CREIGHTON
MEDICINE

CREIGHTON UNIVERSITY ✦ DEPARTMENT OF MEDICINE ✦ DECEMBER 2001 ✦ VOL. II, NO. 3

Diagnostic Strategies and Newer Management Techniques in Obstructive Sleep Apnea-Hypopnea Syndrome

by **Naresh Dewan, M.D.**
PROFESSOR OF MEDICINE


Naresh Dewan, M.D.

The spectrum of sleep disordered breathing (SDB) includes habitual snoring, hypopneas, respiratory effort-related arousals (RERAs) and obstructive apneas. Habitual snoring is the most common symptom in SDB. Snoring in an individual patient that is accompanied by snorting or gasping for breath during sleep with frequent nocturnal awakenings in conjunction with excessive daytime sleepiness is highly predicative of SDB.

The American Academy of Sleep Medicine recommends that an overnight-attended polysomnography be performed in all patients suspected to have sleep apnea. An overnight polysomnography study, demonstrating five or more obstructed events in conjunction with clinical features, is essential to make the diagnosis of obstructive sleep apnea-hypopnea syndrome (OSAHS). A split-night study may be performed in an individual patient in whom the diagnosis of sleep apnea can be established in the early part of the study and the second half of the study can be utilized for titration of nasal CPAP. Unattended home study, including an overnight trend oximetry with an auto-titrating CPAP, are only acceptable if the clinical presentation is highly suggestive of sleep apnea and access to a sleep laboratory is not readily available.

The goals of treatment for OSAHS include reduction or elimination of excessive daytime sleepiness, improvement in neurocognitive impairment, reduction in cardiovascular consequences and relief of snoring. Management options for OSAHS include behavioral treatment, pharmacological treatment, use of nasal CPAP or bilevel pressure therapy, oral appliances and surgical treatment.

Behavioral treatment emphasizes weight loss, avoidance of narcotics, sedatives, alcohol and supine position. The role of pharmacotherapy in OSAHS is limited and not well-established.

Nasal CPAP is considered as an effective first-line therapy for mild, moderate and severe OSAHS. Nasal CPAP acts as a "pneumatic splint" that prevents collapse of the upper airways. The use of nasal CPAP has been demonstrated to eliminate or reduce apneas, hypopneas, RERAs, daytime sleepiness, improve oxygen saturation, blood pressure control, quality of life, cognitive function, steering performance and reduce health care utilization. The overall success rate with nasal CPAP ranges between 65% to 75%. Objective compliance for regular use of nasal CPAP generally tends to be lower than self-reported use. The use of proper fitting masks and headgear, heated humidification, perceived benefit by the patient and education with intensive support are associated with improved compliance. Bilevel ventilation and auto-titrating CPAP devices are other options that may improve compliance in select patients.

Oral appliance therapy in OSAHS is generally indicated for mild OSA or simple snoring. Oral appliances enlarge the upper airway space by advancing the position of the tongue and/or mandible. There are two types of oral appliances: (1) tongue retaining devices that hold the tongue forward, and (2) mandibular advancing devices

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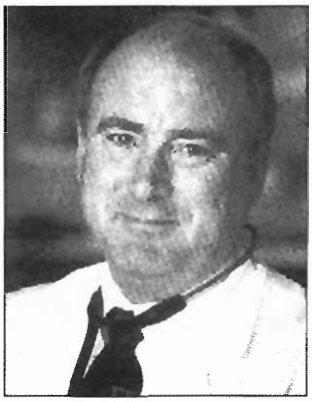
From the Chair


Eugene Rich, M.D.

A few months ago, I reported we were in the midst of a process to define goals for Creighton Internal Medicine to undertake over the next five years. From meetings I had with the faculty, we developed an extensive list of ideas. The Associate Chairs and Division Chiefs helped refine this list into specific goal statements and identified priorities. During the past Spring and Summer, the Department leadership and faculty participated in the process of finalizing our Department's goals for 2001 through 2005.

