Department of Internal Medicine

2005 Annual Report
From The Chairman

The Department of Internal Medicine, University of Nebraska Medical Center (UNMC), Omaha, has accepted the ever-changing challenge to improve the health of the citizens of Nebraska through nationally-recognized programs in clinical care, education of healthcare providers, and research that enhances the understanding, treatment and/or prevention of disease. This report is the first of many anticipated annual updates to convey the status of a journey to accomplish our strategic goals:

- To provide biomedical educational programs for healthcare providers and researchers that are recognized as excellent at the college, state and/or national levels
- To expand and develop national recognition for clinical, translational and basic biomedical research programs and educational scholarship
- To provide clinical care that is recognized at the regional and the national levels for both innovation and effectiveness

With a paid faculty of 141, augmented by a volunteer faculty of 118, the 11 sections of Internal Medicine continue to excel in the education of our future healthcare providers and academic leaders. The entire faculty guides 65 residents in achieving their training as superb clinicians who have developed the skill of lifelong learning in the continued pursuit of providing evidence-based care to their patients. Our residents continue to distinguish themselves by outstanding performance at the bedside, exceptional national academic achievements, and continuing a long tradition of demonstrating the highest professional conduct. For the eighth year in a row, Internal Medicine residents enjoyed a 100 percent board pass rate!

The Department continues to be a leader in medical education at UNMC. One hundred eighteen third year and 279 fourth year medical students rotated through the Department's various services in the past 12 months, and the Department plays a continuing role in the training and continuing education of allied healthcare providers. Eight Accreditation Council for Graduate Medical Education (ACGME)-accredited fellowships are offered - Cardiology, Diabetes/Endocrinology/Metabolism, Gastroenterology, Geriatrics, Hepatology, Infectious Diseases, Hematology/Oncology, and Pulmonary/Critical Care. In addition, the coming academic year will see initiation of a fellowship program in Rheumatology.

The Department's research activity emphasis continues to expand. Our faculty members are involved in directing multidisciplinary research activities that exceed $24 million in total support. We continue to partner with the VA Research Service to provide teams of investigators dedicated to pursuing new knowledge and to determining the practical application of existing knowledge in new clinically-relevant ways. We are excited that new programs in outcomes...
research, genetic epidemiology and nationally-funded clinical trials will enhance the breadth of our ongoing established programs in biomedical research.

While academic pursuits of education and research are critical to the success and viability of the Department, our core values and objectives remain seated in the commitment to be an organization whose ultimate purpose is to provide state-of-the-art care to our patients in a scientific and compassionate manner. We continue to achieve national recognition in providing clinical care in a variety of sub-specialty areas. As UNMC expands clinical activity both regionally and nationally, the Department will continue to be in the forefront providing evidence-based care in new and innovative ways. In the final analysis, it is truly "all about the patient."

The academic year 2006/2007 will continue to provide opportunities for us to demonstrate - through maintaining our momentum in patient care, research and education - that being an internist is both noble and fun. This year will see the implementation of specific, measurable tactical plans developed by each section in support of the Department's overall strategic goals. Through this mechanism, we will continue to expand our activity in a continual journey for excellence in clinical medicine, biomedical research and healthcare education. This is an exciting time for the Department as a whole and for each individual faculty member.

Lynell Klassen, MD
Henry J. Lehnhoff Professor
Chairman, Department of Internal Medicine

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The UNMC Department of Internal Medicine has a wide range of research activities, including basic science investigations of disease mechanisms, investigator-initiated clinical trials, as well as industry-sponsored trials, and research focusing on education. In calendar year 2005, investigators in the Department generated approximately $18.5 million in direct grant dollars and contributed to another $2.7 million direct grant dollars administered through other departments. In addition, faculty in the Department published 240 manuscripts and book chapters in 2005.

Investigators in the Department are located at both UNMC and the Omaha Veterans Administration Medical Center (OVAMC). At the VA, departmental researchers are responsible for one of only two national VA Alcohol Research Centers and have defined a unique mechanism involved in alcohol induced liver disease. This center brings together MDs and PhDs from multiple sections including Gastroenterology/Hepatology, Rheumatology/Immunology, and Pulmonary/Critical Care/Allergy and Sleep Medicine. We are excited that Dr. James O’Dell, Section Chief of Rheumatology, is leading a recently-funded VA cooperative trial to evaluate the best treatment strategies for rheumatoid arthritis for veterans. Dr. Ted Mikuls has created a new tissue bank within the VA system and will be exploring gene-environment interactions relevant to rheumatoid arthritis patients. We are pleased that department investigators have a new Clinical Research Unit at the VA which opened recently to facilitate clinical trials.

The UNMC Department of Internal Medicine is home to the Rheumatoid Arthritis Investigative Network (RAIN), a collaborative approach between investigators at academic health centers and clinicians in practice who have made landmark observations from their clinical studies of combination therapy for rheumatoid arthritis. Investigators in the Section of Hematology/Oncology are housed in the unique cooperative care Lied Transplant Center and Dr. Julie Vose leads the NIH-funded Nebraska blood and marrow transplant research network. Pulmonary Section investigators Dr. Joe Sisson and Dr. Stephen Rennard have NIH-funded programs, located in the state-of-the-art Durham Research Center, focused on mechanisms of injury and repair regulating airways disease. Dr. Jane Potter, Chief of Geriatrics, leads the Nebraska Geriatric Education Center funded by Health Resources and Services Administration (HRSA). The Department, coordinated by Dr. Jennifer Larsen, has an active partnership with Aberdeen Area Tribal Chairman’s Health Board and their Northern Plains Tribal Epidemiology Center. This partnership resulted in a recently-funded Native American Research Center for Health (NARCH) grant through the Indian Health Service.

The Department fosters research experiences for trainees at all levels of medical training from medical students to fellows. In addition, every summer the Department sponsors 20-25 undergraduate students to participate in research projects with our investigators. We are pleased to help these young people explore future careers in the biomedical sciences.
### Funding Support (Includes Both Direct and Indirect Costs)

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<th>2003</th>
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**Yearly Totals**

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### Yearly Grant Trends

![Yearly Grant Trends Chart]

- NIH/NSF
- NIH Subcontracts
- Other Extramural
- Industry
- Admin by Other Departments
- Omaha VAMC
- Intramural
- Yearly Totals

### Type of Publication

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<td>Journal Articles</td>
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<td>Chapter/Reviews</td>
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<td>Electronic Media</td>
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<td>Books Edits</td>
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<td><strong>2005 Totals</strong></td>
<td><strong>247</strong></td>
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![Type of Publication Chart]

- Manuscript & Book Chapters
Our Internal Medicine residency has had another banner year! Highlights of 2005-2006 include: another terrific match, continuation of 100 percent board pass record for the eighth straight year, a top 3 percent performance on the In-Training exam, another terrific slate of Chief Residents, a new Program Director of Med/Peds, and a new Associate Program Director in Internal Medicine.

We are excited to report that Dr. Chad Vokoun accepted the position of Associate Program Director and will work alongside Dr. Joel Bessmer, Associate Program Director, and Dr. James O’Dell, Program Director. Dr. Vokoun is a 2003 graduate of our program and a great asset.

We are also thrilled that Dr. Jennifer Parker has been named Program Director, Internal Medicine/Pediatrics Residency Program. Dr. Parker is UNMC’s only joint board certified Medicine/Pediatrics physician. Dr. Parker is a former UNMC student and Chief Resident at Michigan and is already doing a spectacular job having just put together the best Meds/Peds match ever.
Education

The ACGME has set standards not just for resident and patient safety, but to change the way we train physicians. Residents must be trained for their own practice. This includes but is not limited to, clinical and private offices, staff hiring and retention, practice management, contracts, billing, Medicare guidelines, and patient retention. We have added to our noon conference eighteen month curriculum to reach these goals. We have specialists in their field give lectures on billing, patient retention, Medicare guidelines, and contracts and financial planning. Residents currently may serve on the Turner Park Board to learn more about office management, hiring and retention, and practice management. We continue to prepare graduates for the next step in their medical careers by giving them top training and opportunities.

We have implemented a new online database for the program. The online evaluations are now going well, after a significant learning curve during implementation. We are now seeing an increase in compliance and a decrease in missing evaluations.

The Internal Medicine/Pediatrics Program will have their first graduate in June 2006. Dr. Marcus Snow will be the first to graduate from the program. After graduation, Dr. Snow will be Ambulatory Chief Resident and then will be going into a Rheumatology fellowship.

The residency program is preparing for the ACGME site visit coming in May 2006 and is expected to continue to be fully accredited. The program has been accredited since March 7, 1962. The Medicine Program has also asked for an increase and this too is expected to be approved.

The intern class of 2006-2007 was selected from a pool of 173 outstanding applicants. There were 52 different medical schools represented. We continue to attract top quality medical students on a national level.

Our pass rate for the American Board of Internal Medicine certification exam is impressively at 100 percent for eight straight years. The national average has been between 86-89 percent. As mentioned above, our residency programs continue to rank among the elite nationally with regard to performance on the In-Training exam. The reference group (HO II’s) have scored in the top ten percent of the country for the eighth straight year – this year at the 97th percentile. Further, our HO III’s scored in the 99th percentile.

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Department of Internal Medicine Faculty & Residents 2005-2006

Preliminary
Beth Augustine, MD
Aaron Benner, MD
Jess Boyen, MD
Allyson Braasch, MD
Anya Johansen, MD
Daniel Johnson, MD
James Sederberg, MD

Categorical
HO I
Mathue Baker, MD
Micah Beachy, MD
Erik Ehlers, MD
William Esplin, DO
Katherine Hanson, MD
Neda Heidari, MD
William Lawton, MD
Matthew McCormick, MD
Nicole Paulman, MD
Lindsey Rentschler, MD
Regan Taylor, MD
Ketki Tendulkar, MD

HO II
Jay Anderson, MD
Erin Casey, MD
Segen Chase, MD
Steven Craig, MD
Kristine Erlandson, MD
Michael Feely, MD
Jennifer Fillaus, DO
Julie Fletcher, MD
Travis Hageman, MD
Marilyn Hallinan, MD
Steven Lilla, DO
Aaron Michels, MD
Jessica Novotny, MD
David Odegaard, MD
RoseAnn Schwaninger, MD
David Stearnes, MD

HO III
Colene Andersen, MD
Lee Austin, MD
Nathan Birch, MD
John Cannella, MD
Russell Cowles, MD
Cody Hoeftlicker, DO

HO IV
J.L. Shawn Keeven, MD
Travis Koenenke, MD
Alissa Marr, MD
Eric Rodrigo, MD
Trevor Van Schooneveld, MD
Brad Wilcox, MD

Medicine/Pediatrics
HO I
Burak Gumuscu, MD
Eric Rush, MD

HO II
Daniel Faber, MD
John Freeman, MD

HO IV
Marcus Snow, MD

Chief Residents
Brian Ward, MD
UNMC Chief Resident
Annemarie Whiddon, MD
OVAH Chief Resident
C. José Friesen, MD
Ambulatory Chief Resident
During this last academic year, we modified our Objective Structured Clinical Exam (OSCE) to more closely resemble the National Board of Medical Examiners’ (NBME) Clinical Skills exam, and this change, in general, has gone well. The College of Medicine, specifically the Department of Internal Medicine, suffered a tragic loss with the unexpected death of the legendary educator, Dr. LeeRoy Meyer. His death led to the reassignment of personnel to cover his innumerable teaching responsibilities. Dr. David O’Dell continues as clerkship director, but is playing a more active role with two lectures a week and backing up Dr. Scott Neumeister in conducting the small group high-impact discussions. We are pleased to welcome Dr. Jennifer Parker to our team, and she will be lecturing on Mondays and leading the EKG review sessions. The general medicine senior elective (affectionately known as Dr. Meyer’s class) continued to be very popular this year with approximately 60 percent of seniors electing to take this course, and an even higher percentage are registered for 2006-2007. Dr. Meyer will continue to be missed and will never be replaced, but using the barometer of the student evaluations, this change in personnel has not adversely affected our overall clerkship evaluations.

