEACHING HOSPITAL ❖ COLLEGE OF VETERINARY MEDICINE ❖ CORNELL

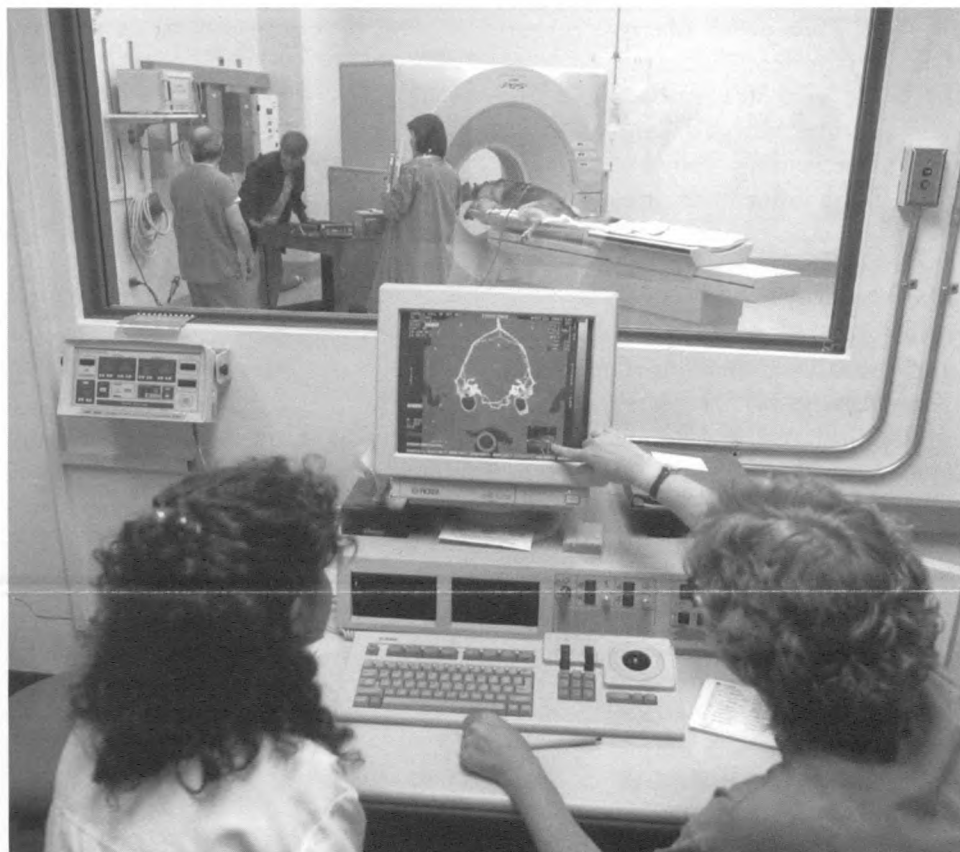
## FROM THE DIRECTOR



In the last issue of *The Referring Veterinarian*, we indicated that we would soon be moving into the Equine and Farm Animal Hospitals, thus completing the relocation of our clinics to newly constructed buildings. This move took place on the first weekend in April. It was necessary to limit the caseload for a few days just before and after the move into our new large animal complex. We hope that this slow-down did not cause any hardships to our equine and farm animal referring practitioners. Moving into the Equine and Farm Animals Hospitals in April allowed us the opportunity to become accustomed to these new facilities before the usual increase in the summer caseload occurred. We are now well established in both the Companion Animal Hospital and the Equine and Farm Animal Hospitals. Our new facilities are unsurpassed anywhere in the world and give us the opportunity to provide state-of-the-art technology in virtually all areas of veterinary care to complement the professional excellence of our staff.

The new clinical, research and teaching facilities were dedicated during the Reunion Weekend in June and many College alumni, as well as others, had the opportunity to tour the new Veterinary Medical Teaching Hospital complex during that time. For those of you who missed this opportunity, we

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During a break in scanning, Julie Pomerantz and Barb Chapman examine a scan in the viewing room while the patient is re-positioned and the monitors checked.