Deriving from the mission of Creighton University, the Department is committed to superlative clinical service to all its patients and to the community; to outstanding education for medical students, residents, and other health professionals; and to a tireless search for new knowledge to better serve our patients and students. Accordingly, we have understood our goals primarily in terms of clinical service, education, and research. Our five-year goals for the Department's clinical mission include expanding faculty and programs in critical care/pulmonary medicine, endocrinology, nephrology, hematology/oncology, dermatology, and gastroenterology. These efforts include a specific emphasis on increased programs and services for diabetic patients, and further development of our programs in respiratory system disease into a comprehensive "Airway Center." We also intend to expand clinical programs in South Omaha and Sarpy County, and improve customer service in all our clinical services and locations (e.g., improved communication with referring physicians, and enhanced patient satisfaction).

"Creighton exists for students and learning..." begins the University mission statement. Our Department's educational goals are a critical part of our 5-year plan. These include efforts to improve the educational program for internal medicine residents, including the residents' ABIM pass rate. On this goal, we are pleased to report the 100% ABIM pass rate achieved by CU medicine residency program graduates this year! We hope to continue our success with recruiting excellent medical students into our internal medicine residency, as well. We are also committed to continuing to improve the support of faculty time for teaching medical students, and expanding faculty development programs in teaching skills. To further enhance student learning, we plan to expand community-based educational sites, including within the Alegent Health System. Our subspecialty fellowship programs in allergy/immunology, cardiology, infectious diseases, and pulmonary/critical care medicine, are important as well, and we specifically wish to improve the research training for our subspecialty fellows.

Of course, Creighton cannot be an institution of higher learning without research, and the Department has been a long-time leader in medical school scholarship. Accordingly, we have set ourselves ambitious research goals as well. These include recruiting more investigators into the Department, and broadening the substantive research expertise into additional divisions. Increasing the involvement of department investigators in interdisciplinary (cross-division and cross-department) scholarship will, we believe, also enhance the success and recognition of all Creighton's investigators. We intend to continue to build on our success with expanding research on pharmacotherapy. We also see several specialty areas ripe for research program expansion, including respiratory system disease, cardiovascular disease, and clinical epidemiology. Of course, we also are determined to enhance the research resources, research mentoring and research faculty development for our new full-time faculty.

To ensure the enduring success of Creighton Medicine, we have set some additional goals for Department administration. These include enhancing collaboration with the Omaha VA Medical Center in development of our clinical, education, and research missions. We must also expand space at Creighton for growth of key clinical, research, and educational programs. Over the past five years the Department has shown superb stewardship of Creighton resources, but we must continue to ensure that financial pressures do not crowd out faculty effort in teaching and scholarship, nor jeopardize essential research program infrastructure. Finally, it is our goal over the next five years to increase other sources of revenue (e.g., grants and endowments) to reduce Department dependence on clinical revenue to subsidize teaching and research.

Our faculty and Department leadership have put considerable thought and effort into articulating this vision for our growth during the first decade of the 21st century. These are certainly exciting and ambitious goals. They will challenge us to achieve ever-greater levels of excellence as educators, clinicians, and scholars, true to the best traditions of Creighton Medicine.

Eugene Rich, M.D.
Tenet Professor and Chair
Department of Medicine
Director, Center for Practice Improvement
and Outcomes Research

CREIGHTON MEDICINE is published three times a year by the Creighton University Department of Medicine. Address all mail to Larry Maxwell, 3006 Webster Street, Omaha, NE 68131-2044 or EMAIL: *lmaxwel@cardiac.creighton.edu*

Progress in Allergy/Immunology

by **Thomas Casale, M.D.**
PROFESSOR OF MEDICINE
CHIEF, DIVISION OF ALLERGY/IMMUNOLOGY


Thomas Casale, M.D.

After 30 years of outstanding leadership of the Division, **Dr. Robert Townley** has stepped down as its Chief July 1, 2001. Dr. Townley will remain a valuable faculty member in the Division, focusing his efforts on basic and clinical research in asthma and allergic diseases, as well as patient care and teaching.

The Division has expanded its fellowship program, and now has three first-year fellows: **Kevin Boesel, M.D., D. Todd Griffith, M.D.,** and **Henry Lin, M.D.,** and one second-year fellow, **Lary Ciesemier, D.O.** The program has four training components, including clinical allergy/immunology, basic research, clinical trials research and ancillary electives.