The strength and commitment of the Internal Medicine Residency Program is critical to the success of the clerkship, and we are pleased to report the development and implementation of a seminar designed to prepare the residents to teach. The seminar was well received and is scheduled to occur annually.

Our plans for the next year include moving our faculty evaluation of students online, continuing to modify our OSCE cases, experimenting with a journal club experience in the senior elective, and reviewing the new student patient logs to help assess our students’ experience.
The Department of Internal Medicine strives to provide clinical care that is recognized at the regional and the national level for both innovation and effectiveness. About 125 faculty members care for patients as part of our three-fold academic mission of patient care, education and research. All clinical faculty members belong to the UNMC Physicians multi-specialty group practice. Department faculty provide the full spectrum of adult internal medicine care, including both primary and sub-specialty care. The Department is organized along subspecialty lines into 11 sections ranging in size from 3 to 28 clinician faculty. The clinical mission of each section may be found in the individual section reports that follow.

Department of Internal Medicine practice sites provided care for over 38,900 patients in 2005. About 120,000 patient-visits occur annually across all department outpatient practices (excluding the VAMC). The inpatient services have become about 25 percent busier in the past five years with annual internal medicine discharges now exceeding 5,200 at The Nebraska Medical Center.

Twenty-three practice locations, geographically dispersed across western Nebraska and eastern Iowa, serve both urban and rural populations [SEE MAP]. Our primary hospital affiliate, The Nebraska Medical Center, the Lied Transplant Center, and our main campus outpatient facilities comprise an important referral center accepting patients from the region, the nation, and many foreign countries. Many department physicians also practice part-time at the OVAMC which is an important affiliate for patient care, education, and research. The Department recently added several new clinical services. The most ambitious project was the opening of a Biocontainment Patient Care Unit. This ten-bed unit is only the third of its kind in the US. It provides a highly secure negative pressure environment and specially trained volunteer nursing staff that can safely care for patients with highly contagious diseases. Other new clinical programs include an academic hospitalist program for the inpatient teaching services, a women’s health clinic, an HIV/Hepatitis C co-infection clinic, an allergy clinic, a thyroid cancer clinic, a diabetes and endocrine urgent care clinic, an on-campus travelers clinic, a community-based rheumatology clinic, and a home hemodialysis program.

As part of the UNMC Physicians practice expansion in west Omaha, the Department will offer a major new program in cancer diagnosis and treatment located just west of the Village Pointe shopping area. Patients will be able to access state of the art multidisciplinary cancer care in a convenient, comfortable setting. The Department will continue its tradition of excellence in cancer care based in the Lied Transplant Center located on the main campus.

Legend for Outreach locations at right:
- Cardiology
- General Internal Medicine (GIM)
- Geriatrics
- Nephrology
- Onc/Hem
- Pulmonary
- Rheumatology

Nebraska
- Omaha
- Brookeston
- Clarkson West
- Douglas Co. Care Ctr.
- Hemodialysis & Peritoneal Clinic
- Lutheran Home
- Maple Crest
- RAI Ames Ave
- Dialysis Clinic
- St. Joseph Villa
- Thomas Fitzgerald
- Turner Park
- VA
- Bellevue - Summit
- LaVista - Brentwood
- Papillion- Midlands Medical Building
- Plattsmouth
- North Platte - Cystic Fibrosis

Omaha Metro Home Visits

Volunteer Clinics
- Omaha
- Sharing, Respect, and Good Life - any IM clinical faculty
- SONA/One World

Iowa
- Harlan - Dialysis Unit & Clinic
- Sioux City - Mercy Med. Ctr.
- Shenandoah - Nephrology Clinic & Dialysis Unit

Thomas G. Tape, MD
Vice Chair for Clinical Affairs
The Section of Cardiology at the UNMC is building for the future with pioneering work in cardiac imaging, cardiac electrophysiology, congestive heart failure/transplantation, interventional cardiology, and preventative cardiology. The section continues to see significant growth in all areas (clinical care, education, and research) thanks in large part to a rich collaborative environment. The section enjoys and benefits from clinical collaboration and support of cardiologists at The Nebraska Medical Center and across the region. There are strong interdisciplinary clinical and research projects between Cardiology, Cardiothoracic Surgery, Vascular Surgery, and Pediatric Cardiology, as well as investigators at Munroe Meyer Institute, Durham Research Center, the College of Nursing, Peter Kiewit Institute, and the OVAMC.

Clinical

Since 2000 the clinical service has seen a growth of at least 20 percent annually. This past year was no exception. Dr. John Haas, a very busy Omaha clinical cardiologist, joined our practice this year. He and Dr. Keith Weeks provide a full-service outpatient cardiology presence to Sarpy County. This program offers nuclear medicine, cardiac ultrasound, and exercise stress testing, as well as regular office visits, pacemaker and ICD evaluations, and preventative cardiology counseling. The clinic is located adjacent to Midlands Hospital. Drs. Tom Sears, Scott Shurmur, and Dan Mathers provide similar comprehensive outpatient services at our west Omaha facility located at Clarkson West. The Durham Outpatient Center remains the hub of “The Heart Center” activity with over 10,000 clinic visits annually.

The year saw the emergence of our advanced heart failure program. Under the leadership of Dr. Ioana Dumitru, patients from across Nebraska, Iowa, and Kansas were evaluated for optimal medical therapy, mechanical hearts, or cardiac transplantation. In the first nine months after the heart transplant program re-opened, 13 patients were successfully transplanted.

Dr. Mark Niebauer leads a world-class electrophysiology program. Along with Drs. Chris Erickson, John Kugler, and recent recruits, Drs. Arthur Easley, Jr., and Daniel Anderson, Dr. Niebauer established a group that excels at the management of cardiac arrhythmias. Dr. Niebauer is a national leader in the evaluation of cryoablation, an energy source that is safer than radiofrequency energy. Cardiac mapping now links three-dimensional images obtained from cardiac CT scan to the electrical activity within the heart. Dr. Erickson combines his expertise in pediatrics and adult electrophysiology to help families with inherited cardiac arrhythmias.

Education

This year the section recruited Dr. Easley as Director of Education for the Section of Cardiology. He will be responsible for the growth and improvement in all aspects of our educational program including sophomore and senior curriculum and delivery, as well as improving the resident education experience at both the UNMC and OVAMC.

We continue to attract strong fellows for the Cardiology program including dedicated electrophysiology and interventional fellows. This has a broad impact on our abilities to recruit the best trainees.

Research

This past year the section published 39 original manuscripts. Some of the topics included basic science research in the mathematical modeling of cardiac arrhythmias, pioneering work using tagged microbubbles to identify areas of inflammation that could signify an impending stroke or heart attack. Drs. Tom Porter and Abdou Elhendy have established Nebraska as the premiere program with dobutamine stress imaging with microbubble
perfusion. Dr. Mark Niebauer has been actively developing new techniques and indications for cryoablation (freezing) to treat arrhythmias.

This past year the section received $225,000 in NIH and other competitive extramural grants, as well as $475,000 in industry research support. Dr. Daniel Anderson received the Department of Medicine’s award for outstanding research by a fellow and will join our faculty in July 2006.

Faculty List and Key

**John Windle, MD**  
Professor and Chief  
Clinical interest: cardiac electrophysiology  
● Research interest: complex cardiac mapping; computerized decision-support and guideline modeling/health informatics

**Daniel Anderson, MD, PhD**  
Assistant Professor  
● Clinical interest: cardiac electrophysiology, specific interests include understanding the clinical aspects and contributing factors involved in both atrial and ventricular arrhythmias  
● Research interest: molecular and cellular immunology with a specific focus on innate immunity as contributing mechanisms of cardiovascular disease processes

**Ward Chambers, MD**  
Associate Professor; Executive Director, UNMC  
● Clinical interest: cardiovascular imaging including MRI and CT  
● Research interest: cardiac MRI and minority health disparities

**Ioana Dumitru, MD**  
Assistant Professor  
● Clinical interest: cardiac transplantation; congestive heart failure  
● Research interest: pharmacologic therapy for congestive heart failure

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**Arthur Easley Jr., MD**  
Associate Professor; Director of Education  
● Clinical interest: ventricular tachycardia; congestive heart failure and device therapy  
● Research interest: cardiac mapping and ablation; biventricular ICDs

**Christopher Erickson, MD**  
Associate Professor  
● Clinical interest: cardiac electrophysiology in children and adults with congenital heart disease; sudden death syndromes (long QT syndrome, hypertrophic cardiomyopathy, etc); pacemakers and ICDs  
● Research interest: genetics and arrhythmias

**Mark Niebauer, MD, PhD**  
Associate Professor; Director of Electrophysiology  
● Clinical interest: complex arrhythmia treatment including catheter ablation for atrial fibrillation and ventricular tachycardia; implantable device therapy; treatment of cardiac arrhythmias using novel approaches including cryoablation  
● Research interest: computer mapping systems for cardiac arrhythmias; comparison of different energy sources for catheter ablation; new energy delivery methods for external and internal defibrillation and cardioversion

**Edward O’Leary, MD**  
Associate Professor; Chief of Cardiology, VAMC  
● Clinical interest: interventional cardiology; peripheral vascular disease  
● Research interest: software development for three-dimensional angiography; outcomes research in vascular disease; rotational atherectomy

**Thomas Porter, MD**  
Hubbard Chair and Professor; Director of Cardiology Imaging  
● Clinical interest: interventional cardiology; peripheral vascular disease  
● Research interest: software development for three-dimensional angiography; outcomes research in vascular disease; rotational atherectomy

**Thomas Sears, MD**  
Associate Professor  
● Clinical interest: risk factor reduction in heart failure  
● Research interest: ethics in research

**Scott Shurmur, MD**  
Associate Professor; Director of Interventional Cardiology  
● Clinical interest: lipids and cardiovascular risk; acute MI; smoking cessation  
● Research interest: lipids; plasmapheresis

**Keith Weeks, MD**  
Assistant Professor  
● Clinical interest: interventional cardiology  
● Research interest: education and teaching methods
Dermatology Section

Clinical

♦ Section members have clinics based at the OVAMC and Durham Outpatient Care Center in the Departments of Internal Medicine and Pediatrics.
♦ Clinical services include skin cancer management and surveillance, phototherapy, photodynamic therapy, and surgical intervention for cutaneous neoplasms.

