

Urologic Diseases

Research Updates

National Kidney and Urologic Diseases Information Clearinghouse

Winter 2008

NIDDK Seeks Studies in Pelvic Pain and Other Syndromes

RFA Calls for Multidisciplinary Approach to Study of Chronic Pelvic Pain

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has issued a Request for Applications (RFA) for a multidisciplinary approach to the study of chronic pelvic pain (MAPP).

The MAPP Research Network will adopt multisite, multidisciplinary, highly collaborative, novel approaches using traditional urologic and nonurologic expertise to address key questions in understanding chronic pelvic pain syndromes. This effort is expected to lead to critical new insights into the underlying causes of interstitial cystitis (IC)—also called painful bladder syndrome (PBS)—and chronic nonbacterial prostatitis (CP), or chronic pelvic pain syndrome (CPPS), as well as possible links between these conditions and comorbid disorders, which have the potential for creating future prevention and treatment strategies.

In a separate complementary effort, the NIDDK is developing new and more comprehensive research definitions and criteria for IC/PBS and CP/CPPS that will adopt the concept of systemic disease. With these new definitions and criteria, researchers hope to identify more specific and relevant patient profiles for IC/PBS and CP/CPPS.

Frustrating Conditions

IC/PBS causes recurring discomfort or pain in the bladder and surrounding pelvic region. CP/CPPS causes pain in the lower back and

genital area. Urinary urgency and frequency commonly occur in both IC/PBS and CP/CPPS patients. Both conditions frustrate patients and their health care providers because so little is understood about the source of the pain. Effective treatments are equally elusive.

The NIDDK has supported a series of initiatives aimed at understanding conditions that cause chronic pelvic pain, including the

- Interstitial Cystitis Database Study
- Interstitial Cystitis Clinical Research Network
- Boston Area Community Health Survey
- Rand IC Epidemiology Study
- Chronic Prostatitis Clinical Research Network
- Chronic Prostatitis Clinical Database

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AND KIDNEY DISEASES



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While the specific scientific interests of each Discovery Site may differ, they all must demonstrate a dedication to the study of IC/PBS or CP/CPPS as a central focus.

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The NIDDK also has funded many basic research studies focusing on the biology of the bladder and prostate in an attempt to better understand the pathological basis of urologic chronic pelvic pain conditions. Despite these efforts, much remains to be learned regarding the etiology and natural history of these diseases.

The clinical and basic research studies developed by the NIDDK and the research community have traditionally focused on the bladder and prostate as the origins of disease for IC/PBS and CP/CPPS, respectively. However, recent epidemiological studies have shown other illnesses that share chronic pain as a major symptom are often associated with these urologic conditions, including fibromyalgia, irritable bowel syndrome, and chronic fatigue syndrome. These findings suggest the possibility of a common underlying pathophysiology in chronic pain disorders that has not been adequately addressed in IC/PBS and CP/CPPS studies.

MAPP Research Network Structure and Organization

The MAPP Research Network will include up to six Discovery Sites that share the common goal of improving the understanding of the fundamental basis of disease pathophysiology and natural history—including predisposition for IC/PBS or CP/CPPS—and assessing potential relationships between IC/PBS and CP/CPPS and other chronic pelvic pain syndromes.

“The NIDDK’s MAPP Network, through its unique approach, will address many long standing questions regarding urologic chronic pelvic pain conditions and will provide an improved knowledge foundation for developing effective treatment and intervention efforts,” said Chris Mullins, Ph.D., the program’s director and the NIDDK director of Urology Basic Cell Biology Programs.

While the specific scientific interests of each Discovery Site may differ, they all must demonstrate a dedication to the study of IC/PBS or CP/CPPS as a central focus. Individual Discovery Sites will conduct multiple projects focused on the scientific priorities of the MAPP Network.