The faculty is actively engaged in research involving new treatments for allergic respiratory disorders. Under the direction of **Devendra Agrawal, M.D.,** Professor of Medicine, investigators are studying new strategies to prevent and reverse the pathophysiologic changes found in a murine model of asthma. Drs. Agrawal and Casale have just submitted a NIH grant examining the effects of FLT-3 Ligand, a newly-described cytokine, on reversing airway remodeling in a mouse model of asthma.

The Division continues to examine new therapies for allergic respiratory diseases in Phase I through Phase III clinical trials. The Division is integrating its basic and clinical research programs with several new studies. For example, Dr. Casale is studying the onset of action of a humanized monoclonal antibody against IgE to block nasal and skin allergic reactions. At the same time, we are correlating the onset of the clinical responses with key immunobiologic responses thought to be important in anti-IgE's mechanism of action including: decreased serum IgE levels, basophil histamine releasability and expression of the high (FCεRI) and low (CD23) affinity IgE receptors on key inflammatory cells. The Allergy/Immunology Division is one of only five centers to study the therapeutic capacity of anti-CD23 for asthma. Dr. Casale is also developing a research program to examine other potential therapeutic areas for using anti-CD23.

Other novel agents being studied include a humanized monoclonal antibody against IL-4, a critical cytokine for allergic disorders, and ciclesonide, a novel steroid. Ciclesonide represents a new generation of cortiscosteroids for airway diseases. It is a pure isomer, pro-drug, that is converted to an active drug via esterases in the lungs. This should hopefully lead to less side effects and a better therapeutic ratio. In addition, the Division is actively collaborating with other faculty to strengthen the basic and clinical research programs in the School of Medicine. Active collaborations are ongoing with Dermatology and Rheumatology, and with Medical Microbiology and Immunology. Physicians interested in these studies and desiring more information for themselves or their patients should call 402-280-5975.

The Division is working on developing an Airway Disease Center focusing on the diagnosis, treatment and research of diseases such as asthma, bronchitis and rhinitis. The plans include the recruitment of new faculty with active research programs in the immunobiology and immunopharmacology of allergic respiratory diseases.

Recent accomplishments and awards for the faculty include the following: Dr. Agrawal has recently had four manuscripts accepted for publication on novel treatments for allergic airway diseases; **Againdra Bewtra, M.D.,** Associate Professor of Medicine, was awarded a grant to study a new method to treat hymenoptera allergic patients; **Russell Hopp, D.O.,** Professor of Pediatrics and of Medicine, along with Dr. Townley, is continuing to study the relationship between BCG vaccination and allergic airway diseases. Dr. Townley has received several new grants to study a new long-acting β-agonist for asthma. Dr. Casale was elected Secretary of the American Board of Allergy and Immunology; presented a plenary lecture at the Annual Meeting of the American College of Allergy, Asthma and Immunology in November, on "Future Developments for Immunotherapy: The Use of Anti-IgE, DNA Vaccines and Cytokines," and has published several articles on newer therapies for allergic respiratory disorders.

Clinical Trials Office

by **Thomas Casale, M.D.**

Staff

The Clinical Trials Office (CTO) is pleased to welcome our newest staff member, **Kristi Kenealy.** She joined the CTO team in September. Her primary duties are study recruiter and support staff.

Facility

The CTO has completed its move to the lower level, Rm. 1630. The CTO now has a 4-bed inpatient unit available on the 5th floor. Feel free to stop by and visit these new facilities.

Clinical trials outside the Department of Medicine

Treatment of community-acquired pneumonia of suspected pneumococcal origin in countries with a high prevalence of drug-resistant respiratory pathogens. For more information, please contact **Mark Goodman, M.D.,** Assistant Professor of Family Practice, Principal Investigator, or Study Coordinators: **Penny Fredrick, R.N.** (402-280-5562) and **Sharon Kochanowicz, R.N.** (402-280-5972).

Adolescent outpatients with social anxiety disorder. For more information, please contact **Shashi Bhatia, M.D.,** Associate Professor of Psychiatry and of Pediatrics, Principal Investigator, or Study Coordinators: **Davin Dickerson, R.N.,** (402-345-7100) and **Sharon Kochanowicz, R.N.** (402-280-5972).

