RESEARCH HIGHLIGHT

Investigating Adrenal Disorders to Improve Human Health
Anand Vaidya, M.D., M.M.Sc, BWH Hospital
Edited by: Karl-Lydie Jean-Baptiste

Adrenal glands play a crucial role in maintaining human health. Adrenal hormones influence blood pressure, fluid and electrolyte balance, glucose metabolism, energy expenditure, and more. Adrenal gland disorders are common, and can include hormone excess or deficiency, and adrenal tumors or cancers. Improving our understanding of these conditions can improve cardiovascular and metabolic health as well as advancing adrenal tumor care. Anand Vaidya, M.D., M.M.Sc., Co-Director of the Center for Adrenal Disorders at Brigham and Women’s Hospital, focuses his research on adrenal hormones and tumors. As a clinician, he helped create a multi-disciplinary model within the Center to provide dedicated and expert care for patients with adrenal diseases.

Dr. Vaidya conducts multiple patient-oriented research studies using the infrastructure and resources of the BWH CRC. The overarching aim of Dr. Vaidya’s protocols are: to advance the understanding of the diagnosis and treatment of adrenal disorders, and investigate novel mechanisms by which adrenal hormones influence cardiovascular health.

Dr. Vaidya sees a variety of patients in the Center who routinely volunteer to join the Center for Adrenal Disorders Tissue Repository (CADTR), a unique and rapidly growing registry of patients who have consented to provide medical data and biospecimens for research. Ambulatory Clinical Center (ACC) resources provide the infrastructure to perform and maintain this research protocol, which aspires to improve treatment and diagnostic strategies for adrenal disorders.

In addition to creating a novel adrenal registry, Dr. Vaidya conducts interventional studies to investigate how adrenal hormones influence cardiovascular health. In 2011, he commenced a pilot study using Harvard Catalyst resources to evaluate whether vitamin D receptor agonists could lower renin-angiotensin-aldosterone system (RAAS) activity. Excessive RAAS activity, a hormonal system that regulates, and is regulated by the adrenal glands, is a major contributor of...
Transitions: BWH Bids Farewell to CRC Director Gordon H. Williams, MD, and Metabolic and Nutrition Research Director Janis Swain, MS, RD

The team at BWH is bidding a fond farewell to Gordon H. Williams, MD, who will has stepped down from his role as Program Director for the BWH CRC site. Dr. Williams was appointed as Program Director of the General Clinical Research Center (GCRC) at Peter Bent Brigham Hospital in 1973. He remained Program Director of the GCRC through the termination of the GCRC Program in 2008, and since then under Harvard Catalyst.

Dr. Williams will continue in his role as Director of the Center for Clinical Investigation (CCI) at Brigham & Women’s Hospital. The CCI is the “umbrella” for all of the resources needed for clinical investigation at BWH, including Education, Biostatistics, Bioinformatics, Research Laboratory, Clinical Research Coordinator Core, and other programs.

Dr. Shalendar Bhasin succeeds Dr. Williams as Program Director of the Clinical Research Center (Catalyst). She is uniquely suited for this new role. She served as the Nurse Director of the MIT CRC from 2005-2013 and knows how to effectively navigate both the MIT CRC and the Harvard Catalyst, where appropriate.

CATHARINE RICCIARDI
Ricciardi is the new CT Navigator for the MIT community.

There will be an MRO designated at each of the four Catalyst affiliated hospitals: Beth Israel Deaconess Medical Center, Boston Children’s Hospital, Brigham and Women’s Hospital, and Massachusetts General Hospital. In each of the next few newsletters we will highlight an CT Navigator or MRO.

Cathy Ricciardi, NP, DNP, is the CT Navigator for the MIT community. In her role, Cathy will reach out to investigators across the MIT community, provide education about how to conduct human studies research, and connect them with people and resources at the MIT CRC and the Harvard Catalyst, where appropriate.