Efforts will involve both site-specific studies and highly collaborative multisite, or trans-network, studies using the combined resources and varied expertise of the MAPP Network. The MAPP Network will include two separate Core Sites that will serve as common resources:

- The Data Coordination Core (DCC) will provide expertise in the overall administration and coordination of multisite research studies and in data analysis for individual Discovery

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Urologic Diseases Research Updates



Urologic Diseases Research Updates, an email newsletter, is sent to subscribers by the National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC). The newsletter features news about urologic diseases, special events, patient and professional meetings, and new publications available from the NKUDIC and other organizations.

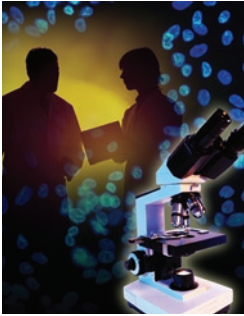
If you would like to subscribe, go to <http://catalog.niddk.nih.gov/newsletter.cfm>. You can read or download a PDF version of the newsletter at www.kidney.niddk.nih.gov/about/newsletter.htm.

Editor: Leroy M. Nyberg Jr., Ph.D., M.D.

Dr. Nyberg is the director of urology and urology centers programs at the National Institute of Diabetes and Digestive and Kidney Diseases, part of the National Institutes of Health (NIH) in Bethesda, MD. Dr. Nyberg is a graduate of Tufts University in Boston, Columbia University in New York, and the University of Massachusetts Medical School in Worcester and completed residency training in urology at The Johns Hopkins Hospital in Baltimore. He has also held faculty positions in urology at The Johns Hopkins Medical School, in urology and biochemistry at the Medical University of South Carolina, and in urology at the University of Connecticut. Dr. Nyberg received the Distinguished Service Award from the American Urological Association for significant clinical and research contributions to urology. He also received the NIH Directors Award for excellence for the development of urologic research programs at the NIH.



NIDDK Fosters Innovation, Collaboration through O'Brien Research Centers



The mounting complexities associated with the studies of disease processes will likely require investigations in cell and molecular biology, biochemistry, physiology, genomics and proteomics, epidemiology, immunology, and pathology.

To foster innovative approaches to research challenges facing today's scientists, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has changed the format of the George M. O'Brien Kidney and Urology Research Centers Program.

The NIDDK created the O'Brien Kidney and Urology Research Centers Program in 1987 to bring together investigators from different disciplines to enhance kidney and urologic diseases research. Since that time, the NIDDK has provided 5-year grants to research institutions with dynamic teams in research fields relevant to kidney and urologic conditions. The seven kidney and five urology centers in the program are allowed to serve as an institutional, regional, national, or even international resource. The pilot and feasibility (P&F) program and new core resources component expand the overall program goal of improving research into the causes, treatment, and cure of kidney and urologic diseases.

The Road Ahead

Interrelated, basic research subprojects, each with high scientific merit and clear research objectives, have been the hallmarks of the O'Brien Kidney and Urology Research Centers Program. With the new changes, the goals of the George M. O'Brien Kidney and Urology Research Centers Program are to

- continue to attract new scientific expertise to the study of the basic mechanisms of kidney and urologic diseases and disorders
- encourage multidisciplinary research focused on the causes of kidney and urologic diseases
- encourage translational research in kidney and urologic diseases
- explore new basic areas that may have clinical research application
- generate 2-year P&F studies that will lead to innovative approaches to studying kidney and urologic diseases and the eventual submission of competitive investigator-initiated R01 research grant applications

The P&F program provides modest support for innovative initiatives with the potential to advance understanding of cellular and molecular mechanisms that cause kidney and urologic diseases or to pilot small clinical studies. This program is directed at both new and established investigators who wish to explore a novel approach to a problem in these areas.

The mounting complexities associated with the studies of disease processes will likely require investigations in cell and molecular biology, biochemistry, physiology, genomics and proteomics, epidemiology, immunology, and pathology. In addition, research will likely focus on topical areas in kidney disease, such as diabetic nephropathy or other endocrine and metabolic disorders, hypertension in kidney disease, hereditary kidney disease, immunologic kidney disease, acute kidney failure, and nephrotoxic cell injury.