Education

♦ We are educators for all primary care residents and medical students, and we serve as consultants for all inpatient services.
♦ Our faculty have been represented as Top Teachers in the Department of Internal Medicine for each of the past ten years.
♦ Dermatology is an elective highly regarded by students and primary care housestaff.

Faculty List and Key Interests

Faculty

♦ Kristie D. Hayes, MD - Clinical interests are management of skin malignancy in organ transplant patients, genodermatoses, and dyschromia.
♦ Shashi Srinivasan, MD - Clinical and research interests cover a wide range of dermatological problems from the common to the exotic. Examples of a few are rosacea, psoriasis, and immunobullous dermatoses.
♦ Ramon Fusaro, MD, PhD - Clinical and research interests are in photosensitivity disorders, and familial melanomas.

Midlevel Provider

♦ Marcia Pennington, PA-C - Clinical interests are in acne and isotretinoin therapy.

From left: Shashi Srinivasan, MD; Marcia Pennington, PA-C; Kristie D. Hayes, MD; and Ramon Fusaro, MD, PhD
Diabetes, Endocrinology, and Metabolism Section

Clinical

The Diabetes, Endocrinology and Metabolism (DEM) Section includes six physicians, one physician’s assistant, and one nurse practitioner. Section members provide clinical care relative to diabetes and endocrine conditions at The Nebraska Medical Center and OVAMC. Their clinical activities include the following:

♦ Management of type 1 and type 2 diabetes, including all of its complications, particularly management of the young adult, the pregnant woman, the transplant patient with diabetes, and patients with cystic fibrosis
♦ All aspects of thyroid disease, including thyroid cancer
♦ Pituitary tumors and other pituitary disease
♦ Disorders of bone and mineral metabolism
♦ Disorders of the adrenal gland - both tumor and changes in function
♦ Disorders of male and female reproduction
♦ Disorders of electrolyte and acid base metabolism
♦ Endocrine disease associated with cancer and other systemic diseases
♦ Consequences of organ transplantation, particularly kidney and pancreas transplant
♦ Women’s health
♦ Evaluation and management of the hospitalized patient for or with diabetes or endocrine disease

Dr. James Lane, Dr. Jennifer Larsen, and Dr. Lynn Mack-Shipman have all been recognized as “Best Doctors” in the region. Clinical care is done in cooperation with diabetes educators associated with The Nebraska Medical Center. The DEM faculty receive referrals regionally and nationally for diabetes and its complications, pituitary disease, thyroid cancer, and reproductive disorders. Subspecialty clinics have been developed to focus on urgent care, organ transplant patients, young adults with diabetes, women’s health, bone and metabolic disorders, thyroid nodules, thyroid cancer, cystic fibrosis, and pregnant and postpartum women with endocrine disease.

Education

DEM faculty provide regular lectures to: first year medical students in biochemistry, as well as physiology; second year medical students as part of their diabetes and endocrine section of the Introduction to Clinical Medicine course; and, physician’s assistant and pharmacy students. Many faculty are involved from year to year in development of cases for problem based learning as well as serving as moderators. All faculty are involved in small group discussions for the second year medical student curriculum. All faculty are also involved in providing noon conferences for residents and students in the Department of Internal Medicine noon education lecture series. DEM clinics and the endocrine inpatient consult services at both The Nebraska Medical Center and the OVAMC serve as sites for education for M3 and M4 students, physician’s assistant students, internal medicine residents, family practice residents, nurse practitioner trainees, and dietitian interns. We also provide shadowing experiences for students, nurses, and dietitians considering becoming certified diabetes educators or just trying to get more experience in diabetes management. The DEM section helps design and direct an annual one day Diabetes Symposium for healthcare practitioners for CME credit. Many DEM faculty give regular lectures to a variety of healthcare practitioner groups across the state regarding various diabetes and endocrine topics. The DEM faculty also provide grand rounds and other teaching conferences to other institutions and at regional and national meetings. The Diabetes and Endocrinology Fellowship Program was started in 1993 and expanded in 2004 to train two fellows each year in a two-year fellowship program. The UNMC Endocrinology and Metabolism Fellowship is an ACGME-accredited fellowship program with a track record for a 100 percent pass rate for endocrinology and metabolism board examinations. DEM faculty are actively involved in the education of DEM fellows including giving didactic lectures, journal clubs, and clinical conferences, as well as mentoring their research.
Cyrus Desouza, MD  
Assistant Professor  
• Clinical interest: diabetes mellitus; diabetes management in the veteran population; obesity and weight management; pituitary disorders; thyroid diseases; diseases of the adrenal gland; management of calcium and bone disorders; management of hypogonadism  
• Research interest: role of PPAR gamma in vascular injury and insulin resistance; role of LGR-7& 8 in inflammation, diabetes and neointimal hyperplasia; role of non-traditional risk factors in the VA diabetes population; effect of atypical antipsychotics on the risk of developing diabetes and cardiovascular disease; role of apathy in glycemic control; effect of implementing a diabetes case management coordination program in a VA diabetes population; efficacy of group clinics in achieving clinical goals in high risk diabetes patients; efficacy and long term effects of a very low calorie diet program (VLCD) in the veteran population

Whitney Goldner, MD  
Assistant Professor  
• Clinical interest: thyroid cancer; thyroid nodule evaluation and biopsy; thyroid diseases (hyper and hypothyroidism); diabetes and prevention of complication; pituitary evaluation and treatment  
• Research interest: thyroid cancer with reduction of antithyroglobulin antibodies; vitamin D replacement following bariatric surgery; association of thyroid cancer with pesticide usage; inpatient glucose control and effects on clinical outcomes

Faculty List and Key Interests

Jennifer Larsen, MD  
Professor and Chief  
Section of Diabetes, Endocrinology and Metabolism  
• Clinical interest: pituitary disease and pituitary function evaluation; male and female reproductive disorders; diabetes and diabetic complications including before and after transplantation; thyroid disease  
• Research interest: metabolic consequences including vascular disease after pancreas and kidney transplantation; prevention of diabetes and its complications in high risk groups; effects of immunosuppressive drugs on insulin action; risk and benefits of growth hormone replacement in hypopituitarism

Robert Bennett, PhD  
Assistant Professor Internal Medicine and Pharmacology  
• Research interest: antifibrotic effects of the hormone relaxin and related peptides; expression and signaling of relaxin receptors; internalization and degradation of relaxin insulin and related hormones; the role of insulin-degrading enzyme in diabetes, Alzheimer’s disease, and other amyloidosis

The strategic planning committee of The Nebraska Medical Center approved funding for a Diabetes Center in collaboration with DEM faculty for clinical, education, and research activities. The site of this Center is currently being discussed.

Dr. Fred Hamel received a new NIH R01 award for the study of protease inhibitors effects on insulin degrading enzyme.  
Dr. Jennifer Larsen with Dr. James Lane received a new Indian Health Service award for evaluating insulin resistance in Native American adolescents.  
Dr. Cyrus Desouza is the chairman for the VISN 23 Obesity Work Group for the Veterans Administration and spearheaded an effort that led to Omaha VA Hospital having one of the top diabetes outcomes of all the VA hospitals across the nation.  
Dr. Amy Neumeister joined the faculty and has begun a successful new clinic aimed at seeing patients who have urgent endocrine concerns.  
Dr. Whitney Goldner initiated a new program for the treatment of hyperglycemia using an intravenous insulin protocol that has been adopted universally throughout The Nebraska Medical Center and is now being used at the Omaha Veterans Administration Hospital.  
Dr. Jennifer Larsen serves this year as the Clinical Chair of the Annual Endocrine Society meeting and has led the Annual Meeting Steering Committee that reviews and programs all clinical symposia, poster and oral abstracts, and meet the professor sessions, as well as new debates that she initiated.  
Dr. Lynn Mack-Shipman initiated a new Women’s Health elective for students and residents.

Highlights in 2005–2006

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Frederick G. Hamel, PhD
Professor of Internal Medicine and Pharmacology
Acting Deputy ACOS/Research OVAMC
• Research interest: the function of insulin-degrading enzyme and its role in signal transduction and insulin action; molecular etiology of type 2 diabetes mellitus; effects of immunosuppressive drugs on insulin action

James Lane, MD
Associate Professor
• Clinical interest: diabetes mellitus including in young adults; pancreas and islet transplantation; thyroid nodules

• Research interest: end-organ complications from diabetes including retinopathy and nephropathy; high risk patients with diabetes at risk for cardiovascular disease; new onset diabetes after organ transplantation; evaluation and management of the islet transplant program

Lynn Mack-Shipman, MD
Associate Professor
• Clinical interest: diabetes mellitus; metabolic bone disease; diabetes in pregnancy; diabetes in cystic fibrosis; thyroid disease; polycystic ovarian syndrome; obesity

• Research interest: prevention of osteoporosis after pancreas & kidney transplantation; prevention of osteoporosis in cystic fibrosis

Amy Neumeister, MD
Assistant Professor
• Clinical interest: urgent endocrine and diabetes care; diabetes mellitus; thyroid diseases; pituitary disease; adrenal disease; male and female reproductive disorders
• Research interest: relationship between diabetes and hepatitis C in high risk groups
Gastroenterology and Hepatology Section

The University of Nebraska Medical Center Gastroenterology and Hepatology (GI) Section provides a full and broad spectrum of expert gastroenterology and hepatology consultation and procedures. Examples of services provided include evaluation and management of esophageal reflux and motility disorders, short bowel syndrome, inflammatory bowel diseases and celiac sprue, pancreatitis, gastrointestinal / biliary endoscopy, liver biopsy, capsule endoscopy, chronic viral hepatitis B and C, cholestatic hepatitis, hemochromatosis, cirrhotic portal hypertension, acute liver failure, nutritional rehabilitation, and liver / small bowel evaluations prior to transplantation. Through triage and urgency based scheduling, we strive to prevent excessive wait times for both clinic and procedure based encounters. Patients of an urgent nature are triaged by both outpatient clinic and the Endoscopy Center according to the severity of their need. They are seen within 24 hours or less if necessary. The average wait time for a routine elective endoscopic procedure is currently two weeks. Generally, the wait time for screening colonoscopy appointments is three to four weeks. We perform over 6,500 procedures annually in our GI Endoscopy Suite at UNMC and OVAMC. In FY04-05 we saw 1,098 new patients and 5,484 return patients in UNMC Physicians clinics.

Our UNMC hepatology team has provided the foundation for the internationally regarded liver transplantation program since its inception in 1985. The team sees an average of 500 patients with liver disease annually, resulting in over 1,300 annual patient encounters.

Education

The UNMC Gastroenterology and Hepatology Section is active at our two healthcare systems. The section has 19 full-time faculty members in gastroenterology, hepatology, and the basic scientific investigation. Experience in surgical approaches to gastrointestinal diseases is provided through our close relationship with members of the Department of General Surgery; in particular, our fellows are involved in an active liver transplant program. Collaboration with Radiology, Pathology, and Pediatric Gastroenterology adds to our well-rounded program.