Cathy is uniquely suited for this new role. She served as the Nurse Director of the MIT CRC from 2005-2013 and knows how to effectively navigate both the MIT and Harvard Catalyst ecosystems to help investigators connect with the proper resources and services they need to conduct their research. Contact Cathy via email: c_ricci@mit.edu.

MROs and CT Navigator

HCCRC is in the process of launching two new programs that will help investigators across the Harvard and MIT communities get access to resources to facilitate clinical and translational research. The CT Navigator program will focus on outreach to the community and linking investigators across the ecosystem with Harvard Catalyst resources and services.

The MRO program will focus on helping researchers new to clinical and translational research navigate the process of finding collaborators, conducting cross-institutional research and obtaining the proper medical oversight for their studies. 
CRC updates

HCCRC @ BIDMC

Research Nursing

Dan David, RN, an HCCRC staff nurse and a Jonas Foundation Scholar at Northeastern University’s School of Nursing, along with Lorraine Britting, RN NP, are currently examining the impact of adding a nurse practitioner to the hospital care team for patients who have acute coronary syndrome or heart failure. They compared hospital readmissions and emergency room visits between a team who had an NP and a physician-only team. They found that the addition of an NP improved both hospital readmission rates and emergency room visits. The CRC provided access to biostatistical programs available to investigators on the unit. This program was established jointly with the Harvard Catalyst Biostatisticians group. In the past several years, nursing research at BIDMC has also been conducted through the departments of Gastroenterology, Obstetrics & Gynecology, and Psychiatry.

For more information about the support that is available to nurse researchers at BIDMC, please contact Linda Godfrey-Bailey, HCCRC at BIDMC Nurse Manager, lgodfrey@bidmc.harvard.edu

HCCRC @ BCH

Congratulations!

Congratulations to Nicolle Quinn, MS, RD, LDN, Metabolism and Nutrition Research (MNR) Director at Boston Children’s Hospital, whose poster won the “Clinical Research Poster Award” at the Progeria Scientific Conference in April 2013.

CTSU Saturday Appointments

The CTSU at Boston Children’s Hospital will continue to open two Saturdays per month, generally the 2nd and 4th Saturday. If one of those weekends is a holiday weekend, we will open another weekend for that month.

Study teams should email CTSUBooking@childrens.harvard.edu to schedule appointments.

Exciting New Study

At the end of May 2013 the CTSU at Boston Children’s Hospital began scheduling patients to participate in the “Neosaxitoxin (neoSTX), alone and in combination with bupivacaine as a prolonged duration local anesthetic: A Phase I Investigator-Initiated Dose Escalation” study. This research study will examine the safety of a new local anesthetic medication, neosaxitoxin (neoSTX), in young-adult, healthy male volunteers. NeoSTX is an investigational drug that has not yet been approved by the Food and Drug Administration (FDA). Information from this research will help determine whether the drug should be approved by the FDA in the future.

This new medicine is given by an injection just under the skin, either by itself, in combination with bupivacaine, a well-known local anesthetic, or with salt water (saline). Bupivacaine is currently most commonly used for patients who need pain relief after surgery.

This research study will evaluate the effects of injecting this new drug in a square area, roughly 2 inches by 2 inches, of the skin of calf on both legs. Every volunteer will get one injection on one leg, followed by a second injection on the other leg a week later. NeoSTX is produced by cyanobacteria grown in culture in Chile. NeoSTX has already been administered to over 200 volunteers and gallbladder surgery patients in Chile. We are excited to launch this study in the CTSU at Boston Children’s Hospital.

HCCRC @ MGH

Summer Student Program

For more than 20 years, the MGH CRC has sponsored four to seven students annually as part of its Summer Student Program. Each student receives a stipend and clinical research experience under the guidance of an MGH investigator at the CRC.