For the urology centers, research must be centered on a single major urologic disease or disorder relevant to the NIDDK's mission interests, which will serve as a central theme for individual research projects and the biomedical core(s). Each center must provide an interdisciplinary approach using basic laboratory, translational, and clinical research. Centers will also have an Educational Enrichment Program.

Urologic diseases and disorders that are appropriate for research focus include benign prostatic hyperplasia, prostatitis, urinary incontinence, dysfunctional voiding, urinary tract infections, interstitial cystitis, erectile function, urinary tract stone disease, and chronic pelvic pain of bladder origin.

INNOVATION, COLLABORATION, from page 3

Applications for the next round of O'Brien Urology Center grants are due March 13, 2008. The Request for Applications is available online at www.grants.nih.gov.

For more information about the O'Brien kidney centers, contact the NIDDK project officer,

Marva Moxey-Mims, M.D., at moxey-mimsm@extra.niddk.nih.gov, 301-594-7717. Information about the O'Brien urology centers is available from the NIDDK project officer, Debuene Chang, M.D., at dc475y@nih.gov, 301-594-7717. ■

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Site projects and multisite trans-network studies.

- The Tissue Analysis and Technology Core will provide tissue (biopsy, serum, and urine) collection, banking, annotation/blinding, distribution services, and histological and tissue morphology analyses. The Core also will provide genomics and proteomics analyses and generate assay platforms—such as for genomics and proteomics studies and tissue expression analyses—for multisite efforts and individual Discovery Site efforts, as needed.

In addition to providing these functions, Data Coordinating Core and Tissue Analysis and Technology Core funds will support MAPP Research Network Ancillary Projects beginning in the first year. These projects, which will be designed to enhance multisite scientific collaborative projects at two or more sites, will be developed by the MAPP Research Network Steering Committee and will be reviewed for scientific merit and feasibility by an external Scientific Advisory Committee.

The NIDDK anticipates that among those selected to serve as Discovery Site or Core Site directors and as project leaders on individual Discovery Site projects will be investigators from diverse fields and those who have not been traditionally involved in studies of urologic chronic pelvic pain, but who have expertise in relevant disciplines.

For more information, email Chris Mullins at MullinsC@extra.niddk.nih.gov. ■



Efforts will involve both site-specific studies and highly collaborative multisite, or trans-network, studies using the combined resources and varied expertise of the MAPP Network.

The George M. O'Brien Kidney and Urology Research Centers are currently located at the following facilities:

Renal Centers

Indiana

Indiana University, Indianapolis
Principal Investigator: Bruce Molitoris, M.D.

Iowa

University of Iowa, Iowa City
Principal Investigator: John Stokes, M.D.

Michigan

University of Michigan, Ann Arbor
Principal Investigator: Roger Wiggins, M.D.

New York

Albert Einstein College of Medicine, Bronx
Principal Investigator: Victor Schuster, M.D.

Tennessee

Vanderbilt University Medical Center, Nashville
Principal Investigator: Raymond Harris, M.D.

Texas

University of Texas Health Sciences Center, San Antonio
Principal Investigator: Hanna Abboud, M.D.

Baylor College of Medicine, Houston
Principal Investigator: William Mitch, M.D.

Urology Centers

Massachusetts

Children's Hospital, Boston
Principal Investigator: Michael Freeman, Ph.D.

Michigan

University of Michigan, Ann Arbor
Principal Investigator: Mark Day, Ph.D.

Pennsylvania

University of Pennsylvania Health System, Philadelphia
Principal Investigator: Samuel Chacko, D.V.M., Ph.D.

Virginia

University of Virginia, Charlottesville
Principal Investigator: William Steers, M.D.

Wisconsin

University of Wisconsin, Madison
Principal Investigator: Wade Bushman, M.D., Ph.D.

NIH Conference Explores Problem of Fecal and Urinary Incontinence

More than a quarter of Americans will experience fecal or urinary incontinence at some point in their lives, but less than half will voluntarily report their symptoms to a health care provider, according to an independent panel appointed by the National Institutes of Health (NIH) to study the conditions.



