LSUHSC Nursing & Dentistry team up to serve seniors

The LSUHSC Schools of Dentistry and Nursing teamed up to offer a free dental and oral health cancer screening to seniors this week. Volunteer DDS and hygiene faculty and students took the Mobile Dental Services van to the clinic LSUHSC School of Nursing faculty and students staff at Village de Jardin senior housing community.

The LSU Health clinic serves as a national model, providing onsite care to residents of a gated community of affordable housing for seniors, while also providing educational and clinical experience for LSUHSC students and residents in multiple disciplines.

Study advances LSUHSC research, shows fish oil component reduces brain damage in newborns

Research conducted by a team of scientists from Columbia University College of Physicians and Surgeons and Dr. Nicolas Bazan, Boyd Professor and Director of the LSUHSC Neuroscience Center of Excellence, found the novel use of a component of fish oil reduced brain trauma in newborn mice. The study reports that neonatal brain damage decreased by about 50% when a triglyceride lipid emulsion containing docosahexaenoic acid (DHA) was injected within two hours of the onset of ischemic stroke. The paper is published in the journal, *PLOS ONE*, available online at http://dx.plos.org/10.1371/journal.pone.0056233.

LSUHSC named Nursing School of the Year

The LSUHSC School of Nursing has received the prestigious Louisiana State Nurses Association (LSNA) Nightingale Nursing School of the Year Award for the category of “Entry into Practice Program.” Criteria for this award include comments from graduates, graduates’ employers, faculty, accreditation status, first-time passage rate on NCLEX-RN, and innovations in education/teaching.

Research discovers gene mutation causing rare eye disease

Research conducted by Dr. Jayne S. Weiss, Professor and Chair of Ophthalmology at LSU Health Sciences Center New Orleans, and colleagues has discovered a new mutation in a gene that causes Schnyder corneal dystrophy (SCD). The gene was found to be involved in vitamin K metabolism suggesting the possibility that vitamin K may eventually be found useful in its treatment. The findings are published in the February 2013 issue of the peer-reviewed journal, *Human Mutation*.

Schnyder corneal dystrophy is a rare hereditary eye disease that results in progressive loss of vision as abnormal deposits of cholesterol and other fats cloud the cornea. Affecting both eyes, it often requires corneal transplantation surgery.
This study identified a new DNA mutation in UBIAD1 that substituted one amino acid with another in 51 members of six SCD families. The mutation, which alters enzyme function, is likely involved in causing the disease as it was found in 47 of 47 people with clinically diagnosed SCD and was not observed in 300 control individuals.

The research team also showed significantly reduced production of MK-4 and the association of UBIAD1 with enzymes involved in cholesterol production and storage, providing direct links between UBIAD1 and cholesterol metabolism that are likely involved in the development of SCD. The finding of decreased MK-4 production suggests MK-4 supplements, potentially delivered by topical administration to the eyes, might be useful as a therapy to treat clouded corneas, or at least prevent the continued accumulation of cholesterol and lipids that are seen in SCD.

Dr. Weiss is one of the world's leading authorities on the disease. She identified the largest group of people with SCD in the world and corrected misconceptions about the disease facilitating its diagnosis. Dr. Weiss and her colleagues discovered UBIAD1, the gene that causes SCD, in 2007 – a gene that is also involved in cholesterol metabolism.

The researchers conclude that the findings suggest a need for further studies to determine if acute injection of these emulsions could be neuroprotective after stroke injury in humans. They also suggest that the emulsion rich in DHA will prove to be a novel and important therapy to treat stroke and could decrease mortality and increase long-term functional recovery after stroke in humans of different ages.

Dr. Bazan's group has increasingly shown that DHA is a potentially powerful treatment for stroke for nearly ten years. A study published in 2011 found DHA triggered production of Neuroprotectin D1 (NPD1), a naturally occurring neuroprotective molecule in the brain derived from DHA discovered by Dr. Bazan. DHA treatment saved and repaired stroke-damaged brain tissue.

The study compared the effectiveness of emulsions with two omega-3 fatty acids found in some fish—DHA and eicosapentaenoic acid (EPA) — as well as optimal doses and therapeutic window. The researchers found that DHA provided protection while EPA did not. The therapeutic window ranged from 90 minutes prior to several hours after with the optimal window for treatment 0 - 2 hours. There was no protective effect at hour 4.

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The LSUHSC School of Nursing is accredited by the Commission on Collegiate Nursing Education until 2019, and the first-time pass rate on NCLEX-RN for LSUHSC grads exceeds 98%. Innovations include case-based, interactive learning for the critical care theory course, a home simulation lab in the occupational health apartment with a real patient, a real caregiver, and a faculty facilitator to simulate various scenarios in Community Nursing, and providing cultural competence and emergency preparedness and disaster response training to RNs, nursing students and faculty in caring for vulnerable populations.

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They performed visual oral examinations on 153 children and adults and provided oral hygiene instructions and supplies to 263 children and adults. They also gave away donated toothbrushes, toothpastes, dental floss, and mouthwash in addition to printed dietary instructions.