Originally included as part of the MGH General Clinical Research Center program, the Summer Student Program has been continued during the past five years of Harvard Catalyst. During this time, 37 undergraduate and medical students have spent the summer performing research with 19 different mentors representing diverse clinical areas. This year’s group of Ivy League undergraduates, doctorate students, and Harvard Medical School students will be working on a variety of projects in endocrinology, neurology, nutrition and psychiatry.

Recent program graduates are now medical residents, medical students, Ph.D. students in science and psychology, MGH research coordinators, and a practice manager. They have also been co-authors on papers related to their summer work. The investment over time by the GCRC program and now Harvard Catalyst has helped launch medical, science and clinical research careers for a large number of students. For more information, please contact Ed Andrews, Administrative Director, eandrews@partners.org

HCCRC @ BWH

Metabolism and Nutrition Research (MNR) Services

The BWH Metabolism and Nutrition Research (MNR) service is available to review study protocols, design, recommend and implement a wide range of nutrition services to fulfill protocol needs. The unit is equipped with a fully staffed metabolic kitchen to consistently produce nutrient controlled meals to both inpatient and outpatient subjects seven days a week. In addition to offering controlled nutrient meals, the dietary staff is also trained to accurately perform body composition measures including anthropometry, bioelectrical impedance, and calorimetry. For assessment of dietary intakes, nutrient intake data analysis is available using validated software including Nutrition Data Systems Research (NDSR) and Pronutra. For information about the Harvard Catalyst Clinical Research Center MNR please visit the webpage http://catalyst.harvard.edu/programs/hccrc/mnr-information-for-investigators.html
cardiovascular disease. Dr. Vaidya completed the study in 2012, demonstrating for the first time that vitamin D receptor agonists can lower RAAS activity. This preliminary study linked two endocrine systems in a manner that was not previously understood, and raised the possibility that vitamin D treatment could influence adrenal hormones to protect cardiovascular health.

Dr. Vaidya’s current studies, VALIDATE-D and RAAS-PARC, will ascertain whether RAAS activity can be favorably modified by vitamin D receptor agonists and influence other hormones that regulate calcium (such as parathyroid hormone). These studies involve complex physiologic protocols that require multiple inpatient and outpatient admissions to the BWH CRC for expert nursing, pharmacy, and dietary needs. Ultimately, the results of these studies will shed new insights into hormonal mechanisms of cardiovascular disease and new physiologic interactions that exist between the adrenal glands and hormones that regulate calcium.

HCCRC Fleece Jackets

In April, Clinical Research Staff who had been with the CRC for six months or more, received official HCCRC fleece jackets. The navy blue jackets contain the Harvard Catalyst logo above the words “Clinical Research Center @” and the specific CRC.

There has been some great feedback from the CRC staff about these fleeces we thought we should share:

“It’s awesome. I love it!” -Nurse staff member

“On a cold, gloomy day the fleece not only warms me up, but also creates a sense of camaraderie since many of my coworkers wear them too...Not to mention the pride I get when I am being questioned outside of the CRC about being part of the Harvard Catalyst—it’s a big deal!” -Nutrition staff member

“The fleeces are warm and cozy. I have gotten many compliments on it from others around the hospital...it was very generous of the CRC to get them for us.” -Nutrition staff member

About Harvard Catalyst: Founded in 2008, Harvard Catalyst | The Harvard Clinical and Translational Science Center is dedicated to improving human health by enabling collaboration and providing tools, training, and technologies to clinical and translational investigators. As a shared enterprise of Harvard University, Harvard Catalyst resources are available to all Harvard faculty, regardless of institutional affiliation or academic degree.

Sign up for the Harvard Catalyst newsletter (http://www.pages04.net/harvardcatalyst/forms/subscribe/) and learn more about collaborations, resources, funding, and education in clinical and translational research.

HCCRC Fleece Jackets

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Sign up for the HCCRC newsletter (http://eepurl.com/ySTGj) and learn more about the Clinical Research Centers of Harvard Catalyst.