Our Gastroenterology Fellowship Program is three years in length. The distinct Hepatology Fellowship Program is one to two years in length. The core curriculum typically includes six to nine months at the OVAH, six to nine months at UNMC, six months on the liver service, and six months on research. An additional 12 months would be spent doing clinical research or services tailored to meet the individual fellow’s needs (depending on future goals - areas requiring focus of the individual fellow). Some possibilities for the 12 months of elective time include endoscopic ultrasound (EUS), endoscopic retrograde cholangiopancreatography (ERCP), additional research, outpatient clinic, motility, and transplantation.

Training is provided in all fundamental procedures of gastroenterology and liver disease, including diagnostic and therapeutic ERCP. Busy ambulatory clinics exist at both UNMC and OVAMC. Fellows have their own continuity clinics where they see patients with staff supervision.

Research

Gastroenterology and Hepatology has active industry-sponsored and federally-funded studies ongoing within the section. The section is committed to providing protected time for research. Twelve of sixteen faculty (six MD and six PhD) are principal investigators (PI) on 28 projects (7 NIH, 3 VA, and 14 industry-funded) representing $5.1 million over the grant term—over $1 million dollars of research money within our section annually. Our team of research nurses facilitates all aspects of ongoing clinical trials. Basic science

Mark Mailliard, MD
Chief
Section of Gastroenterology and Hepatology
research takes place at the OVAMC by our team of post-doctoral researchers in the Alcohol Study Unit. The Alcohol Study Unit is an internationally-recognized collaborating team that recently applied for a VA Alcohol Center Grant.

**Highlights**

In recognition of his seminal work in the therapy of hepatitis C infection post-liver transplantation, Sandeep Mukherjee, MD, recently received the 2005 REGAL Award sponsored by the University of Kansas Medical Center. This award was conferred at the REGAL Award Symposium in October 2005 at the annual meeting of the American Association for the Study of Liver Disease in San Francisco. The REGAL Awards Symposium is a combination of formal scientific presentations, as well as informal sessions focusing on details of research, strategies for grant application success, and career paths in research. The symposium fosters collaboration and networking among recipients and faculty participating on the REGAL Awards Steering Committee.

At the symposium, Dr. Mukherjee presented “Impact of Pegylated Interferon Alfa-2α on Hepatic Fibrosis in the Liver Transplant Recipient with Recurrent Hepatitis C: An Open Label Series.”

**Faculty List and Key Interests**

- **Mark Mailliard, MD**
  - Key interest: natural history and therapy of hepatitis B and C; liver regeneration; ethanol and the liver

- **John Benson, MD**
  - Key interest: professionalism and ethics; music as medicine

- **Carol Casey, PhD**
  - Key interest: ethanol and the liver

- **Dahn Clemens, PhD**
  - Key interest: ethanol and pancreatic regeneration

- **Terrence Donohue, PhD**
  - Key interest: ethanol and protein degradation

- **Richard Gilroy, MD**
  - Key interest: hepatology; liver transplantation; small intestinal rehabilitation and transplantation

- **John Gollan, MD, PhD**
  - Key interest: hepatology; hemochromatosis; molecular mechanisms of iron metabolism

- **Dee Harrison-Findik, PhD**
  - Key interest: molecular mechanisms of cellular signaling

- **Kusum Kharbanda, PhD**
  - Key interest: ethanol and fatty liver

- **Timothy McCashland, MD**
  - Key interest: hepatology; liver transplantation; biliary endoscopy

**Benita McVicker, PhD**
- Key interest: ethanol and liver injury

**Sandeep Mukherjee, MD**
- Section Chief, Omaha Veteran’s Affairs Medical Center
- Key interest: hepatitis C after transplantation; therapy of non-alcoholic fatty liver

**Natalia Osna, PhD**
- Key interest: ethanol and hepatitis C

**Fedja Rochling, MD**
- Key interest: hepatology; liver transplantation; hepatocellular cancer

**Dan Schafer, MD**
- Key interest: hepatology; liver transplantation; the kidney and liver transplantation

**Courtney Schaffert, PhD**
- Key interest: ethanol and liver injury

**Michael F. Sorrell, MD**
- Key interest: hepatology; liver transplantation; ethanol and the liver

**Dean Tuma, PhD**
- Director, Liver Study Unit, OVAH
- Key interest: ethanol and liver injury

**Renee Young, MD**
- Fellowship Program Director
- Key interest: Crohn’s disease; ulcerative colitis

**Rowen Zetterman, MD**
- Chief of Staff, OVAMC
- Key interest: hepatology; liver transplantation; primary biliary cirrhosis
emphasize prevention, wellness, and care of the whole patient. Several physicians in the section are “hospitalists.” They focus their attention on inpatients and work closely with The Nebraska Medical Center to improve hospital care. Six of our General Internal Medicine physicians were recognized as “Best Doctors in America 2005-2006.”

Education

Education of medical students and Internal Medicine residents comprises our core academic activity. General Internal Medicine provides the foundation for all subspecialties of Internal Medicine. Section faculty members instruct students and residents in both inpatient and outpatient settings. Students can gain experience working with patients and also prepare for board certification. These clinician-educators also teach in the classroom setting during all four years of medical student training. The section specifically directs three courses in the medical student curriculum: first year Introductory Clinical Experience, third year Internal Medicine Clerkship Class, and forth year Senior Medicine Elective. Our faculty members play key management roles in the Internal Medicine, Medicine-Pediatrics, and Primary Care residency programs. Section faculty members also teach at the national level, both for the Internal Medicine Board Review Course and procedural skills for practicing internists. Faculty members provide leadership in the College of Medicine in matters of medical education and are also involved at the national level at the National Board of Medical Examiners, the American Board of Internal Medicine, and the American College of Physicians.

Highlights

Section faculty members have diverse academic interests including medical education, medical judgment, computers in healthcare, and epidemiology of endocrine disease.

Innovations in Medical Education

Senior Medicine Elective
Senior Medicine (Course # 722) provides students with a comprehensive overview of Internal Medicine. Students play an active role in learning by working together in small groups to diagnose and manage complex case simulations based on actual patient cases. The case-based approach is supplemented by interactive lectures, computer programs, and daily quizzes on assigned readings. Approximately 60 percent of the senior class takes this very popular elective. The course is primarily facilitated by Drs. David O’Dell and J. Scott Neumeister.

Junior Medicine Clerkship
The Junior Internal Medicine Clerkship (Course #708) incorporates a similar set of innovative teaching approaches
as the Senior Medicine course to enrich the traditional clinical experience. This part of the course is facilitated by Drs. Neumeister, O’Dell, and Lance Schupbach. Students continue to spend considerable time working directly with patients both in the hospital and ambulatory settings. All General Internal Medicine faculty members teach as clinical preceptors.

**Primary Care Program**
The Primary Care Program, jointly sponsored by the Departments of Internal Medicine and Family Medicine, stresses both depth and breadth of knowledge. The program, begun in 1989, produces graduates equipped to meet the challenges of primary care practice in Nebraska. The program accepts six junior students each year. The first year takes the place of the senior year of medical school and consists of a mixture of subinternship rotations and continuity clinics. Two years into the program, residents choose whether to complete their training in Internal Medicine or Family Medicine. Dr. O’Dell directs this program.

**Medicine-Pediatrics Residency Program**
Dr. Jennifer Parker directs both the Medicine-Pediatrics Residency program and a fourth year elective in Med-Peds. Students and residents gain exposure and experience with the daily practice of combined Medicine and Pediatrics. Resident training emphasizes the acute care of hospitalized patients, as well as the chronic care of patients with complex medical problems. It also focuses on wellness promotion in patients of all ages. Residents completing the program are board-eligible in both specialties and have the option for further subspecialty training.

**Evidence Based Physical Diagnosis**
As medical technology becomes more advanced, does it lessen the need for the "old-fashioned" physical examination? How do we decide when to order expensive tests? Do these tests always provide us with more understanding about a given patient's illness? Dr. Devin Nickol directs a course for second year medical students designed to explore these questions and introduces students to evaluating the diagnostic accuracy of medical testing and physical examination.

**Senior Basic Science Elective**
Senior students in either the Primary Care or Accelerated Residency Programs spend one month studying basic science concepts that form the foundation of primary care medicine. Topics include applied anatomy, critical appraisal of the literature, study design, journal club skills, EKG interpretation skills, and presentation skills. Dr O’Dell directs this elective.

**Residents as Educators Seminar**
Second year residents must take this seminar before supervising inpatient medical care teams. Drs. Joel Bessmer, O’Dell, and Chad Vokoun use a multimodal approach to enhance the teaching skills of resident physicians. Topics include effective orientation, bedside teaching, and giving feedback to learners. Role play techniques are used to simulate real-life situations, so that residents can practice their teaching skills and receive immediate feedback from the instructors.

**Research**

**Understanding Physician Judgment and Decision Making**
How do physicians make diagnostic judgments? What factors do they consider when choosing therapy for patients? Section researchers, led by Dr. Robert Wigton, study these types of questions using the methods of judgment psychology. Analyzing physician judgment provides insight into practice variability and helps us better teach the art of medicine to students.

**Medical Informatics**
The section has a long tradition of using computers as tools for better patient care as well as for medical education. Our clinics have used an electronic medical record since 1983. This record system now provides a comprehensive, secure health record that can be accessed by healthcare providers across multiple practice sites. Dr. James Campbell plays the key role in this effort as Chief Medical Information Officer for The Nebraska Medical Center. He also works at the international level shaping the standards for storage and exchange of medical information.
Minority Health Research
Do cultural differences between physicians and their patients affect health outcomes? At present, minority physicians are under-represented in the physician workforce. Therefore, many minority patients see physicians of a different cultural background. Dr. Gay Canaris leads a project to study physician-patient communication across cultural boundaries designed to improve health outcomes of minority communities in Nebraska.

Endocrine Disease
Should asymptomatic people be tested for thyroid disease? Should people with abnormal thyroid test results be treated? Can we identify who is at most risk for diabetes? These questions comprise the focus of Dr. Gay Canaris’s clinical epidemiology research program. She collaborates with the Section of Diabetes, Endocrinology, and Metabolism as well as the Native American Research Center for Health.

Medical Education Research
How do we teach medical procedures? What procedures are normally done in practice? Which procedures should be taught in medical training? Dr. Wigton has studied these questions. His recent research shows declining numbers of medical procedures being done in practice. For some procedures, students and residents may not get enough hands-on experience during their training. Dr. Wigton and colleagues in the General Medicine Section therefore developed a set of multimedia computer programs designed to improve procedural skills training.