Nationally, more than 20 million women have urinary incontinence or have experienced it at some point during their lives.

Secrecy, distress, and embarrassment related to incontinence erode the quality of life for millions of people and hamper scientific understanding and development of prevention and treatment strategies, according to the 15-member conference panel, which included experts in geriatrics, nursing, gastroenterology, obstetrics and gynecology, internal medicine, urology, general surgery, oncology, neurosurgery, and other areas of health care.

Following 3 days of meetings, the panel produced a state-of-the-science conference statement reflecting current scientific knowledge of fecal and urinary incontinence and identifying areas for further research. The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and the NIH Office of Medical Applications of Research, along with other NIH components, sponsored the conference.

Prevalence of Incontinence

Urinary or fecal incontinence—the inability to control urination or bowel movements—disproportionately affects women, although both men and women at all stages of life can experience the problem.

The prevalence of urinary incontinence in women increases with age from 19 percent among those younger than 45 to 29 percent among women aged 80 and older, according to the panel. Nationally, more than 20 million women have urinary incontinence or have experienced it at some point during their lives.

The prevalence of urinary incontinence in men is 5 percent among those younger than 45, increasing to 21 percent among men aged 65 and older. About 6 million men have experienced urinary incontinence during their lifetimes. The overall prevalence of urinary incontinence among nursing home residents is between 60 and 78 percent for women and between 45 and 72 percent for men.

Removing the stigma associated with incontinence would help more people with the condition get the help they need, according to the panel. Panel members recommended that health care providers address four issues when raising the subject of incontinence with their patients: frequency, volume, the degree to which symptoms are bothersome, and the desire for treatment.

The panel acknowledged that behavioral and lifestyle changes—such as getting adequate exercise, losing and maintaining weight, and not smoking—can reduce the risk of both fecal and urinary incontinence. Pelvic floor muscle training and biofeedback are effective in preventing and reversing some pregnancy-related fecal and urinary incontinence for the first year following delivery, according to the panel.

However, research about the sustained long-term benefits of pelvic floor muscle training or biofeedback in preventing fecal or urinary incontinence is insufficient. Panel members called for other interventions that increase muscle strength and mobility and standardized protocols for pelvic floor muscle training.

NIDDK Director Honored by Hematology Society

Griffin P. Rodgers, M.D., M.A.C.P., director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), was honored with the American Society of Hematology's Outstanding Service Award in December.



The award recognizes Rodgers' significant contributions to hematology, particularly in the areas of genetic diseases, molecular genetics of human blood cells, and human blood cell development, according to the Society. Rodgers also was honored for his efforts to increase the number of minority scholars in hematology and for becoming the first hematologist to direct the NIDDK.

"Griff Rodgers is an outstanding physician-scientist and molecular hematologist," said

National Institutes of Health Director Elias A. Zerhouni, M.D. "He's internationally recognized for contributions to the development of effective therapy for sickle cell anemia and other genetic diseases of hemoglobin, and he is also an accomplished scientific leader and mentor."

Rodgers took the helm at the NIDDK on April 1, 2007. The Institute was established in 1950. ■

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Additional Recommendations

Some of the panel's other recommendations addressed the need for

- uniform definitions for fecal and urinary incontinence
- more studies to estimate the direct and indirect economic and societal costs of incontinence and the potential benefits of successful prevention and treatment
- studies to test specific hypotheses derived from the conceptual model of the causes of abnormal bladder or bowel function that could lead to incontinence
- natural history studies to identify factors affecting the incidence, progression, and remission of incontinence
- research on medical and surgical treatments that might secondarily cause incontinence,

such as anorectal surgery, prostatectomy, pelvic radiation, and commonly prescribed drugs

- research to examine the impact of public health initiatives, increased public and provider awareness, reimbursement changes, and health delivery redesign

The panel's complete state-of-the-science statement, which is not a policy statement of the NIH or the Federal Government, is available at www.consensus.nih.gov. Background information about the NIH Consensus Development Program Process, which includes state-of-the-science conferences, is available at www.consensus.nih.gov/forthemedia.htm.