*"It's like a Maserati..."*

## TEST-DRIVING THE NEW CT SCANNER

Dr. Nathan Dykes is a radiologist at the Veterinary Medical Teaching Hospital and director of the Teaching Hospital's medical imaging department. He is obviously enthused about the Hospital's newest item of medical imaging equipment: a brand new, state-of-the-art CT scanner. "It's like a Maserati," he said. "We're doing sixty already and we're not even out of first gear!" As a diagnostic and research instrument, the scanner will

dramatically expand medical imaging capabilities at the VMTH.

CT (Computed Tomographic) scanning was developed in the mid-1970s and is best known for its uses in human medicine. The new Cornell machine, in fact, was built for humans. But the technology has been readily and successfully adapted to veterinary use. "We'll continue to use our present techniques as well—radiography [X-rays], ultrasound, and nuclear medi-

CT SCANNER continued on page 3

# NEW EQUINE AND FARM ANIMAL HOSPITALS SUPPORT STATE-OF-THE-ART CARE

*New facilities provide caregivers with optimal space and tools*

When owner Mary Potts went to feed Homespun Sherlock at 6:30 a.m. on July 2, the 10-year-old Morgan wouldn't eat. When the gelding started kicking his belly, Potts immediately called veterinarian Dr. Ann Chaffee, who arrived in Interlaken within the hour. "I was pretty sure it was a case of surgical colic," said Chaffee, who has a large and small animal practice in Trumansburg, NY. "I treated Sherlock with an intravenous tranquilizer and a non-steroidal inflammatory drug and told Mary to call me if he didn't improve."

Within a couple of hours, Sherlock was worse. "At that time, I could rectally palpate some gas-distended organ," said Chaffee. "I knew this wasn't going to be a simple gas colic so I referred Mary to the closest emergency hospital."

By noon, Sherlock was being trucked to the new equine facility at Cornell University's Veterinary Medical Teaching Hospital where he was admitted by senior surgical resident Dr. Jan Palmer and Dr. Norm Ducharme, professor of surgery and head of Cornell's Equine and Farm Animal Hospitals. By 4 p.m., he was undergoing emergency surgery for a 180-degree torsion of the large colon.

Sherlock spent six days in the Intensive Care Unit at Cornell on the receiving end

of the most advanced equine care in the country. "When he left, there were eight people waving goodbye," said Potts, who was extremely impressed with the facility, the people, and the care her horse received. Chaffee, a 1977 graduate of the Cornell Veterinary College, had not seen the new facility, and it was Pott's and Sherlock's first visit.

"We are able to deliver a much higher level of care for both in- and out-patients," said Dr. Ducharme. "The environment is much more tightly controlled, which provides a

cleaner, safer area for animals and technicians. It is a state-of-the-art facility and our diagnostic tools have been improved. The level and quality of care of intensive care is much improved over what we could deliver in our former location."

The new facility is more spacious, as evidenced by the size of the equine holding areas, the stalls, wards, surgery suites, and special function areas. More animals can be accommodated. Horses and cattle are now kept in separate hospitals so that so there is little chance of cross-contamination, or the injury that can ensue when a horse sees its first cow, panics, and runs over itself, its owner, or attending veterinarians. In the dedicated intensive care unit, there are eleven stalls for foals, mares, or colic cases. In the two neo-natal stalls in ICU, all IV and monitoring services are provided in-stall, and mares are kept separate from the foals by a low

*NEW HOSPITALS continued on page 7*



*At the front entrance of the new Equine and Farm Animal Hospitals, Veterinary Technician Judy Urban and Dr. Christine Cable take a preliminary look at a new patient.*

by Charlie Harrington, University Photo

# TEST-DRIVING THE NEW CT SCANNER

*continued from page 1*

cine," said Dykes. "But CT scanning gives a much clearer picture of the anatomy in most cases, and overcomes other limitations, too. So it not only improves our current procedures, but suggests many other uses."