Management of post-operative pain control in patients undergoing ACL repair. For more information, please contact **Charles Giangarra, M.D.,** Assistant Professor of Orthopedics Sports Medicine, Principal Investigator, or Study Coordinators: **Sami Zeineddine, M.D.** (402-280-4356) and **Tony Romero, M.S.** (402-280-5960).

New Psoriasis Treatments

by **Christopher Huerter, M.D.**
ASSOCIATE PROFESSOR OF DERMATOLOGY
CHIEF, DIVISION OF DERMATOLOGY


Christopher Huerter, M.D.

Psoriasis, a common skin disorder that affects 1-2% of the population, has always been a challenge to treat, particularly in its most severe forms. Milder psoriasis is effectively treated with a variety of topical corticosteroids. Moderate and severe psoriasis require more aggressive measures. Phototherapy is one option, as are the systemic agents methotrexate, cyclosproin and acitretin. All of these options can be effective, but are limited by potentially serious side effects. Patients must be carefully selected and monitored through treatment. As a result, research has searched for more safe and equally effective alternatives.

Biologics are a new class of therapy that are being evaluated for certain chronic inflammatory disorders. The most notable of these conditions are psoriasis and rheumatoid arthritis. In Creighton's Division of Dermatology, we have had the opportunity to evaluate two of these biologics. I would like to discuss our experience with these agents, and two additional agents that are entering into Phase III studies for the treatment of psoriasis.

Our Division had the opportunity to test alefacept (Amevive), a fusion protein which acts to block the activation of T lymphocytes. It is administered once weekly (similar to methotrexate). In our study, it was given by intramuscular injection, but in other studies has been given by IV push. Psoriasis improvement is measured by what is known as a PASI index, a clinical measure of psoriasis regression. In Phase III data, which included data from our study, the percentage of patients with >75% improvement in PASI scores measured about 30%. Other information derived from the studies indicate that several months of remission after this pulse treatment can be expected. However in certain patients, lasting T cell depletion was observed.

We also had the chance to assess efalizumab (Xanelin). It is a monoclonal antibody to CDlla. Like Amevive, it acts to inhibit T lymphocytes. Xanelim offers the advantage of subcutaneous injection. The key to this route of administration is that it would allow patients to self-medicate at home with the required weekly injections. Similar to Amevive, PASI scores with >75% improvement measured around 30% in Phase III trials. One of the potential concerns with Xanelim is the possibility of psoriasis rebound within 2-4 weeks of cessation of therapy.

We derived a few important conclusions from the use of these drugs. Both medications offer an alternative to other systemic agents with efficacy rate in the same "ballpark" as cyclosporin, methotrexate and acitretin. The real potential advantage is drug safety. None of the patients we enrolled had any serious adverse side effects and while these drugs are not without adverse reactions, the overall safety profile is impressive.

Two other biologics, infliximab (Remicade) and etanercept (Embrel), being tested for psoriasis, have already achieved FDA approval for the treatment of rheumatoid arthritis. Methotrexate, an immune modulator that treats psoriasis and rheumatoid arthritis very well has been used for years, so it is not surprising that medicines effective for rheumatoid arthritis would also benefit psoriasis. Let us discuss each drug separately.

Remicade is delivered by IV infusion over two hours every six weeks. It is a monoclonal antibody with anti-tumor necrosis factor activity. PASI score improvements >75% occurred in 40-50% of patients tested in Phase III studies. This represents a better clinical response than Amevive or Xanelim. One potential disadvantage is that it is recommended that Remicade be taken concurrently with methotrexate to avoid decreased efficacy from antibody formation. This use of methotrexate may account for better response and also

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Assumptions regarding biologics