The National Kidney and Urologic Diseases Information Clearinghouse has fact sheets about urinary incontinence at <http://kidney.niddk.nih.gov/kudiseases/a-z.asp>. ■

Following 3 days of meetings, the panel produced a state-of-the-science conference statement reflecting current scientific knowledge of fecal and urinary incontinence and identifying areas for further research.

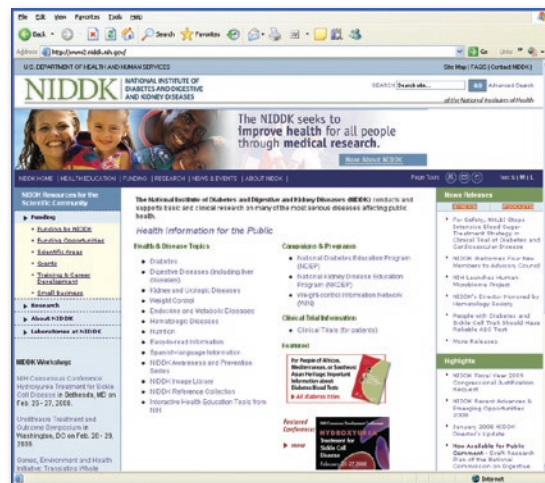
NIDDK Website Recognized as Top Performer

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) website ranked among the top five Government sites in the American Customer Satisfaction Index (ACSI) E-Government Satisfaction Index.

The ACSI E-Government Satisfaction Index is a special quarterly report of the ACSI produced by the University of Michigan in partnership with the American Society for Quality, ForeSee Results, and the CFI Group. The ACSI is a cross-industry measure of offline customer satisfaction that measures the performance of about 200 private sector companies and many Government agencies.

With a score of 85, the NIDDK was one of the top-performing sites during the last quarter of 2007. To calculate the ACSI E-Government quarterly aggregate citizen satisfaction score, ForeSee Results collects and analyzes data for more than 100 Government websites. A random sampling of site users on each of these ForeSee Results' client sites is presented with an online survey. Visitors rate the site on various components of the web experience and overall satisfaction with the website.

With a score of 85, the NIDDK was one of the top-performing sites during the last quarter of 2007.



The high satisfaction score indicates that website users are likely to return to the site, recommend the site to other users, and use the site as a primary resource. The number-one site, with a score of 88, was the Social Security Administration's Internet Social Security Benefits Application site. ■

Upcoming Meetings, Workshops, and Conferences

The National Institute of Diabetes and Digestive and Kidney Diseases will exhibit at the following upcoming conferences:

Society of Urologic Nurses and Associates 2008 Annual Symposium

February 28 to March 2 in Tampa, FL.
For more information, go to www.suna.org/cgi-bin/WebObjects/SUNAMain.woa/wa/confReg?mtg_id=SUN0820&sfm=Y.

American Urological Association Annual Meeting

May 17 to 22 in Orlando, FL.
For more information, go to www.aaa2008.org.

American College of Physicians Internal Medicine 2008

May 15 to 17 in Washington, DC.
For more information, go to www.acponline.org/cme/as/im08.htm?hp.

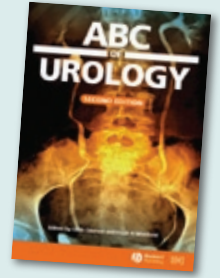
American Academy of Physician Assistants Annual Conference

May 24 to 29 in San Antonio.
For more information, go to www.aapa.org/annual-conf/index.html. ■

Featured in the NIDDK Reference Collection

Urologic Evaluation

The most common urologic complaints that trigger a referral to a primary care physician or urologic surgeon can be divided into those related to the lower urinary tract and those of the upper urinary tract. Differentiation between urologic and nonurologic causes of nonspecific symptoms can be made only after basic investigation.