Faculty Listing, Primary Practice Location, and Key Interests

Thomas Tape, MD – Section Chief
• Medical judgment and decision making; computer usability for physicians

Colene Andersen, MD – Plattsmouth clinic (starts summer, 2006)
• Obesity; diabetes; women’s health; medical education

Terri Batterman, MD – UNMC
• Medical education; management of hospitalized patients; preventive medicine

Joel Bessmer, MD – UNMC
• Internal Medicine Residency Associate Program Director; Turner Park Clinic Director

James Campbell, MD – UNMC
• Computerized patient medical records; clinical decision support systems; primary outcomes research

Gay J. Canaris, MD, MSP – UNMC, Brentwood Village clinic
• Clinical epidemiology of endocrine diseases; minority health research; clinical preventive medicine; women’s health

Brent Crouse, MD – Brentwood Village clinic
• Outpatient primary care; cardiology; diabetes care

Grace Davis, MD – UNMC
• Preventive care; women’s health

J. Calvin Davis, MD – UNMC
• Infectious diseases; medical education

Gale Etherton, MD – VA
• Resident education; feedback on clinical performance; medical education curriculum; quality improvement

Julie Fedderson, MD – UNMC - hospitalist
• Perioperative care and risk assessment; management of the hospitalized patient

William Gust, MD – VA
• Associate Chief of Staff for Education; graduate education; hypertension; media relations

Mary Jansen, MD – Plattsmouth clinic
• Medical education; substance abuse and addiction; psychiatric illness in primary care

John Matoole, MD – VA
• Student and house officer education; utilization of healthcare resources in education

Merle McAlevy, MD – VA
• Physical diagnosis teaching; VA hospital informatics; quality assurance

Scott Menolascino, MD – VA
• Emergency medicine

J. Scott Neumeister, MD – UNMC
• Undergraduate and graduate medical education; procedural training

Devin Nickol, MD – UNMC
• M1 Integrated Clinical Experience Core Director; M2 Physical Diagnosis Course Director; undergraduate medical education; computers in medical education and research
David O’Dell, MD – UNMC

- Junior Clerkship and Primary Care Residency Director; undergraduate and graduate medical education; medical student procedural training

Rubens Pamies, MD – UNMC

- Vice Chancellor for Academic Affairs; disparities in healthcare

Jennifer Parker, MD – UNMC, Baker Place clinic

- Internal Medicine-Pediatrics Program Director; resident training /education

Lance Schupbach, MD – VA

- Medical education

Robert Schwab, MD – Brentwood Village clinic

- UNMC Physicians Medical Director of Ambulatory Care

Susan Schwerdtfeger, MD – Brentwood Village and Turner Park clinics

- Women’s health; Ambulatory medicine

Jason Shiffermiller, MD – UNMC-hospitalist

- Perioperative care and risk assessment; management of the hospitalized patient

Jean Thierfelder, MD – UNMC clinic

- Preventive care

Chad Vokoun, MD – UNMC

- Internal Medicine Residency Associate Program Director; resident and medical student education; perioperative and consultative medicine

Mary Wampler, MD

- Occupational medicine

Robert Wigton, MD – UNMC

- Associate Dean for Graduate Medical Education for the College of Medicine; research in judgment and medical decision making; research in medical education including training in procedural skills; evaluation and multimedia teaching; history of the medical school

Renee Woehler, MD – VA and Brentwood Village Clinic

- Clinical practice, resident and medical student teaching

Midlevel Providers

Rodney Carlson, PA-C – UNMC clinic

John Ries, PA-C – Brentwood Village clinic

- PA medical education; congestive heart failure; outpatient preoperative evaluation

Karen Schrader, PA-C – UNMC clinic

- Acute care; geriatrics; medical education

General Internal Medicine Section Faculty and Staff

Bottom row from left to right: David O’Dell, MD; Julie Fedderson, MD; Thomas Tape, MD; Jean Thierfelder, MD; and Mary Slowik

Second row from left to right: Gale Etherton, MD; John Mattole, MD; Karen Schrader, PA-C; Joel Bessmer, MD; Renee Woehler, MD; Brent Crouse, MD; Jennifer Parker, MD; and Devin Nickol, MD

Third row from left to right: Mary Gallagher-Jansen, MD; Rodney Carlson, PA-C; Susan Schwerdtfeger, MD; William Gust, MD; Lisa Allen, Lance Schupbach, MD; Terri Batterman, MD; James Campbell, MD; and Kathy McCormack

Top row from left to right: John Ries, PA-C; J. Scott Neumeister, MD; Chad Vokoun, MD; Robert Schwab, MD; Robert Wigton, MD; and Gay Canaris, MD, MSP
Geriatric and Gerontology Section

Jane F. Potter, MD
Chief
Section of Geriatrics and Gerontology

http://geriatrics.unmc.edu

Clinical

The Geriatric Assessment Program provides a comprehensive and interdisciplinary evaluation of older persons who are experiencing memory loss and/or a complex of health problems that rob them of their ability to perform essential day-to-day activities. This includes a physical examination, review of medications, cognitive and mood evaluations, and interviews of the patient’s family or significant support persons. A detailed treatment plan is developed and is then implemented with the patient, the family caregivers, and the primary physician.

Clinical Education

Introduction

The Section of Geriatrics includes seven board-certified geriatricians who are recognized regionally and nationally as leaders in education and training in geriatric medicine. Other members of the healthcare team include fellows, nurses, two nurse practitioners, pharmacists, a social worker, research coordinators, and administrative support staff. The medical team provides patient care and clinical training in geriatric assessment and continuity outpatient clinics, nursing homes, subacute and rehabilitative care, hospital, hospice and home care. Patient care services are provided at The Nebraska Medical Center, Omaha VA Medical Center, Thomas Fitzgerald Veterans Home, Douglas County Health Center, and a number of nursing home and assisted living facilities in the metro area. Clinical services are available to Medicare-eligible persons ages 65 and older.

Education

A major mission for the section is to provide exemplary and innovative teaching in geriatrics/gerontology for health professions learners from multiple disciplines.

Training is provided for M1-M4 medical students, physician assistant students, nurse practitioner students, pharmacy students, Internal Medicine and Family Medicine residents, geriatric medicine fellows, and community practitioners. Education at all levels aims to: (1) improve knowledge and skills regarding evaluation and treatment of common geriatric syndromes and health problems across the continuum of care, and (2) to develop positive attitudes regarding care of older people.

M1 students learn the demographics of aging and the special approach to evaluating older people. Medical students in years two and three participate in more in-depth lectures and small group discussions of geriatric syndromes and learn management of pain and delirium in the older surgical patient. Fourth year students can choose a hospice or basic science elective, or elect a one-month sub-internship in Geriatrics. During the sub-internship they learn to evaluate and manage geriatric patients from admission into the hospital.
until discharge, and they engage in discussions with faculty at geriatric case conferences and didactic sessions.

Residents from UNMC, Creighton, and the Clarkson Family Medicine program have one-month rotations through Geriatrics. The rotation includes care of older people on the inpatient service and outpatient clinics or in skilled nursing facilities, as well as care of those who are home bound. This in-depth training allows the resident to develop proficiency in diagnosing and treating geriatric syndromes and evaluating and developing management strategies to reduce risk of falls and nutritional deficiency. Residents learn measures to reduce functional decline and minimize functional disability, as well as to recognize the importance of the caregiver and family’s role in the ongoing care of older people. Residents formulate individualized treatment plans and counsel patients and family members on appropriate end-of-life care.

The Section of Geriatrics operates an accredited program for up to four fellows. The goals of the Geriatric Fellowship program include professional development in three main areas. First, the mastery of knowledge, skills, and attitudes essential to clinical competence in geriatric medicine. Second, is a skill in interpretation and evaluation of medical research. Third, the program focuses on developing and refining teaching skills.

**Nationally Funded Education Programs**

In 2000, the section received 1 of 20 awards to U.S. medical schools from the American Association of Medical Colleges to develop model programs for geriatrics education (“A Model Medical Curriculum for Gerontology and Geriatrics: Vertical Integration through the Pre-Clinical and Clinical Years”). The overall goal was to instill in medical students the attitudes, knowledge, and skills for competent, compassionate care of older patients. Planned interactions with geriatric patients for first and second year medical students were implemented, and third and fourth year students began to participate in required clinical rotations augmented with geriatric content through intranet materials. Students participated in lectures, small groups, problem-based learning cases, interactive case studies, semi-structured interviews, and examinations of patients.

In 2001 the section was awarded a $2 million grant from the Donald W. Reynolds Foundation to “Strengthen Physician Training in Geriatrics in Nebraska,” which addressed the training of medical students, General Surgery and Anesthesiology residents, all primary care training programs in the state, and end-of-life care for practicing physicians. The UNMC Departments of Internal Medicine and Family Medicine are regionally important in the training of a high proportion of physicians who practice in Nebraska. These efforts were combined with our affiliated programs at Creighton University, the Clarkson Family Practice Program, and the Lincoln Family Practice Program to reach primary care residents and practicing physicians.

An important element in achieving adequate care for the burgeoning older population resides with continuing education for primary care physicians. The Nebraska Geriatric Education Center (NEBGP) was established in 2004 through a five-year $2 million HRSA grant to improve healthcare and healthcare outcomes of Nebraska’s elderly population residing in rural areas and nursing homes, as well as minority older adults through enhanced training of health professionals in geriatrics and gerontology. NEBGP’s goals are being accomplished through an interdisciplinary mini-fellowship program for physicians, pharmacists, nurse practitioners, physical therapists, and other clinical preceptors and health professionals who practice in rural and underserved urban areas. Coursework for the University of Nebraska’s gerontological nursing program is available online and through distance education courses to increase the number of nursing preceptors in the state. UNO’s Department of Social Work now offers a Certificate in Gerontology, and the number of students recruited for the program has exceeded expectations. Other projects undertaken by NEBGP are to improve access to geriatric training resources for rural healthcare providers, develop new interdisciplinary clinical sites for geriatric training, and to improve the diversity and cultural competence of the health professions workforce.
The Section of Geriatrics offers rich clinical research opportunities to fellows, residents, and students, and also participates in collaborative research with Orthopaedics, Geriatric Psychiatry, General Surgery, and the Center for Neurovirology and Neurodegenerative Diseases (rapid autopsy program). In addition, a major focus is in educational scholarship.

Dr. Brenda K. Keller and Dr. Jane F. Potter have served as research mentors for trainees at all levels. The Geriatric Assessment Clinic at UNMC has been the source of a comprehensive clinical database on geriatric functional status, physical and emotional well-being, and social interactions, as well as severity and etiology of dementia. Within this database is additional in-depth information about vision changes in aging and dementia. The Geriatric Assessment Clinic database has been the source of multiple abstracts and research manuscripts. An additional database of outpatient geriatric continuity patients focuses on screening for functional disability in the general elderly population. Dr. Keller’s recently completed studies include: “Illumination and Function in the Elderly,” “Visual Acuity and Functional Status in an Outpatient Geriatric Evaluation and Management Clinic Population,” and “The Effectiveness of Functional Screening Follow-up in an Outpatient Geriatrics Clinic.”

Every member of the faculty participates in educational scholarship. Essentially every educational product of the AAMC and the Reynolds project are posted to the “Portal of Online Geriatrics Education” www.pogoe.org; several are posted to the AAMC website (GROW< Geriatrics on the Web) and are being submitted to the AAMC’s peer review process. We also publish handbooks (Geriatrics at Your Finger Tips), annually; book chapters; and reports in print journals.

**FACULTY AND KEY INTERESTS**

**Jane F. Potter, MD**
Neumann M. and Mildred E. Harris Professor of Geriatrics; Chief, Section of Geriatrics and Gerontology; Geriatric Fellowship Program Director

- Key interest: cognitive disorders and dementia; caregivers; geriatric assessment; education of surgical specialty residents in geriatrics; functional decline and sensory impairment in the aging population.