Product	Mode of administration	Mechanism of action	Percentage of patients with PASI >75% improvement (Phase III data)	Other Information (Assume True and Complete)
Amevive (Biogen)	IV push or IM Weekly	Fusion protein CD 2	25 - 30%	May result in several months of remission after pulse administration; can cause T cell depletion.
Remicade (Centecor)	IV fusion over two hours, every six weeks	Anti-TNF Mab	40 - 50%	Agent is chimeric (mouse/human) molecule that must be administered with MTX to avoid decreased efficacy from antibody formation; potential to diminish cell-mediated immunity
Embrel (Immunex/Wyeth)	SC administration twice per week	TNF receptor IgG fusion protein	40 - 50%	Potential to diminish cell-mediated immunity
Xanelim (XOMA/Genetech)	SC administration weekly	Anti-CDlla Mab	25 - 30%	Potential for psoriasis to rebound within 2-4 weeks of cessation of therapy

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Pillars, Past and Present

Robert J. Townley, M.D., FACCP, FAAAA&I, Professor of Medicine and of Microbiology. Founded the Division of Asthma, Allergy and Immunology in 1966 and served as its Chief until July 2001.

Who have been your most influential teachers? First, my parents, who gave me their faith, and my paternal grandmother, who encouraged me to go into medicine after the death of my aunt from asthma; then, my professors of philosophy and history at Creighton, who helped me "to see the big picture;" then, my colleagues who are continually "opening new doors" of knowledge in the exciting field of immunology and medicine.

Why did you choose to work at Creighton University? Creighton undergraduate and medical school provided me with a sense of values and an education, for which I am forever grateful. After completing Internal Medicine residency, Allergy fellowship in Boston, and four years on the faculty at the University of Colorado and National Jewish Hospital, I returned to Creighton. With an N.I.H. grant and encouragement from the Chairman of Medicine, Robert Heaney, M.D., I was given the opportunity to begin the long-term goal of studying the risk factors and mechanisms of airway hyper-responsiveness in asthma.

Which research event has had the most effect on your work? An experiment that failed. I was attempting to induce asthma in a monkey after infusing the monkey with serum from an allergic asthmatic. While nebulizing an allergen to the monkey, the monkey failed to wheeze or react. However, I did wheeze for the first time in my life. That experience led me to compare lower airway responses to allergens, histamine and methacholine in asthmatics with a person like myself with allergic rhinitis.

What are your greatest dreams? First, to find the cause of airway hyper-responsiveness, which is now part of the definition of asthma. Second, to develop a vaccine that will prevent asthma and the epidemic of asthma.

What is your greatest regret? An unrealized dream to reach out to the global community by setting up a program of International Health.

What are you reading now? *Nothing Like It in the World,* by Stephen Ambrose; *Lives of Moral Leadership,* by Robert Coles; *Challenging Inequities in Health,* edited by Timothy Evans, Margaret Whitehead Finn, Didericksen, Abbas Bhurya and Meg Wirth; and two books edited by Kevin M. Cahill, M.D., *Preventive Diplomacy: Stopping Wars Before They Start* and *A Framework for Survival: Health, Human Rights, and Humanitarian Assistance in Conflicts and Disasters.*

How do you relax? Jogging, biking, reading history, and immunology.

What advice would you offer new medical graduates? Think big, think globally and be forever grateful for the opportunity to practice and teach medicine.

What are your most interesting travels? Cuba and Kosovo, where I learned to appreciate freedom; Gambia, where I witnessed extreme poverty and tropical diseases; many trips to Japan, where I experienced an enduring collegiality over a 30-year span; and finally, Bangkok Thailand, Istanbul Turkey, and Latin America, to collaborate in vaccine and allergy research.

Division News

Cardiology

submitted by **Syed Mohiuddin, M.D.**

Social worker on staff

Jeanette Hanson, B.S.W.

The Cardiac Center now has an onsite referral person, **Jeanette Hanson, B.S.W.**, to assist our patients and their family members and advocate for their social needs, whether financial, medical or personal. If you have questions or concerns, please call 402-280-3400 for assistance.

Ribbon cutting ceremony

The Cardiac Center formally dedicated its **Patient Learning Resource Center**, located in our Outpatient Clinic Lobby, on December 7th. The Learning Resource Center provides cardiovascular information via video tapes, pamphlets, CD Rom, selected websites, and a touch screen education system. Patients and their family members are encouraged to use these resources while they are at The Cardiac Center for an appointment. The facility was made possible by generous gifts from the Saint Joseph Hospital Service League and the Alpha Phi Sorority, Theta Delta Chapter, Creighton University.