Like conventional radiography, CT scanning uses short wave radiation (X-rays) to make images. The scanner projects X-rays from a large ring; a table on which the patient is positioned moves through the scanning ring in small increments. The advantage of the CT scan is that it can show precise locations and details of internal anatomical features by examining the subject in a series of thin (1-10mm) cross sections; a conventional X-ray image superimposes anatomical features and lacks this spatial precision.

Cornell's scanner uses the largest scanning ring available. Animals of up to about 450 lbs. can fit on the table and through the ring, although 350 lbs. is the preferred limit of the table's tracking mechanism. There are plans to build a special table to offer partial scans of larger animals—heads, necks, legs.

## SPIRAL SCANNING

An exciting aspect of the new scanner is its ability to perform spiral scanning, sometimes called helical volume scanning. "This is one of the first of a new generation of scanners to offer this technology for less than a million dollars—our scanner cost about \$700,000," explained Dykes. The dif-

ference between standard scanning and spiral scanning is somewhat like that between a still and a video camera: In standard CT scanning, data is recorded as a series of discrete images, or slices,



*Images from the new CT scanner provide a uniquely clear and flexible way of examining internal features. Sitting, Barb Chapman, Ned Dykes, Julie Pomerantz. Standing, Maria Lagana, Sharon Koski.*

as the subject travels through the scanning ring. The perspective is fixed and if a different perspective is desired or a new area needs to be examined at a later date, the subject must be re-scanned. In spiral scanning, the scanner ring revolves as the table moves through it. Data is recorded continuously. From the computer-reconstructed data, the radiologist can examine any part of the anatomy in precise three-dimensional detail, from any perspective, at any time, whether or not the patient is still at the hospital.

## DIAGNOSTIC USES

The diagnostic implications for this kind of imaging clarity and flexibility are manifold.

"It's been a big help in surgical planning for complicated fractures," according to Dykes, "especially in areas like the hip, spine, pelvis and skull. It's useful to be able to examine the affected area from many perspectives before going in for surgery."

The new scanner has also been useful in evaluating animals with cancer to determine the full extent of the tumors. In particular, brain tumors can be more clearly demonstrated.

The CT scanner has been notably effective in taking images around and behind the eye and in studying diseases of the middle and inner ear, areas that are difficult to see clearly with other mechanisms. "A scan of a 1mm section in this region can show exquisite detail. With the scanner, we can often pick up the first signs of fluid accumulations and changes in the fine bony structure that signal problems," noted Dykes.

## NEW USES

In the future, Dykes foresees considerable work with the CT scanner in pulmonary disease and several types of lung cancers, noting the scanner's importance in examining these conditions in human medicine. He has even had inquiries from avian researchers to scan birds' lungs and air sacs, some details of which are not well-known.

*CT SCANNER continued on page 6*

Photo by Charlie Harrington, University Photo



## VMTH NEWS

*As is true in any academic environment, the situation is constantly changing in terms of personnel and staffing, facilities and technologies, and in other areas. We are anxious to keep our referring veterinarians as current as possible with regard to those changes that will affect your interactions with the VMTH.*

### THE FRONT LINE

Enclosed as an insert with this issue of *The Referring Veterinarian* is an updated list of faculty and house officers in the Veterinary Medical Teaching Hospital. As you know, house officers are the "Front Line" of our interaction with referring veterinarians and the clients they send to us. Each year, this list changes as a number of our house officers complete their training programs and are replaced by young veterinarians beginning their specialty training. Our house officers are chosen through a Matching Program administered by the American Association of Veterinary Clinicians. The AAVC computer program matches prospective house officers with institutions by rank order based on the institution's ranking of candidates and the candidates ranking of their choices of institutions. This year, we were very successful. Over 60% of our new house officers were our number one choices and the remainder were within the top three. It is apparent, therefore, that Cornell still ranks highly as a choice by prospective candidates as a site to undertake residency training.