**Catherine Eberle, MD, CMD**
Associate Professor; Acting Chief of Geriatrics, OVAMC; Co-Medical Director, VNA Hospice
- Key interest: end-of-life care; recurrent urinary tract infection; rehabilitation; function and disability in aging; public education

**Cheryl Hinners, MD**
Assistant Professor.
- Key interest: medical student education in geriatrics and long-term care services

**Brenda K. Keller, MD**
Assistant Professor; Medical Director, Brookestone
- Key interest: special sensory disorders (vision and hearing); functional status in frail older people and those with dementia; education in nursing home care

**William L. Lyons, MD**
Assistant Professor
- Key interest: transitional care of the elderly between hospital and other care settings; medical decision making in end-of-life care; medical resident education; practice based quality improvement; palliative care

**Debra E. Mostek, MD**
Assistant Professor; Medical Director, Maple Crest Care Center
- Key interest: elder abuse; education in home care services for medical students and residents

**Edward V. Vandenberg, MD, CMD**
Assistant Professor; Medical Director, Thomas Fitzgerald Veterans Home
- Key interest: dementia; end-of-life quality improvement in long-term care; use of technology in medical education
Introduction

The Infectious Diseases (ID) Section of the Department of Internal Medicine is, as they say in microbiology, in a growth phase. The section currently has six full-time physician faculty, with active participation from: Pharmacology and Experimental Neuroscience (Howard Gendelman, MD; Mary Ricardo-Dukelow, MD); Pathology and Microbiology (Paul Fey, PhD); hospital Pharmacy Services (Elizabeth Hermsen, PharmD, MBA); and private practice ID (Rick Starlin, MD). The section’s areas of focus include transplant ID, HIV, hospital infection control, and biopreparedness. The section has received commitments for new faculty in transplant ID and HIV ID for 2006, and is actively recruiting in the area of antibiotic stewardship.

Clinical

ID has several active clinical services at The Nebraska Medical Center. In addition to the general ID consult service, Alison Freifeld, MD; Andre Kalil, MD; and their NP, Lisa Hill, staff a busy transplant ID service. Susan Swindells, MBBS, and Ziba Jalali, MD, conduct busy HIV clinics at UNMC, and various ID physicians participate in scattered ID clinics. Phil Smith, MD, participates in clinics in Kearny, Norfolk, and Fremont. There is a travelers’ clinic on campus that is open five days a week.

Education

ID offers a popular rotation for Internal Medicine residents, Infectious Disease fellows, medical students, PA students, and pharmacy students. The rotation includes options for one of three clinical ID services (UNMC ID, transplant ID, and private practice ID), plus a number of didactic sessions with staff, conferences, a packet of review articles, and options for special projects. Currently an ID fellow and a third year medicine resident are being mentored by transplant ID physicians in research projects.

The ID faculty give numerous lectures on campus for many audiences (e.g., medical students, pharmacy students, nursing, and PA students), participate in Internal Medicine Grand Rounds and noon conferences, and are heavily involved in the training of hospital personnel. We participate actively in continuing education programs locally, regionally, and nationally. A number of faculty participate in the award-winning two-day basic training course for infection control practitioners, developed by Dr. Smith in 1985, which is given every spring and fall.

A number of section members have been honored as top teachers in the Department of Internal Medicine, most recently Dr. Kalil in 2004 and Dr. Mark Rupp in 2005.

Research

The section engages in the spectrum of research from basic research to clinical and epidemiologic studies. Dr. Gendelman works in the Center for Neurovirology and Neurodegenerative Disorders on mechanisms of injury and neuroregeneration in HIV and other neurodegenerative diseases. Dr. Ricardo-Dukelow works in the same laboratory on blood-brain barrier issues and proteomic techniques. Dr. Rupp works with Dr. Fey on bacterial adherence, antibiotic resistance mechanisms, bacterial growth characteristics, and epidemiologic fingerprinting of organisms. Dr. Rupp also directs the Clinical Trials Office that facilitates clinical research on campus. Drs. Freifeld and Kalil conduct clinical research in the field of transplant ID with the assistance of their research nurses Kim Bargenquast and Penny Hardiman. They are studying fungal infections, CMV, West Nile encephalitis, and sepsis in transplant patients. Dr. Swindells conducts clinical research in the field of HIV/AIDS. Dr. Smith is involved in educational outcomes research in biopreparedness education with Sharon Medcalf through the Center for Biopreparedness Education.

Highlights

New Developments

The section added Dr. Jalali to work with Dr. Swindells in HIV/AIDS. Dr. Jalali received her MD from the University of Cologne in Germany and her ID training from Albert Einstein College of Medicine in New York. Dr. Swindells embarked on two new clinical trials with a novel anti-HIV agent, the Pfizer coreceptor inhibitor maraviroc.
The transplant ID section recruited a third faculty member who will join them in July 2006, and added Lisa Hill, NP, to their clinical consultative team. They also embarked on a study of varicella/zoster in liver transplant patients, a traceback study of organ transmitted histoplasmosis in conjunction with the CDC, and are coordinating a multicenter case study of voriconazole use in endemic fungal infections.

Dr. Rupp joined an international study on the population genetics of West Nile encephalitis. He embarked on several hospital infection control projects including the study of a safety-engineered blood collection set and a study of transparent dressings for central lines.

The Nebraska Biocontainment Unit was opened in March, 2005, with Julie Gerberding, MD, of the CDC coming to Nebraska for the ribbon cutting. The unit is the third such unit in the United States and is a joint venture between the Nebraska Department of Health, The Nebraska Medical Center, and UNMC. Dr. Smith is the medical director of the unit, and Pat Lenaghan is the nurse manager. In November 2005, UNMC hosted a national consensus conference on biocontainment units with approximately 40 participants from around the country.

Key Publications

Dr. Kalil was lead author on a meta-analysis of the treatment of CMV infections in solid organ transplant patients published in the December *Annals of Internal Medicine*. Dr. Freifeld was a coauthor. Dr. Freifeld was lead author on an article in *Transplant Infectious Disease* regarding histoplasmosis in solid organ transplants with Dr. Kalil contributing. They teamed up on several other contributions to the literature including a report on the treatment of West Nile encephalitis with interferon.

Dr. Rupp was lead author on the publication of a national nine-center study of antiseptic-coated central catheters also published in the *Annals of Internal Medicine*, and coauthored a book on biofilms (*Biofilms, Infections, and Antimicrobial Therapy*, Pace JL, Rupp ME, Finch R (eds). Marcel Dekker CRC Press, New York, 2005), and authored a chapter regarding mediastinitis in Mandel’s prestigious textbook of infectious diseases.

Speaking of textbooks, Drs. Swindells and Gendelman were editors of a textbook on neurologic complications of AIDS released last year (Howard E. Gendelman, Ian Everall, ...
Igor Grant, Stuart Lipton, and Susan Swindells. *The Neurology of AIDS, Second Edition,* Oxford University Press, 2005). Drs. Swindells and Gendelman also teamed up on several articles including one on the rapid autopsy program and another on neuroinflammatory responses in HIV patients. Dr. Gendelman had another extremely productive year with multiple publications in neurovirology and neuroimmunology, including articles in the *Journal of Immunology* and the *Journal of Virology.*

**Awards and Honors**

Dr. Smith received the first Robert D. Sparks award for lifetime contributions to public health. The award was presented by the UNMC/UNO Public Health Program. Drs. Freifeld, Swindells, and Rupp gave invited lectures at national meetings in 2005. Dr. Freifeld discussed an approach to infections in the transplant patient, and Dr. Swindells discussed HIV clinical research careers, at the Infectious Disease Society of America meeting in San Francisco in October. Dr. Rupp lectured on the role of staphylococcal superantigens in septic shock at the Interscience Conference on Antimicrobial Agents and Chemotherapy in Washington, D.C., in December.

Members of the section continued to serve on national committees, including Dr. Swindells being appointed co-chair of an AIDS Clinical Trials Study Unit, and Dr. Rupp serving on the Board of the Society for Healthcare Epidemiology of America. Dr. Freifeld was appointed chairperson of the Infectious Diseases Society of America Fever and Neutropenia Guideline, and Dr. Smith was appointed to a second term on the Healthcare Infection Control Practices Advisory Committee, (HICPAC) of the CDC.

**Faculty List and Key Interests**

**Philip W. Smith, MD**
Professor and Chief, Section of Infectious Diseases
- Key interest: bioterrorism preparedness education; outcomes research in bioterrorism preparedness; infectious diseases in the elderly; healthcare infection control policies

**Alison Freifeld, MD**
Associate Professor; Director, Immunocompromised Host Infectious Diseases Program
- Key interest: care of patients who have infectious complications from cancer chemotherapy or solid organ transplantation; research in the area of immunocompromised infections; fungal infections in cancer patients and solid organ transplant patients; national guidelines and policies regarding management of cancer patients with fever, neutropenia and infectious complications

**Howard E. Gendelman, MD**
Professor and Chair, Department of Pharmacology and Experimental Neuroscience; Larson Professor of Internal Medicine and Infectious Diseases; Director, Center for Neurovirology and Neurodegenerative Disorders

**Ziba Jalali, MD**
Assistant Professor
- Key interest: HIV/ hepatitis C co-infection; translational/ clinical research in the HIV field; research in HIV/ hepatitis co-infection and viral hepatitis

**Andre Kalil, MD**
Assistant Professor; Associate Director, Immunocompromised Host Infectious Diseases Program
- Key interest: transplant infectious diseases; critical care medicine; sepsis; CMV infections

**Mark E. Rupp, MD**
Professor; Medical Director Department of Healthcare Epidemiology; Medical Director Clinical Trials Office
- Key interest: pathogenesis and prevention of nosocomial infection; pathogenesis

**Susan Swindells, MBBS**
Professor; Medical Director, UNMC HIV Clinic; Principal Investigator, AIDS Clinical Trials Group (NIH-funded); Director, Nebraska AIDS Education and Training Center
- Key interest: HIV/AIDS therapeutics; neurologic complications of HIV; HIV education
Nephrology Section

Clinical Activities

The Nephrology Section maintains general nephrology clinics at both the UNMC Physicians clinic at The Nebraska Medical Center and the OVAMC. We also staff the Renal/Pancreas Transplant Clinic at The Nebraska Medical Center. In addition, the section maintains an inpatient and consultative service at The Nebraska Medical Center, as well as an inpatient transplant service. At the OVAMC, we maintain a consultative nephrology service. The Nephrology Section maintains medical directorships of two dialysis units in Omaha and two dialysis units in western Iowa, as well as providing the medical directorship of the acute dialysis services at The Nebraska Medical Center and the kidney-pancreas transplant program at The Nebraska Medical Center. The acute dialysis service at The Nebraska Medical Center is the largest in the state of Nebraska.

Research

The Nephrology Section is involved in a number of clinical trials, both in chronic kidney disease and in kidney transplantation. Dr. Babu Padanilam is involved in basic science research in the area of renal physiology and pathophysiology and is funded by the NIH. In addition, Dr. Groggel is a participant on a NIH-funded grant to study cardiovascular disease in renal transplant recipients.

One of the highlights of the past year is that the Nephrology Section at the UNMC has established the only home hemodialysis program in the greater Omaha metropolitan area. It is one of only two home dialysis programs in the state of Nebraska. In addition, the Nephrology Section has two of only five positions on the Medical Advisory Board of Renal Advantage Incorporated, a national dialysis company.

