PLANNING FOR LIFE

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SKILLED in delivering cutting-edge financial strategies, effective product implementation and superior tactics designed to help you either stay on track or change course as your needs dictate.

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Connection Between Childhood Adversity and Psychiatric Disorders Seen at Cellular Level

PROVIDENCE – In a new study published online in *Biological Psychiatry* on January 23, 2015, researchers from Butler Hospital identify an association between biological changes on the cellular level and both childhood adversity and psychiatric disorders. These changes in the form of telomere shortening and alterations of mitochondrial DNA (mtDNA), are important in the aging process, and this new research provides evidence that psychosocial factors – specifically childhood adversity and psychiatric disorders – may also influence these cellular changes and could lead to accelerated aging.

Recent studies have examined the possible connection between mitochondria and psychiatric disorders, but the research is very limited, and no prior work has examined the relationship of mitochondrial DNA to psychosocial stress.

"We are interested in these relationships because there is now clear evidence that stress exposure and psychiatric conditions are associated with inflammation and health conditions like diabetes and heart disease. Identifying the changes that occur at a cellular level due to these psychosocial factors allows us to understand the causes of these poor health conditions and possibly the overall aging process." said AUDREY TYRKA, MD, PHD, Director of the Laboratory for Clinical and Translational Neuroscience at Butler Hospital and Associate Professor of Psychiatry and Human Behavior at Brown University.

Dr. Tyrka and fellow researchers recruited 299 healthy

adults from the community for the study. Participants completed diagnostic interviews to assess psychiatric disorder diagnosis, and assess childhood adversities, including parental loss, and childhood abuse and neglect. Participants were categorized into four groups based upon the presence or absence of childhood adversity and the presence or absence of lifetime depressive, anxiety, or substance use disorders. Using standard techniques, researchers extracted DNA from whole blood samples for each participant and quantified telomere length and mtDNA copy number, a measure of mitochondrial DNA content.

Results of the study show childhood adversity and lifetime psychopathology were each associated with shorter telomeres and higher mtDNA content. These effects were seen in individuals with major depression, depressive disorders, and anxiety disorders, as well as those with parental loss and childhood maltreatment. A history of substance disorders was also associated with significantly higher mtDNA copy numbers.

These findings indicate that childhood stress and some psychiatric disorders are linked to important cellular changes that may represent advanced cellular aging. "Understanding this biology is necessary to move toward better treatment and prevention options for stress-related psychiatric and medical conditions, and may shed light on the aging process itself," said Dr. Tyrka, also the director of Research for Butler Hospital. •

Memorial Opens Follow-Up Clinic

PAWTUCKET – Memorial Hospital has created a Hospital Follow-Up Clinic to ensure that patients discharged from any area hospital can be seen quickly by a primary care physician.

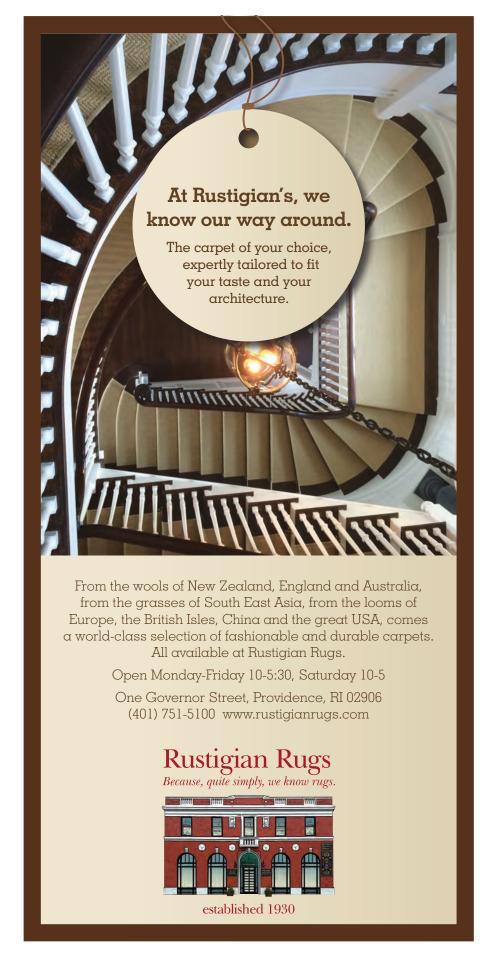
"We have a checklist of items we make sure are addressed – including medication reconciliation, follow-up testing and the patient's understanding of the care plan – and we then turn the patient over to their primary care physician," explains DINO MESSINA, MD, PHD, FACP, associate program director in the Department of Medicine at Memorial and medical director of the Internal Medicine Clinic. "We are tracking certain parameters going forward but we're certain that this clinic can make a difference and improve the quality of the transition of care from the hospital to the home for our patients." ❖

Women & Infants Receives Women's Choice Award

Hospital is among America's Best Hospitals for Obstetrics

PROVIDENCE – Women & Infants Hospital has received the 2015 Women's Choice Award® as one of America's Best Hospitals for Obstetrics. This evidence-based designation identifies the country's best health care institutions based on robust criteria that consider female patient satisfaction, clinical excellence and what women say they want from a hospital.