### FACULTY COMINGS & GOINGS

In addition to the alterations in our house officer program for 1996-97, there are also some changes in faculty. **Dr. Ron Riis** in our Ophthalmology Service has just begun a sabbatical leave which will extend through the fall semester. **Dr. Tom Kern** will thus be the Chief of Service for Ophthalmology for the next six months or so. **Dr. Jim Gaarder** is a third year resident in Ophthalmology. He is extremely well

qualified and will be a great asset to the Service during Dr. Riis' absence. In Large Animal Medicine, **Dr. Tom Divers** has also just begun a sabbatical leave which will extend through the end of the fall semester. The Large Animal Medicine Service will be in the capable hands of **Drs. Dorothy Ainsworth** and **Bill Rebhun** during Tom's absence.

**Dr. Steve Barr** in our Small Animal Internal Medicine Service will be on sabbatical leave for the 1996-97 academic year. **Dr. Angelyn Cornetta**, a graduate of the University of Illinois who has just completed a residency at the Animal Medical Center, will be filling Dr. Barr's clinical responsibilities in Small Animal Internal Medicine during his absence. In Small Animal Surgery, **Dr. Jim Flanders** has recently returned from a three-year leave of absence during which he was pursuing doctoral studies in Pharmacology. We welcome Jim back to the General Surgery Service in the Companion Animal Hospital. **Dr. Rick Hackett** in Large Animal Surgery has been on sabbatical leave since the beginning of March. He returned to active duty on the Large Animal Surgery Service at the beginning of September.

In Large Animal Theriogenology, **Dr. Barry Ball** has recently returned from a sabbatical leave and we welcome him back to clinical duty. **Dr. Vicki Meyers-Wallen** will be on sabbatical leave from the Small Animal Fertility and Infertility Service for the entire 1996-97 academic year. During her absence, **Dr. Rob Gilbert** will be Service Chief of the Reproductive Services in the Companion Animal Hospital.

In the Anesthesiology Service, **Dr. John Ludders** will begin a sabbatical leave effective September 1, 1996. He will return to active duty on April 1, 1997.

In addition to the above, several new faculty have joined the VMTH. **Dr. Anjilla Cooley**, a graduate of the College of Veterinary Medicine at the

University of Tennessee, has just completed a residency in Small Animal Surgery at the Virginia-Maryland Regional College of Veterinary Medicine. She has joined our Small Animal Surgery staff with primary responsibility in a new course titled "Community Practice Service, Anesthesia, and Surgery." However, she will also be assisting in the Small Animal Surgery Services.

**Dr. Greg Starrak**, a graduate of the Western College of Veterinary Medicine at the University of Saskatchewan with several years of clinical experience, has recently completed a residency in radiology at North Carolina State University and has joined our Radiology Service.

**Dr. Lorin Warnick** has joined our faculty as a member of the Ambulatory Clinic. Lorin graduated from Colorado State University's College of Veterinary Medicine. He undertook an internship and residency in Ambulatory Medicine at Cornell and thereafter completed a doctoral degree in Epidemiology also at Cornell. He comes to us after several years as an assistant professor at the Virginia-Maryland Regional College of Veterinary Medicine.

We are pleased to announce the appointment of **Shaun Cobb** as a staff pharmacist in the VMTH Pharmacy. Mr. Cobb graduated from the College of Pharmacy at Buffalo and had five years of experience as a hospital pharmacist at Cortland Memorial Hospital before joining our staff. Shaun replaced **Jerry Decker** who resigned as Chief Pharmacist after eight years of service to the VMTH. **Ed Kirker**, staff pharmacist in the VMTH for the last seven years, has been appointed Acting Director of the Pharmacy. Both Shaun and Ed stand ready to assist our referring veterinarians on any pharmacy matters.