Introduction

The faculty and staff members of the Nephrology Section provide comprehensive care for patients with acute and chronic renal disease. They also provide consultative services for patients with fluid and electrolyte disorders, acid-base disorders, and difficult-to-control hypertension. The Nephrology Section maintains an inpatient service at both The Nebraska Medical Center and OVAMC. The Nephrology Section is also involved in the kidney and pancreas transplant program.

Education

The Nephrology Section maintains a clinical service for Medicine residents at the University of Nebraska Medical Center and for Family Practice residents at the OVAMC. In addition, the renal rotation is available to senior medical students, fellows, and residents from other departments/sections. Multiple members in the Section of Nephrology are annually voted some of the top teachers in the Department of Internal Medicine.

Gerald Groggel, MD
Chief
Section of Nephrology

Research

The Nephrology Section is involved in a number of clinical trials, both in chronic kidney disease and in kidney transplantation. Dr. Babu Padanilam is involved in basic science research in the area of renal physiology and pathophysiology and is funded by the NIH. In addition, Dr. Groggel is a participant on a NIH-funded grant to study cardiovascular disease in renal transplant recipients.

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Gerald Groggel, MD
Chief
Section of Nephrology
Faculty List and Key Interests

Gerald C. Groggel, MD
Professor of Medicine
● Clinical interest: diabetic nephropathy, microalbuminuria, and progressive chronic kidney disease; glomerular disease and transplantation; all areas of glomerular disease; immunological renal injury
● Research interest: prevention of cardiovascular disease post-transplant; treatments to slow the progression of chronic kidney disease; new treatments for proteinuria

Troy J. Plumb, MD
Assistant Professor of Medicine
● Clinical interest: general and consultative nephrology; refractory hypertension; acute renal failure; the management of patients with chronic kidney disease (CKD) and its associated complications, such as anemia
● Research interest: improving clinical outcomes in patients with CKD; lipid lowering therapy in patients with CKD and the effect on cardiovascular and renal outcomes; treatment of anemia of CKD with a novel oral agent; novel therapy for diabetic nephropathy

Vinaya Rao, MD
Assistant Professor of Medicine
● Clinical interest: clinical transplant nephrology encompasses the immediate and long-term care of renal transplant patients. Dr. Rao has additional areas of interest including chronic kidney disease in non-renal solid organ transplants; immunosuppressive protocols and clinical drug trials in transplantation; renal transplant pathology with the future goal of studying genomics and proteomics of various transplant pathophysiological states.

Babu Padanilam, PhD
Assistant Professor of Physiology
● Research interest: molecular response of the kidney in the setting of acute renal failure, specifically, the role of various molecules involved in cell death pathways and the role of stem cells in the regeneration of ischemic kidneys; elucidating the molecular mechanisms of the development of hyperglycemia and the associated endothelial cell dysfunction in high fat induced type-2 diabetes animal models

Midlevel Providers

Margaret Nusser-Gerlach, MSN, CNN, APRN
Nephrology Nurse Practitioner

Sheila O’Day, MSN, CNN, APRN
Nephrology Nurse Practitioner
The Oncology/Hematology Section provides inpatient services at UNMC. One service is for the bone marrow transplantation/leukemia patients and the other is for general oncology/hematology patients and a consulting service. We have outpatient clinics in the Lied Transplant Center and also at Clarkson West.

**Clinical Activities**

The Oncology/Hematology Section has 218 total clinical trials open with 1,060 patients consented to these clinical trials last year. Focused areas of clinical research are novel agents for non-Hodgkin’s lymphoma, stem cell transplantation, pharmacodynamic therapy modeling for gastrointestinal malignancies, and vaccine trials for lymphoma and breast cancer. We are also 1 of 16 transplant centers nationwide which is funded by the NCI/NHLBI Bone Marrow Transplant Clinical Trials Consortium. Basic research is done in conjunction with other scientists including oncogene evaluation, siRNA evaluation, and pharmacokinetics and pharmacodynamic modeling of therapy with translational endpoints.

**Education**

The Oncology/Hematology Section provides educational opportunities for medical students, Internal Medicine Residents, and Oncology/Hematology fellows. Education is provided during inpatient teaching rounds, outpatient clinics, didactic sessions, and section research conferences.

**Research**

The Oncology/Hematology Section has 218 total clinical trials open with 1,060 patients consented to these clinical trials last year. Focused areas of clinical research are novel agents for non-Hodgkin’s lymphoma, stem cell transplantation, pharmacodynamic therapy modeling for gastrointestinal malignancies, and vaccine trials for lymphoma and breast cancer. We are also 1 of 16 transplant centers nationwide which is funded by the NCI/NHLBI Bone Marrow Transplant Clinical Trials Consortium. Basic research is done in conjunction with other scientists including oncogene evaluation, siRNA evaluation, and pharmacokinetics and pharmacodynamic modeling of therapy with translational endpoints.

**Faculty List and Key Interests**

- **Julie Vose, MD**
  - Key interest: non-Hodgkin’s lymphoma; Hodgkin’s disease; multiple myeloma; stem cell transplantation

- **James Armitage, MD**
  - Key interest: non-Hodgkin’s lymphoma; Hodgkin’s disease

- **Philip Bierman, MD**
  - Key interest: non-Hodgkin’s lymphoma; Hodgkin’s disease; stem cell transplantation; malignant brain tumors

- **R. Gregory Bociek, MD**
  - Key interest: non-Hodgkin’s lymphoma; Hodgkin’s disease; multiple myeloma; stem cell transplantation

- **Marcel DeVetten, MD**
  - Key interest: acute and chronic leukemias; allogeneic stem cell transplantation; graft-versus-host disease

- **Apar Ganti, MD**
  - Key interest: lung cancer; head and neck cancer
Jean Grem, MD  
• Key interest: colorectal cancer, gastric cancer, pancreatic cancer, and other GI malignancies; phase I drug development; laboratory interests in pharmacokinetics, and pharmacodynamics of novel agents

William Haire, MD  
• Key interest: coagulation; non-malignant hematology

Ralph Hauke, MD  
• Key interest: prostate cancer; renal cell cancer; other GU malignancies

Anne Kessinger, MD  
• Key interest: lung cancer; hepatocellular carcinomas; other solid tumors  
• Research interest: stem cell research

Fausto Loberiza, Jr., MD, M.Sc.  
• Key interest: healthcare outcome research and biostatistics

Lori Maness, MD  
• Key interest: acute and chronic leukemias; myelodysplastic syndromes; anemia evaluation

Tim McKeithen, PhD  
• Research interest: siRNA in lymphoma; gene array analysis; oncogene evaluation

Elizabeth Reed, MD  
• Key interest: breast cancer

Some of the Oncology/Hematology Faculty

Front center: Julie Vose, MD  
Second row from left to right: Lori Maness, MD; Elizabeth Reed, MD; and Jean Grem, MD  
Third row from left to right: Marcel DeVetten, MD; Philip Bierman, MD; Ralph Hauke, MD; and R. Gregory Bociek, MD
The Pulmonary, Critical Care, Sleep, and Allergy Section (PCCSA) at UNMC provides inpatient and outpatient services focused on diseases of the lung, the management of critically ill patients, the diagnosis and treatment of sleep-related problems, and the evaluation and treatment of patients with allergic disorders. As part of UNMC Physicians, our nationally recognized faculty provides specialty services in the following areas:

All PCCSA physicians are full-time academic faculty with practices at both UNMC and the OVAMC. In these venues, we provide comprehensive medical direction for the pulmonary laboratories, the sleep center, the critical care units, the pulmonary rehabilitation unit, and the bronchoalveolar lavage-processing center. Our clinical services include a full range of inpatient and outpatient consultations including comprehensive care of adults with cystic fibrosis.

Clinical

Section faculty have a number of specialty outpatient clinics at UNMC. In addition to general pulmonary, sleep, and allergy consultations, specific clinics are in place for difficult and complicated patients with asthma, sleep disorders, occupational lung exposures, mucociliary clearance disorders, adult cystic fibrosis, and allergic and immune disorders. The section also provides clinic-based training for Internal Medicine residents and Pulmonary and Sleep fellows.

Our pulmonary inpatient service provides consultation for common and unusual pulmonary problems including pneumonia, COPD exacerbation, complications of lung cancer, and other common pulmonary diseases. In addition, we have a long history of expertise in the management of difficult infections in the immunocompromised host including bone marrow, liver, lung, cardiac, renal, and small bowel transplantation patients. We also have a busy inpatient service that manages adult cystic fibrosis patients with exacerbations. Indeed, UNMC is the only medical center in the state that specializes in adult cystic fibrosis care, with trained nursing and respiratory therapy care designed to preserve good lung function in these complicated patients.
Our section began the Critical Care Medicine (CCM) team in 1990, which is an intensivist-based team approach to the care of all critically ill patients admitted by the academic Internal Medicine Department. The CCM team provides around-the-clock bedside care for patients with respiratory failure, shock, GI bleeding, a variety of heart diseases, and other critical illnesses, for UNMC physicians. The team also provides critical care consultation for multiple surgical subspecialties including line placement, bronchoscopy, and ventilator management services.

Another important aspect of clinical care delivered by members of the section is care delivered to thousands of veterans at the OVAMC. A weekly Advanced Lung Disease Clinic provides care to those with severe lung disease. The OVAMC Intensive Care Unit is directed by a member of the section and participates in a regional collaborative effort to improve the care of patients in the ICU.

Education

Education is a vital part of the mission of the PCCSA Section. Our section has had a combined Pulmonary & Critical Care Fellowship Program accredited by the ACGME for the past twenty years, which graduates two dual board-eligible physicians each year. As our Pulmonary & Critical Care Fellowship Director, Dr. Craig Piquette provides the guidance, structure, and leadership that makes this program successful and an integrated part of our section’s activities. We also have a separate accredited Sleep Medicine training program, which is led by Dr. Teri Barkoukis. Dr. Barkoukis is a national leader in curriculum development in sleep education. The Sleep Medicine training program has recently expanded to provide two full one-year Sleep Medicine Fellowship positions each year.

The section is integrally involved in the education of medical students which includes giving lectures to first, second, third, and fourth year medical students related to pulmonary, critical care, sleep, allergy, lung physiology, lung pathology, and disease recognition and management. A number of our section faculty are routinely ranked as top educators in the Department of Internal Medicine, and we provide leadership for curriculum development at the Department and University levels.

Section faculty play an integral role in the postgraduate medical education of residents at UNMC. Clinical educators in the section provide a lecture series for residents assigned to the Critical Care Medicine service and for those on the Pulmonary consult service. Bedside teaching occurs daily on rounds on all services. Section members give invited lectures to residents in many training programs on campus including Emergency Medicine, Obstetrics and Gynecology, Surgery, and Family Medicine, as well as to Physician Assistant and Nursing students.