Clinical trials

Amlodipine vs. valsartan in the treatment of hypertension compares the efficacy of angiotensin II receptor antagonist valsartran (Diovan™) to calcium channel antagonist amlodipine (Norvasc®) in the management of mild to moderate hypertension in African-Americans. For more information, please contact **Kathleen Packard, Pharm.D.**, Clinical Research Fellow, at 402-280-4992.

Acetylcysteine vs. placebo study compares the efficacy of acetylcysteine to placebo in the prevention of contrast mediated renal failure following coronary catheterization. Patients scheduled for coronary angiography and/or percutaneous intervention and who already evidence of renal impairment will be enrolled. For more information, please contact **J. Bradley Oldemeyer, M.D.**, Cardiology Fellow and Principal Investigator, at 402-280-4566.

40th Anniversary

Nearly 300 people, including faculty, Saint Joseph Hospital staff, and community physicians attended a dinner hosted by Saint Joseph Hospital on October 15th to recognize the entire faculty and staff of The Cardiac Center and their contribution to cardiac medicine throughout the region.

Dermatology

by **Christopher Huerter, M.D.**

Clinical trials

Treatment of patients with Actinic Keratoses on the head. For more information, contact **Christopher Huerter, M.D.**, Principal Investigator, or Study Coordinators: **Tony Romero, M.S.** at 402-280-5960, or **Sharon Kochanowicz, R.N.** at 402-280-5972.

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Endocrinology

submitted by **Karla Malesker**
OPERATIONS MANAGER

Clinical trials

Joan Lappe, Ph.D., R.N., Associate Professor of Nursing and of Medicine, is conducting a study to establish a normative database of bone density in children. The Osteoporosis Research Center will be recruiting 368 healthy children between the ages of 6-16, inclusive, to follow for four years. For more information, please contact **Gina Lypaczewski, M.S.N.** at 402-280-4174.

Robert Recker, M.D., Professor of Medicine and Director of the Osteoporosis Research Center, is conducting a study to compare the effects of treatment with raloxifene and alendronate in preventing fractures in postmenopausal women with osteoporosis. Study participants will be randomly assigned to either raloxifene or alendronate. All participants will be provided with calcium and vitamin D. Each participant will be on study for five years. For more information, please contact **Jennifer Cavalieri, B.S.N.** at 402-280-4250.

Gastroenterology

submitted by **Mary Ann Scramstad**
COORDINATOR FOR ACADEMIC AFFAIRS, DEPARTMENT OF MEDICINE


Safak Reka, M.D.

New faculty

Safak Reka, M.D. joined the Division on December 3rd as an Assistant Professor of Medicine. She comes to Creighton from the State University of New York Health Science Center in Brooklyn, NY. Dr. Reka is a native of Turkey, where she received her medical degree with a residency and fellowship training in gastroenterology. She was also a faculty member at Ege University in Izmir, Turkey. She came to the United States and completed an Internal Medicine Residency and a Gastroenterology Fellowship before becoming an Assistant Professor of Medicine at SUNY-Health Center in Brooklyn. Dr. Reka is certified in Internal Medicine and in Gastroenterology.

General Internal Medicine

submitted by **Wendy Taylor**
SENIOR SPECIALIST, CENTER FOR PRACTICE IMPROVEMENT & OUTCOMES RESEARCH

Meetings attended

Bruce Houghton, M.D., Assistant Professor of Medicine, and **Henry Sakowski, M.D.**, Assistant Professor of Medicine participated in a Workshop, "Strange Bedfellows: An Evidence-Based Approach to Teaching Complimentary and Alternative Medicine" at the 18th Annual Midwest Regional SGIM in Chicago on September 7-8, 2001. They made the same presentation at the 2001 CDIM National Meeting in Tucson AZ, October 18-20th.

Dr. Rich participated in the Roundtable Meeting on Genetics Education with Secretary's Advisory Committee on Genetic Testing, NIH, Washington D.C.November 2001.

Professional activity

Anna Maio, M.D., Adjunct Assistant Professor of Medicine and Chief of General Internal Medicine Division, has been elected to the American College of Physicians-American Society Internal Medicine Practice Committee.