Finally, we welcome **Patricia Elliott** as our new Director of Medical Records. Ms. Elliott became an accredited medical records technologist in 1979. From 1979 to the present she has

*VMTH NEWS continued on page 7*

**VETERINARY MEDICAL TEACHING HOSPITAL**  
**COLLEGE OF VETERINARY MEDICINE - CORNELL UNIVERSITY**  
**1996-1997**

**Faculty (F), Residents (R) & Interns (I)**

**AMBULATORY CLINIC:**

**(607) 253-3140**

- (F) Charles Guard, Mary Smith,  
Lorin Warnick, Maurice White
- (R) Terri Tyson
- (I) Kelly Bosma, Gillian Taylor

**EQUINE & FARM ANIMAL  
HOSPITALS:**

**(607) 253-3100, Fax (607) 253-3787**

**Medicine:**

- (F) Dorothy Ainsworth, Thomas Divers  
(sabbatic 6/96-1/97), William Rebhun
- (R) Gillian Perkins, Lisa Weisensel

**Ophthalmology:**

- (F) William Rebhun

**Surgery:**

- (F) Normand Ducharme, Susan Fubini,  
Richard Hackett, Alan Nixon
- (R) Christina Cable, Laurie Goodrich,  
Jan Palmer, Allison Worster

**COMPANION ANIMAL HOSPITAL:**

**(607) 253-3003 [veterinarians]**

**(607) 253-3060 [clients]**

**(607) 253-3788 [Fax]**

**Avian/Exotics/Wildlife:**

- (F) Noha Abou-Madi, George Kollias

**Cardiology:**

- (F) Sydney Moise
- (R) Anna Gelzer

**Community Practice:**

- (F) Laura Eirmann, William Hornbuckle

**Dentistry:**

- (F) John Saidla

**Dermatology:**

- (F) William Miller, Danny Scott
- (R) Emily Rothstein

**Fertility & Infertility**

- (F) Robert Gilbert, Vicky Meyers-Wallen  
(sabbatic 9/96-8/97)
- (R) Carlos Gradil

**Medicine:**

- (F) Stephen Barr (sabbatic 7/96-6/97),  
Angelyn Cornetta, Sharon Center,  
John Randolph, Kenneth Simpson
- (R) Nichole Birnbaum, Todd Deppe,  
Timothy Fan, Shannon Flood,  
Jeffrey Toll

**Ophthalmology:**

- (F) Thomas Kern, Ronald Riis (sabbatic  
7/96-2/97)
- (R) James Gaarder

**Surgery:**

- (F) Anjilla Cooley, Jay Harvey,  
James Flanders, Kathleen Linn,  
Rory Todhunter, Eric Trotter
- (R) James Farese, Paul McNamara,  
Catherine Reese

**ANESTHESIOLOGY:**

**(607) 253-3003 [veterinarians],**

**(607) 253-3060 [clients]**

- (F) Robin Gleed, John Ludders (sabbatic  
9/96-2/97), Paula Moon, Lesley Smith  
(thru 12/31/96)
- (R) Maria Glowaski, Andrea Looney

**BEHAVIOR:**

**(607) 253-3450**

- (F) Katherine Houpt
- (R) Diane Frank

**NUTRITION:**

**(607) 253-3486**

- (F) Arleigh Reynolds, Francis Kallfelz,  
Franklin Loew

**RADIOLOGY:**

**(607) 253-3241**

- (F) Nathan Dykes, Victor Rendano,  
Gregory Starrak, Amy Yeager

**THERIOGENOLOGY:**

**(607) 253-3081**

- (F) Barry Ball, Peter Daels, Robert Gilbert
- (R) Carlos Gradil

## CT SCANNER

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Because CT scanning is so fast, sensitive and relatively non-intrusive, Dykes also sees new uses for it, for example in a field known as CT Angiography. "We can inject a contrast material—iodine—into a vein and pick it up in the blood leaving the heart headed for the liver or kidneys or other internal organs. This lets us study the blood supply to these organs much more readily than before, and again pick up early signs of dysfunction, without going to the time, trouble, and some trauma of inserting a catheter into the artery."

Although it has only been in operation about four months, the new scanner has assumed a central and rapidly growing role in the VMTH's medical imaging department, providing important and often spectacular diagnostic images for staff, students, and referring veterinarians. The department is very interested in receiving new cases of all kinds, especially cases where other imaging technologies give a less-than-ideal picture.