This chapter about urologic evaluation is from an atlas of basic urologic problems, *ABC of Urology*, designed to help general practitioners address the needs of the ever-increasing number of people seeking help for urinary problems. In this chapter, the author reviews obstructive symptoms, irritative symptoms, erectile dysfunction and sexual problems, urinary incontinence, pain, renal colic, fever, and hematuria, or blood in the urine. The chapter also covers external physical examination, initial laboratory tests including urine testing and culture, the use of urodynamics, and radiological investigation. The section features several pages of text, charts and tables, and full-color photographs and illustrations. For more information, contact Blackwell Publishing Inc., P.O. Box 20, Williston, VT 05495, 1-800-216-2522, orders@aidcvr.com, or go to www.blackwellpublishing.com.

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Reference Collection is a free, online database that helps health care professionals, health educators, patients, and the general public find educational materials not typically referenced in most databases. The NIDDK does not control or endorse the information contained in this collection; the information is provided as a convenience to visitors.

Visit the Reference Collection at www.catalog.niddk.nih.gov/resources to find more urologic diseases resources. ■

Additional Resources

Awareness and Prevention Series

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has created a new health information series to raise awareness about kidney and urologic diseases, diabetes, and digestive diseases among people not yet diagnosed with these illnesses.

The Awareness and Prevention Series, which the NIDDK developed for health fairs and similar venues, features two-page fact sheets about a wide range of health topics. Each fact sheet gives readers a snapshot of an illness, highlighting risk factors, symptoms, prevention tips, and where to go for more information. The fact sheets are written in English on one side and Spanish on the other. Kidney and urologic diseases fact

sheets address kidney stones, bladder control, and urinary tract infections.

“The series is designed to encourage readers to ask ‘Could this be me or someone I care for?’” said Kathy Kranzfelder, director of the NIDDK Information Clearinghouses. “Raising awareness of these illnesses will hopefully help people learn to prevent them or see a doctor if they have symptoms.”

Copyright-free full texts of the Awareness and Prevention Series publications can be downloaded or ordered through the National Kidney and Urologic Diseases Information Clearinghouse website at www.kidney.niddk.nih.gov/kudiseases/ap.htm.

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The Awareness and Prevention Series fact sheets are written in English on one side and Spanish on the other.

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The website also has fact sheets and booklets with more complete information about these and many other topics related to kidney and urologic diseases.



Interstitial Cystitis/Painful Bladder Syndrome

The National Kidney and Urologic Diseases Information Clearinghouse has a new, easy-to-read booklet about interstitial cystitis/painful bladder syndrome (IC/PBS). Although IC/PBS affects both men and women, it is nine times more common in women. It also is most common in middle age. People with IC/PBS rarely have bladder pain all the time. The pain usually comes and goes as the bladder fills and empties. The pain may go away for weeks or months and then return. People with IC/PBS sometimes refer to an attack of bladder pain as a flare or flare-up. Though stress may bring on a flare-up of symptoms in someone with IC/PBS, it does not cause the condition. *What I need to know about Interstitial Cystitis/Painful Bladder Syndrome* explains the symptoms of IC/PBS, diagnostic tests, and treatment options, and is available online at www.kidney.niddk.nih.gov/kudiseases/pubs/interstitialcystitis_ez/index.htm.

Lo que usted debe saber sobre las infecciones urinarias (What you need to know about Urinary Tract Infections)

The National Kidney and Urologic Diseases Information Clearinghouse has completed an online update of this booklet in Spanish. A urinary tract infection (UTI) is usually caused by bacteria that can also live in the digestive tract, in the vagina, or around the urethra, which is at the entrance to the urinary tract. Most often these bacteria enter the urethra and travel to the bladder and kidneys. Usually the body removes the bacteria and people have no symptoms. However, some people—including women and older adults of both sexes—are prone to infection. This easy-to-read booklet discusses the causes and treatment of UTIs, how to prevent them, and when to see a doctor. For a copy of the publication, go to www.kidney.niddk.nih.gov/spanish/pubs/uti_ez/index.htm. ■