Review panel

Dr. Rich was Chair of the Agency for Healthcare Research and Quality Special Emphasis Panel Teleconference on November 1st.

Grant awarded

Principal Investigator, Kimberly Galt, Pharm.D., Co-Investigators: Houghton B, Rich, EC, Bramble JD, Young W, Markert R, Barr C. Impact of Personal Digital Assistant Devices on Medication Errors in Primary Care. AHRQ, $901,770; 10/01-9/04.

Hematology/Oncology

submitted by **Thomas Casale, M.D.**

Clinical trials

James Mailliard, M.D., Professor of Medicine, is the Principal Investigator of five new trials which compliment the already existing studies we have open:

SELECT-Prostate cancer prevention trial using supplements Vitamin E and Selenium. For more information, please contact **Penny Anzures** at 402-280-5274.

STAR-Breast cancer prevention trial using Tamoxifen and Raloxifen. For more information, please contact **Penny Anzures** at 402-280-5274.

Phase II clinical trial evaluating three schedules of ALIMTAâ plus gemcitabine as frontline chemotherapy **for patients with locally advanced or metastatic non-small cell lung cancer.** For more information, please contact **LuAnn Miller** at 402-280-4381.

Randomized Phase II trial of preoperative combined modality chemoradiation for **patients with distal rectal cancer.** For more information, please contact **LuAnn Miller** at 402-280-4381.

Randomized Phase II/III trial of paclitaxel plus carboplatin with or without bevacizumab in **patients with advanced non-squamous non-small cell cancer.** For more information, please contact **LuAnn Miller** at 402-280-4381.

Infectious Diseases/VA Hospital

submitted by **Marvin Bittner, M.D.**
ASSOCIATE PROFESSOR OF MEDICAL MICROBIOLOGY AND IMMUNOLOGY, AND OF MEDICINE

Educational and professional activities

Bioterrorism has affected the activities of many internists. Two members of the Infectious Diseases Division at the VA Medical Center have been especially involved in the response to bioterrorism.

Martha Gentry-Nielsen, Ph.D., Associate Professor of Microbiology and Immunology, spoke on bioterrorism to a group of nurses at the VA Medical Center in Omaha on November 7th. She also lectured nurses and managers at Saint Joseph Hospital on bioterrorism on November 14th.

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Diagnostic Strategies and Newer Management Techniques in Obstructive Sleep Apnea-Hypopnea Syndrome

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that are either fixed or variable. Generally, variable mandibular advancing devices are more effective than the fixed devices.

The American Academy of Sleep Medicine recommends that a polysomnography be performed in all patients to establish the diagnosis of OSAHS before surgery is undertaken. The site of upper airway obstruction guides the choice of surgery. Tracheostomy is very effective but not acceptable to all patients. Tonsillectomy and adenoidectomy is the treatment of choice in children who have enlarged tonsils and adenoids. Uvulopalatopharyngoplasty (UPPP) is effective in less than 50% of patients. Maxillomandibular advancement osteotomy is reserved for select patients with hypo-pharyngeal obstruction with success rates in excess of 90%. Radiofrequency volumetric tissue reduction is a new emerging technique that is being tried in patients with snoring and mild sleep apnea.

New Psoriasis Treatments

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increases side effect potential. There is also a potential for diminished cell-mediated immunity and the resultant infection risk.

Embrel is an IgG fusion protein directed at tumor necrosis factor receptors. It is delivered by subcutaneous injection twice weekly, and can be done by patients at home. Like Remicade, PASI scores improved by >75% in 40-50% of patients studied in Phase III trials. There is potential for diminished cell-mediated immunity.

What do we take away from the data presented on these new biologics? Clinical experience after drugs become FDA-approved generally helps sort things out. It seems very likely that all four of these agents will achieve FDA approval for the treatment of psoriasis. Ultimately, the drug that will emerge as the leader will depend on the following factors: efficacy, safety and cost. Ease of administration is also very important.

Psoriasis represents a chronic disease that has seen dramatic improvements in response to treatment over the last half century. Many therapies have been effective, yet an absolute best treatment eludes us. The basic research that has gone into developing these therapies has increased our understanding of the disease. The biologics are another step in the advance towards that goal of a perfect therapy for the millions that suffer from the "heartbreak of psoriasis."