"Part of our job here in the medical imaging department," said Dykes, "is to give the best possible picture that we can of the disease or injury in question, to guide surgery or therapy, or as an adjunct to or, even perhaps, instead of ex-

*"The department is very interested in receiving new cases of all kinds, especially cases where other imaging technologies give a less-than-ideal picture."*

ploratory surgery. CT scans can help the veterinarian. We find, too, that the families of our patients feel better the more they know, regardless of the outcome, whether it's a more successful treatment, or sadly, the conclusion that the condition is inoperable."

"As researchers and teachers, we are also trying to determine the best, clearest, most efficient way to image a par-

ticular feature—whether to use the CT scan, radiography, ultrasound, or nuclear medicine—and to let these recommendations be known."

As many possibilities as the new CT scanner presents, Dykes is quick to point out, "This is not a completely new thing. Many veterinary teaching hospitals have scanners or have access to scanner facilities, although perhaps not with our capabilities. So we're playing a little catch-up." He adds with a definite twinkle in his eye, "But we think we've got second gear figured out now, and we're catching up—fast!"

## Cases Needed for Gene Therapy Trial for Canine Osteosarcoma

The Companion Animal Hospital at Cornell University requests referrals of dogs with long bone osteosarcoma for entrance into a gene therapy trial. In order to be eligible for entrance into the trial, the dogs cannot have any radiographic evidence of thoracic metastasis and the owners will need to pay for amputation at Cornell and for two doses of postoperative carboplatin chemotherapy.

Tumor cells will be harvested immediately after amputation. The cells

will be cultured, irradiated, and a modified, non-infectious adenovirus will be used to introduce an immune-modulating gene (GM-CSF or IL-2) into the tumor cells. These cells will be used to make an autogenous tumor vaccine which will be administered one month after amputation. Funding is available to pay for the vaccine and all subsequent recheck visits to Cornell (once every three months) including radiographs and bloodwork.

We are hopeful that the presence of

GM-CSF or IL-2 in the autogenous vaccine will stimulate the patient's immune system to seek and destroy any micrometastases present after chemotherapy. Results from similar studies in mice have been promising. A pilot study has shown that the autogenous vaccine is safe in dogs.

Veterinarians with questions about the trial can call Dr. Jim Flanders at the Companion Animal Hospital (607) 253-3060.



CT scan of the head showing a contrast-enhanced mass at the base of the brain.



# NEW HOSPITALS

*continued from page 2*

gate. "The environment is safer for both foal and care-giver," said Dr. Ducharme, "and does not cause undue stress to the lactating mother."

The rooms in the new facility serve dedicated functions. This provides a safer, more sterile environment, and makes it easier for technicians and veterinarians to provide care as well as serve and stock the rooms. Four treatment areas are dedicated to outpatient use and three areas to inpatient care, which reduces the chance of infection between in-patient and out-patient. The two anesthesia induction rooms are separate from the three surgery rooms which are separate from padded recovery rooms. "More scheduled and emergency surgeries can be accommodated at one time," said Ducharme.

There are also improvements in equipment. In the radiology department, the new nuclear medical camera can be moved to the animal, which is safer and easier for the animal, and provides better images of various orthopedic injuries. A custom-built large animal table is planned for the new CT scanner [*see story page 1*] to enable scans of the heads and extremities of these patients. Surgical lights are on tracks instead of wheels, and new surgical tables on wheels make it easier and safer to move the animals from room to room.

Veterinarians, technicians, students, and owners have not been neglected either. Technician stations are more centralized and are dedicated to the units they serve. Animal owners have access to a spacious waiting room, restrooms, and consultation rooms; hot coffee is provided at all times.

Due to the installation of a new computer system, record-keeping procedures have been completely overhauled. More sections of the medical records and x-ray reports are computerized which allows on-line tracking.

Complete case data and history are instantly retrievable.

Still to be completed are an indoor lunging area, a special recovery pool, and a new high-speed treadmill. "Smart" surgical rooms will soon be equipped with video cameras wired to remote consultation or conference rooms so students can view surgeries without contaminating the surgical environment.

