Tetrahydrobiopterin (BH4) Deficiency, Inflammation and Large Artery Stiffening in Estrogen-deficient Postmenopausal Women. The findings from the BLAST study conducted by IMAGE researcher KerrieMOREAU, PhD, were recently published in the American Journal of Physiology. Vascular health was assessed in 9 premenopausal and 24 postmenopausal women before and after they took tablets containing a factor called BH4 that is important for maintaining the health of the arteries with aging. Postmenopausal women were then given a skin patch to wear for 2 days that contained either the female hormone estrogen or placebo (inactive substance) and had their vascular health assessed again before and after taking the BH4 tablets. Vascular health measures (i.e., stiffening of the neck artery [carotid] and dilation of the arm [brachial] artery) were obtained by ultrasound imaging. The main findings were that postmenopausal women had worse vascular health (i.e., stiffer arteries and less dilation) than premenopausal women. The BH4 tablets improved both stiffening and dilation in the postmenopausal women but not in the premenopausal women. Vascular health measures also improved in the postmenopausal women who had worn the estrogen patch but not in those women who wore the placebo patch. When the postmenopausal women were given the BH4 tablets again, there was no further improvement in the vascular health measures in the women who wore the estrogen patch. These findings suggest that reduced levels of BH4 may be one of the reasons for the decline in vascular health with aging and declines in the female hormone estrogen with menopause in women. Future studies are needed to investigate what causes BH4 to decrease and to determine what types of therapeutic interventions, such as exercise, can prevent this from occurring.
New IMAGE Faculty Member
Beret A. Casey, MD
Endocrinology, Diabetes & Metabolism

The IMAGE group welcomes Beret Casey, MD, to the research team. Dr. Casey received her BS in Biochemistry from the University of St. Thomas in St. Paul, Minnesota, and her MD from the Medical College of Wisconsin in Milwaukee, Wisconsin. She completed her Residency training in Internal Medicine and Women’s Health at the University of Alabama, Birmingham. Last year she moved to Colorado and completed her clinical year of Fellowship training in the Division Endocrinology, Diabetes and Metabolism. In July of this year she began her first research year of Fellowship training working with the IMAGE group. Her research interests include women’s health, aging, and metabolism. She is also a Green Bay Packers fan and loves to skate-ski.

DOES THE IMAGE GROUP HAVE A STUDY FOR YOU?

STUDIES FOR WOMEN & MEN:

The Rehabilitation for Total Knee Replacement study is exploring 2 rehabilitation programs designed to restore muscle strength and function more effectively after knee replacement. Participants receive 3 months of FREE rehabilitation and $120 compensation. Eligible adults are 50 to 85 years of age. To learn more, please call 303-724-9590 or email: Michelle.Reynolds@ucdenver.edu (COMIRB #10-1188)

Environmental and Genetic Risk factors for Progressive Supranuclear Palsy. We are looking for men and women over the age of 40 for a study of progressive supranuclear palsy (PSP). This NIH-sponsored study is seeking to identify possible environmental and genetic risk factors for PSP, and we need controls for the study for comparison with people who have PSP. The main requirement for controls is that you do not have Parkinson disease or a related disorder and that you are not a caregiver for a person with PD, PSP, or related diseases. The study involves a single 60-minute visit, with three short questionnaires and a blood draw. For more information, please contact Carol Hennessy, at 720-848-5334 or carol.hennessy@ucdenver.edu. (COMIRB 07-1040)

SPARX is a study to determine whether individuals who have been recently diagnosed with Parkinson’s disease (PD), and have not yet started drug treatment, can successfully take part in an aerobic exercise program. Individuals with PD are randomized to a control group that does not exercise, or to a group that exercises on a treadmill at a moderate or high intensity. Participants will exercise 4 days a week, for 30 minutes a day, for 6 months. If you or someone you know has been diagnosed with Parkinson’s disease and is interested in participating in this clinical research, please contact Lindsey Pederson at 720.848.6481. (COMIRB #11-1237)

The Determination of Pain Phenotypes in Older Adults with Knee Osteoarthritis study is exploring what causes pain with knee osteoarthritis. We are looking for people aged 50 to 85 years with knee osteoarthritis to attend a single testing session at the Anschutz Medical Campus (~2 hours) to explore factors that contribute to knee pain. Monetary compensation provided. To learn more, please email KNEEpain@ucdenver.edu or call 303-724-9590 (COMIRB #12-1188)

STUDIES FOR WOMEN:

The TEMPUS study will examine whether one week of estrogen has different effects on insulin metabolism in women who are only a few years past menopause compared to women who are many years past menopause. Eligible participants are healthy women between the ages of 45 and 70 years who are not using hormone therapy and who are either within 6 years of menopause or more than 10 years past menopause. Volunteers will be asked to wear estrogen patches for one week prior to one of two study visits designed to measure insulin metabolism. Up to $400 in compensation will be provided for participation in the study. To learn more, please call 720-848-6418 or email: Tracy.Swibas@ucdenver.edu (COMIRB #11-0788)

The POWER study is examining the roles that exercise training and the female sex hormone estrogen play in preventing excess fat gain in women. Eligible participants are healthy women between the ages of 18 and 49 years who have regular menstrual cycles and are not currently using hormonal contraceptives. Monetary compensation will be provided for your time (up to $850). To learn more, please call 720-848-6399 or email: Anne.Stavros@ucdenver.edu. (COMIRB #06-0512)

To learn more about a study, offer comments, suggest an article, request this newsletter electronically or be removed from our mailing list contact:
Drew Hepler, 720-848-6480, Andrew.Hepler@ucdenver.edu.