Research

The PCCSA Section research activities are largely focused on the biology of the airway. Major projects are focused on triggers that cause airway injury including cigarette smoke, exposure to organic dusts in agriculture, the effect of alcohol intake on the airways, and impact of upper respiratory viral infections. Our nationally recognized faculty have NIH- and VA-funded laboratories located in the
Leadership

The section is well recognized at UNMC, The Nebraska Medical Center, and the OVAMC for its leadership. In the past five years, two members of the section have served as Acting Chair of Internal Medicine. Under their guidance the Department has been able to move forward with important initiatives. In addition to serving on many important committees at UNMC, including the IRB and the Ethics Committee, members have taken on responsibility for revising the manner in which care is delivered in the ICU, and are serving as Vice-Chair for Research and Acting Associate Chief of Staff for Research at the OVAMC.

Faculty List & Key Interests

Joe Sisson, MD
Larson Professor of Medicine; Chief, Pulmonary, Critical Care, Sleep & Allergy Section
Dr. Sisson is a clinician scientist whose laboratory studies the regulation of airway ciliary motility with a focus on effect of alcohol on mucociliary clearance. His clinical interest is primarily focused on ICU care, which he teaches to students, residents, and fellows.

Diane Allen-Gipson, PhD
Instructor
Dr. Allen-Gipson is a basic scientist who investigates airway wound healing and the roles that several mediators play in regulating this important process. After completing her PhD at Florida A&M, she obtained her post-doctoral fellowship training in our laboratories and became an instructor in our section in September of 2004.

Teri Barkoukis, MD
Associate Professor
Dr. Barkoukis is a clinician educator who co-directs the UNMC Sleep Center and is our director of the Sleep Fellowship program at UNMC. Dr. Barkoukis recently completed the 2nd edition of her very popular, A Review of Sleep Medicine, textbook and is an expert of sleep curriculum development.

Anthony Floreani, MD
Associate Professor
Dr. Floreani is a clinician scientist whose clinical interests are asthma and interstitial lung diseases. His research focuses on the role complement receptors play in mediating airway inflammation. He also currently serves as the interim Adult Critical Care Medical Director for The Nebraska Medical Center.

Tricia D. LeVan, PhD
Assistant Professor
Dr. LeVan is a basic scientist who joined our section in April, 2006 from the Arizona Respiratory Center. Her research interests include genetic epidemiology and gene-environment interactions. She is also developing a genetics analysis facility for the Department of Internal Medicine. Dr. LeVan collaborates closely with Drs. Romberger, Von Essen, and Poole on several occupational exposure-related projects.

Xiangde Liu, MD
Assistant Professor
Dr. Liu is a basic scientist whose research is focused on cellular injury to the lung. Dr. Liu studies the roles of NF-kB and STAT3 in cigarette smoke-induced airway cell DNA damage and the blockage of apoptosis.
Peter (Jim) Murphy, MD
Assistant Professor
Dr. Murphy is a clinician educator whose busy clinical practice focuses on the care of adults with cystic fibrosis. Dr. Murphy directs our Adult Cystic Fibrosis Program at UNMC, and serves as the Medical Director of Respiratory Care Services at The Nebraska Medical Center.

Craig Piquette, MD
Associate Professor
Dr. Piquette is a clinician educator who serves as both the Director of the Pulmonary & Critical Care Fellowship and the Pulmonary Core of the 2nd year medical school curriculum. He serves at the VA as the Medical Director of the ICU and the Associate Chief of Medicine Subspecialties and as the Medical Director of Pulmonary Rehabilitation at The Nebraska Medical Center.

Jill Poole, MD
Assistant Professor
Dr. Poole is a clinician scientist who is the first board-certified allergist in the Department of Internal Medicine. Dr. Poole is a UNMC medical school graduate who obtained her post-graduate medical training in Internal Medicine at Washington University in St. Louis and in Allergy at National Jewish Hospital in Denver. In addition to starting our section's new allergy outpatient service, Dr. Poole’s laboratory is investigating the mechanisms of tolerance in individuals exposed to organic dusts.

Stephen I. Rennard, MD
Larson Professor
Dr. Rennard is a clinician scientist whose research includes both basic science and clinical projects. His laboratory focuses on mechanisms of lung repair, remodeling and regeneration. His clinical investigations include studies of chronic obstructive pulmonary disease and smoking cessation.

Debra J. Romberger, MD
Professor
Dr. Romberger is a clinician scientist whose research explores the effect of organic dust on epithelial functions and resultant airway diseases. Dr. Romberger is the Vice Chair for Research for the Department of Medicine and is the Acting Associate Chief Of Staff (ACOS) for Research at the OVAMC.

Austin Thompson, MD
Associate Professor
Dr. Thompson is a clinician educator who focuses on pulmonary hypertension, advanced chronic obstructive lung disease, and lung transplantation. Dr. Thompson directs the Internal Medicine Specialty Clinics and is the Medical Director of the Pulmonary Function Laboratories at The Nebraska Medical Center.

Susanna G. Von Essen, MD, MPH
Professor
Dr. Von Essen is a clinician scientist with a long-standing interest in rural health, particularly lung disorders related to work in the agriculture setting. Her research focuses on the health effects of exposure to organic dusts. She a member of the faculty of the UNMC School of Public Health and coordinates the teaching of the occupational health curriculum to students, residents and fellows.

Todd A. Wyatt, PhD
Associate Professor
Dr. Wyatt is a basic scientist whose research focuses on the roles of cyclic nucleotide-dependent protein kinases in the airway. Active projects include studies of kinase roles in the combined effects of alcohol and cigarette smoke on the lung and in the inflammatory response triggered by organic dust.

Bottom row from left to right: Jill Poole, MD; Diane Allen-Gipson, PhD; Susanna Von Essen, MD, MPH; Teri Barkoukis, MD; and Debra Romberger, MD
Second row from left to right: Anthony Floreani, MD; Joseph Sisson, MD; Austin Thompson, MD; and Todd Wyatt, PhD
Third row from left to right: Craig Piquette, MD; Xiangde Liu, MD; Stephen Rennard, MD; and Peter (Jim) Murphy, MD
Rheumatology and Immunology Section

Dr. Erickson will be primarily based at the Brentwood clinic.

Education

Goals
♦ To remain the top teaching service for residents
♦ To continue to have 100 percent representation of our faculty on the “Top Teachers” list for the Department of Internal Medicine
♦ To successfully launch our fellowship program

Accomplishments
♦ We were again evaluated by residents as the top subspecialty rotation for the last academic year. This continues our longstanding tradition of being one of the top teaching services for residents and students. Our elective for junior students continues to be extremely popular and is completely filled on an elective basis. Additionally, our residents scored in the 99th percentile in Rheumatology on the annual in-training exam for the third year in a row.
♦ All five faculty members in our section have again received recognition as “Top Teachers” in the Department of Internal Medicine—again making us the only section with 100 percent of faculty on the Top Teachers list.
♦ Internal Medicine residents scored in the 99th percentile of the nation on Rheumatology.
♦ Dr. O’Dell’s VA cooperative study grant was funded ($13 million).
♦ Dr. Ted Mikuls won the Internal Medicine Department’s Clinical Research Award
♦ Dr. Marcus Snow won the Internal Medicine Department’s Resident Research Award for work he did with our section.
♦ Dr. Geoff Thiele won the Golden Apple Award from the Sophomore class.
♦ Dr. O’Dell was elected President of the American College of Rheumatology Research and Education Foundation and was selected as the Nebraska American College of Physicians’ Laureate Award winner.
♦ Our fellowship application was approved by the Residency Review Committee (RRC) without any citations. Dr. Annemarie Whiddon will be our first fellow and will start in the summer of 2006. We have over 30 fellowship applicants for 2007 and will begin interviews in March.
♦ We have just completed a revision and update of our pre- and post-tests for residents and students taking our rotation. We have also continued to expand our web-based educational curriculum.

Highlights
♦ Rheumatology was again recognized as the #1 teaching service for residents.
♦ Rheumatology was the only section with 100 percent of faculty on the Top Teachers list.
♦ Internal Medicine residents scored in the 99th percentile of the nation on Rheumatology.
♦ Dr. O’Dell’s VA cooperative study grant was funded ($13 million).
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♦ Our fellowship program was approved by the RRC with no citations and our first fellow was recruited.

Clinical Activities

Goals
To continue to provide clinical coverage of the highest quality for rheumatology patients at UNMC and at the OVAMC while not allowing the clinical demands to dictate the academic careers of our faculty.

Accomplishments
The Rheumatology/Immunology Section grew to five full-time physicians with the addition of Dr. Amy Cannella in 2005. We have an active outpatient service at UNMC (seven clinics per week) and at the VA (three clinics per week). Additionally, we have active inpatient consultative services at both The Nebraska Medical Center and the OVAMC. In July 2006, we will add Dr. Alan Erickson to our clinical faculty, and therefore, double the number of clinics we will offer per week.

James R. O’Dell, MD
Chief
Section of Rheumatology and Immunology
Dr. Amy Cannella started her faculty appointment and was appointed Associate Program Director of Rheumatology.

Ruth and Bill Scott donated $5 million to support collaborative research programs with Orthopedics.

Dr. Alan Erickson was successfully recruited and will double our outpatient clinical capacity.

Publication of three major clinical trials by RAIN occurred.

Faculty List and Key Interests

James O’Dell, MD
• Key interest: education of students, residents and fellows in General Medicine and Rheumatology; clinical trials (investigator-initiated) in the therapy of rheumatoid arthritis; co-morbidity of rheumatoid arthritis

Amy Cannella, MD
• Key interest: education of students, residents and fellows in rheumatic diseases; ultrasound as an educational, diagnostic, and research tool in rheumatoid arthritis; longitudinal studies of rheumatoid arthritis patients; the association of periodontal disease with rheumatoid arthritis outcomes and autoantibodies

Lynell Klassen, MD
• Key interest: mechanisms of autoimmune disease; disease pathophysiology and treatment of vasculitis; transplant related complications of immunodeficiency and graft-versus-host disease

Ted Mikuls, MD, MSPH
• Key interest: co-morbidity of rheumatoid arthritis; environmental and genetic interactions in rheumatoid arthritis; genetic and environmental risk factors for osteoporosis (especially in African Americans and veterans); gout treatment safety

Gerald Moore, MD
• Key interest: education of medical students

Geoff Thiele, PhD
• Key interest: education of medical students in Immunology; autoimmune disease; alcoholic liver disease; endothelial cells
The University of Nebraska Medical Center, Nebraska’s academic health science center, is recognized nationally and internationally as a leader in research, education, and patient care. Success in patient care grows from UNMC’s pioneering efforts in basic science and clinical research. UNMC is the only public health science center in the state. Its educational programs are responsible for training more health professionals practicing in Nebraska than any other institution.

Through its commitment to education, research, patient care, and outreach, UNMC has established itself as one of the country's leading centers for research in cancer, transplantation biology, biomedical technology, ophthalmology, and arthritis. UNMC’s research funding from external sources is now nearly $80 million annually, and has resulted in the creation of more than 2,600 highly skilled jobs in the state.

Research is an integral part of UNMC’s academic medical center. Research demands an inquisitive mind, the ability to apply scientific principles and a certain intellectual rigor that is mandatory for education.

The University of Nebraska Medical Center does not discriminate in its academic, employment or admissions programs, and abides by all federal regulations pertaining to same.

We’re on the Web at: www.unmc.edu/intmed/