Some things have not changed. "Our staff is as dedicated as ever," said Ducharme. The clinic is still staffed 24 hours a day every day of the year, and the clinicians follow-up all cases with both the owner and the referring veterinarian.

"We are very lucky to be so close to the Cornell Veterinary Medical Center," said Chaffee. "It dramatically improves the level of emergency care I am able to provide to my clients."

And Sherlock? He has made a wonderful recovery; Potts plans to be back in the saddle on October 2.

## VMTH NEWS

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held several positions in the medical records area, most recently as Health Information Manager and Quality Assurance Coordinator at the McAuliffe Health Center, Loretto Corporation in Syracuse, New York. Patty is currently in the process of contacting each of our referring veterinarian practices to ensure that demographic information in our database is accurate. We appreciate your cooperation in our efforts to improve communication with each and every one of our referring veterinarians.

We welcome all new members to the VMTH family and wish our departing colleagues all the best in the future.

## FROM THE DIRECTOR

*continued from page 1*

invite you to visit any time you are in the Ithaca area and either I or another member of our staff would be pleased to give you a tour. In the meantime, we continue to welcome your referrals. Both clients and referring veterinarians who have had the opportunity to visit have been very impressed with our new physical plant.

We hope that our expanded readership enjoyed the Winter 1996 issue of *The Referring Veterinarian*. We have added a few more new readers with this issue, too. If you or a colleague do not receive this newsletter directly and would like to do so, just let me know. The next several issues will highlight various aspects of our new facilities and we hope that you will find this interesting and informative.

A few weeks ago, the New York State Budget for fiscal year 1996-97 was passed. We were very pleased to note that the reductions to the State University Budget were less than had been originally anticipated. The good news is that no further reductions to the budget of the Veterinary Medical Teaching Hospital will be necessary this year. We are very thankful for the support of the administration of the University, SUNY, and the legislature in maintaining our programs. Regardless of budgetary constraints, we will do the best job possible in providing your clients and patients with the services you have come to expect from the VMTH.

As always, if you have any questions or concerns, please don't hesitate to contact me. I can be reached by phone at (607) 253-3030 during work hours or at (607) 257-2522 on nights or weekends. Our fax number is (607) 253-3056 and my e-mail address is [fak1@cornell.edu](mailto:fak1@cornell.edu) or [xnfe20@prodigy.com](mailto:xnfe20@prodigy.com). I would be happy to receive your queries or comments.

—Fran Kallfelz

## STAFF PROFILES

**Dr. Lorin D. Warnick** is Assistant Professor of Ambulatory and Production Medicine.

Dr. Warnick received his DVM from Colorado State University in 1988, with an internship and residency at the Cornell University Ambulatory Clinic from 1988-1991. He earned his PhD from Cornell in 1994 in Epidemiology. Dr. Warnick is a diplomate of the American College of Veterinary Preventive Medicine.

Before joining the Cornell faculty on Aug. 1, 1996, Dr. Warnick was Assistant Professor of Large Animal Clinical Sciences at the Virginia-Maryland Regional College of Veterinary Medicine in Blacksburg, Virginia. His research focus there was the investigation of clinical salmonellosis in Virginia beef and dairy herds.

At Cornell, Dr. Warnick's focus will be dairy production medicine and epidemiologic research related to disease effects on production in dairy cattle.



**Dr. Gregory Starrak** joined the Cornell faculty in August, 1996, as a Lecturer in Radiology in the Department of Clinical Sciences.

Dr. Starrak graduated in 1981 from the Western College of Veterinary Medicine in Saskatoon, Saskatchewan. For twelve years he was in private practice in Vancouver, B.C., working primarily with racehorses and other performance horses. For the past three years, Dr. Starrak was a resident in radiology at North Carolina State; his main research there was a study of canine lymphoma. He recently passed the first stage of the American College Of Veterinary Radiology (ACVR).

Dr. Starrak has a special interest in quantitative imaging, using CT scanning, ultra-sound, and nuclear scintigraphy in particular to follow the progression of disease and trauma as it affects both anatomic and physiologic function. He is especially interested in applying these techniques to equine imaging.



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