The America's Best Hospitals for Obstetrics scoring process is unique in that it is the only national list that focuses on female patient satisfaction. The hospitals that qualify for this highly selective designation provide the highest level of obstetric services based on their exceptional scores for patient recommendation as provided by data reported by the U.S. Department of Health and Human Services in Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys, as well as an analysis that weighs criteria identified as the most important to women for patient satisfaction, including early elective deliveries. •



RIH Awarded Advanced Certification for Comprehensive Stroke Center

PROVIDENCE – Rhode Island Hospital has been recognized by The Joint Commission as meeting its standards for Disease-Specific Care Comprehensive Stroke Center Certification, one of 82 health care organizations nationwide to earn this designation.

Rhode Island Hospital submitted to a rigorous onsite review by the Joint Commission, which measured the hospital's performance against its Comprehensive Stroke Center standards and requirements including advanced imaging capabilities, uninterrupted availability of specialized treatments, and staff with the unique education and competencies to care for complex stroke patients.

Organizations seeking CSC certification must meet all of the general eligibility requirements for disease-specific care and primary stroke center certification. In addition, CSCs are required to:

- Have dedicated neuro-intensive care unit beds for complex stroke patients that provide neuro-critical care 24/7.
- Use advanced imaging capabilities.
- Meet strict requirements for providing care to patients with a diagnosis of subarachnoid hemorrhage; perform endovascular coiling or surgical clipping procedures for aneurysms; perform emergency retrieval of clots lodged in brain arteries; and administer IV tissue plasminogen activator (tPA).
- Coordinate post-hospital care for patients.
- Use a peer-review process to evaluate and monitor the care provided to patients with ischemic or hemorrhagic stroke.
- Participate in stroke research.

"By achieving this advanced certification, Rhode Island Hospital has thoroughly demonstrated the greatest level of commitment to the care of its patients with a complex stroke condition," said MARK R. CHASSIN, MD, Joint Commission president. •

URI scientists discover estrogen interaction prevents some pregnant women from expelling bile acids *Problem can lead to serious health issues for fetus, infant*

KINGSTON – A University of Rhode Island pharmacy professor has discovered an interaction involving the hormone estrogen that occurs in some pregnant women preventing them from expelling bile acid, leading to disease in their fetuses.

RUITANG DENG, an associate professor of biomedical sciences in the College of Pharmacy, and his research team, recently completed a study funded by a \$1.4 million National Institutes of Health grant. They examined the effects of molecular interactions involving estrogen in the late stages of pregnancy that shut down the bile salt export pump, preventing the woman from expelling bile acids and leading to a condition called intrahepatic cholestasis of pregnancy. The bile salt export pump is an active transport protein in humans located on a plasma membrane.

The findings were published in the December 2014 issue of *Hepatology*,

the official journal of the American Association for the Study of Liver Diseases. The journal also ran an editorial article featuring the work of Deng and his research team.

"Typically, the condition is not dangerous for pregnant women, but it can have severe consequences for the fetus, including stillbirth," Deng said. "If it is diagnosed before birth, the only solution is pre-term birth by induced labor or Cesarean section. And even then, the baby can develop diseases later on in childhood because of the condition."

The incidence of disease varies widely among ethnic groups, ranging from 1 to 5 percent in the United States and European countries, and 15 to 27 percent in some South American countries such as Chile and Argentina. The condition and symptoms usually develop in the third trimester.

The most common symptom of the disease in pregnant women is skin itching (pruritis), particularly in the

palms of the hands and soles of the feet, Deng said.

Deng and his research team members, all of whom are URI faculty, graduate students and post-doctoral fellows, examined the interactions among estrogen, estrogen alpha, a nuclear receptor to which the estrogen binds, and the bile acid receptor called farnesoid X receptor (FXR). Those interactions led to suppression of the bile salt export pump.

"We examined the estrogen and bile acid signaling pathways and uncovered a crosstalk between the two pathways controlling the bile export pump," Deng said. "Something in that crosstalk causes the bile salt export pump to shut down.

"The next step would be to examine that crosstalk to see how to keep the pump activated," Deng said. "Maybe we can provide a strategy for developing therapeutic treatments for the disease by targeting the crosstalk." •

Lifespan Opens Urgent Care Center for Mental Health Issues in East Greenwich

EAST GREENWICH – The Lifespan Outpatient Psychiatry and Urgent Care recently opened in East Greenwich. The new center integrates Lifespan's behavioral services with those of Gateway Healthcare, for the area's first walk-in urgent care for mental health issues.

"Rhode Island is ranked among the nation's highest for people with serious mental health issues," said **DANIELA BOERESCU**, **MD**, director of Lifespan Outpatient Psychiatry



and Urgent Care. "Our goal in opening this location is to provide urgent care and outpatient services to make mental health services more accessible, especially to those people who need attention right away. We want to be able to help patients and their family members quickly in those times."

Urgent care, which is available for those 18 years or older, offers onsite mental health assessment, access to crisis psychiatry as necessary, crisis stabilization services, and family education and support. And both urgent care and outpatient services support a broad range of medical and psychotherapy treatments, including medication management, individual psychotherapy, group therapy, couples and marital therapy, and family therapy. The on-site team is multidisciplinary and is made up of psychiatrists, psychologists, social workers and community treatment specialists.

"We are able to treat patients with a variety of behavioral health conditions," explained Dr. Boerescu. "Those include mood disorders, anxiety disorders, somatoform disorders and other behavioral health issues such as eating disorders, attention deficit disorder, job pressures and stress management." *