Residency Program News

submitted by **Robert Dunlay, M.D.**

The pass rate was 100% for those taking the American Board of Internal Medicine for the first time, who completed their medicine or medicine/pediatrics residency at Creighton University this year.

Division News

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Dr. Bittner presented a Creighton internal medicine resident teaching conference on bioterrorism on October 25th. He has written an article on the subject for the Metro Omaha Medical Society website (www.omahamedical.com), has served as a resource on bioterrorism for the *Creighton University Magazine,* and he has been invited speak to the West Omaha Kiwanis on anthrax on December 19th.

Grant approval

Gary Gorby, M.D., Associate Professor of Medical Microbiology and of Medicine, has been notified his VA Merit Review Board proposal, entitled "Gonococcal Opas: Role in Invasion of Human Fallopian Tube Epithelium," has been approved. The study explores a fundamental question in infectious diseases. From time to time, a variety of bacteria reside on mucosal surfaces. Sometimes these bacteria invade the host and cause serious disease. Dr. Gorby is exploring the factors that allow some gonococcal strains to invade the fallopian tube epithelium.

Nephrology

submitted by **Robert Dunlay, M.D.**

ASSISTANT PROFESSOR OF MEDICINE AND OF PHARMACOLOGY

Pat Adams, M.D., Assistant Professor of Medicine, joined the faculty in September. Dr. Adams is a graduate of the Creighton University School of Medicine, where he also completed his medicine residency. His nephrology fellowship was at the University of New Mexico. Dr. Adams' research interest is the management of dialysis accesses.

Pat Adams, M.D.

Pulmonary

submitted by **Naresh Dewan, M.D.**

Professional activities

Walter O'Donohue, M.D., Professor of Medicine, was elected to the Board of Regents of the American College of Chest Physicians at the annual meeting in Philadelphia on November 3, 2001. He also served as the Director for a postgraduate course on "CPT Coding in Pulmonary and Critical Care" during the meeting. Dr. O'Donohue presented a medical seminar at the Practice Administration Committee of the American College of Chest Physicians.

Dr. O'Donohue was the recipient of the American Medical Association Award for Excellence in CPT Education and was appointed to the American Association of Medical Colleges (1) Group on Educational Affairs and the Group on Resident Affairs.

Dr. Dewan was elected as the President of the American Association of Chest Physicians of Indian Origin at the annual meeting of the ACCP in Philadelphia on November 5, 2001. He served as Course Director for a postgraduate symposium on "Sleep Disordered Breathing," at the 2001 Asian-Pacific Congress on Diseases of the Chest, held in Mumbai, India, on November 29th. Dr. Dewan was also invited to speak on Solitary Pulmonary Nodules, COPD Exacerbations and Management of Sleep Apnea at this meeting.

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Clinical trials

Effect of 12-week treatment on exercise endurance in patients with chronic obstructive pulmonary disease. For more information, please contact **Naresh Dewan, M.D.**, Principal Investigator, or Study Coordinators: **Tony Romero, M.D.** at 402-280-5960, or **Sharon Kochanowicz, R.N.** at 402-280-5972.

Trial evaluating comparative inhalation treatments in patients with chronic obstructive pulmonary disease. For more information, please contact **Naresh Dewan, M.D.**, Principal Investigator, or Study Coordinator: **Mike Caldwell** at 402-346-8800 Ext 3312.

Rheumatology

submitted by **Sharon Kochanowicz, R.N.**

Trial assessing the safety and efficacy of COX-2 selective inhibitor as compared to naproxen in patients with primary osteoarthritis. For more information, please contact **John Hurley, M.D.**, Associate Professor of Medicine, Principal Investigator, or Study Coordinator, **Sharon Kochanowicz, R.N.** at 402-280-5972.

Trial assessing the gastrointestinal safety of COX-2 selective inhibitor as compared to naproxen in patients with osteoarthritis of the knee or hip who are taking low-dose enteric-coated aspirin. For more information, please contact **John Hurley, M.D.**, Principal Investigator, or Study Coordinator, **Sharon Kochanowicz, R.N.** at 402-280-5972.

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