

Lopez elected to Mastership

r. Fred Lopez, Professor and Vice Chair of the Department of Medicine and Assistant Dean of Student Affairs at the LSUHSC School of Medicine, was awarded a Mastership by the Board of Regents of the American College of Physicians (ACP) at its annual meeting this week.



Mastership is conferred only on a select number of worthy candidates who have been deemed distinguished through the practice of internal medicine. Masters must be highly accomplished individuals. Their achievements can come from many types of endeavors such as research, education, health care initiatives, volunteerism, and administrative positions. Masters are recognized by the excellence and significance of their contributions to the field of medicine.

With 133,000 members, ACP is the largest medical-specialty organization and second-largest physician group in the United States.

Research reveals Rx target for HPV, Hep C & related cancers

team of LSUHSC scientists has revealed for the first time the inner workings of a master regulator that controls functions as diverse as the ability of nerve

cells to "rewire" themselves in response to external stimuli and the mechanism by which certain viruses hijack normal cellular processes to facilitate their replication that can ultimately lead to cancer. Research conducted by Dr. Virginia Ronchi, a postdoctoral fellow, and research associate Jennifer Klein, working in the laboratory of Dr. Arthur



Haas, the Roland Coulson Professor and Chairman of Biochemistry and Molecular Biology at LSUHSC, is published in today's issue of the Journal of Biological Chemistry.

Coordination of the proteins made by human genes is controlled by a small set of master regulators that sense the environment of the cell and alter subtle features of the genetic programs to maintain metabolic balance. More radical alterations due to gene mutation or in response to viral or bacterial infection frequently lead to conditions that see **Regulator**, *page 2*

Allied Health & Magnolia School team up to give back

ennifer Pate, a student in the LSUHSC Doctor of Physical Therapy program,

organized a project where those who help people with disabilities teamed up with those who have disabilities to help a local non-profit. LSUHSC Allied Health students and faculty volunteered with residents and staff of the Magnolia School at the Green Project last Saturday.

The Green Project staff were amazed by all the work completed ---sweeping the entire facility, de-cluttering and organizing the tiles, loading up old paint to be recycled,



picking up debris and litter surrounding the facility, folding banners, sorting



molding, arranging windows and frames, and working in the lumberyard.

It's difficult for the staff to do what the volunteers completed and run the store. The LSUHSC project not only benefitted the Green Project, but the community at large.

Pate conceived this project as part of her participation in LSUHSC's Human Development Center Interdisciplinary Traineeship program.

LSUHSC research discovers new drug target for metastatic breast cancer

r. Suresh Alahari, the Fred Brazda Professor of Biochemistry and Molecular Biology at LSUHSC led research which is the first to report that two specific tumor suppressor genes work in

concert to inhibit the growth and spread of breast tumor cells to the lungs. The research is published this week online in the Journal of Biological Chemistry.

Working in mice, the researchers studied LKB1, an enzyme that functions as a tumor suppressor in the small intestine, and Nischarin, a protein that regulates breast cancer cell migration and movement discovered by Dr. Alahari in 2000. Thirty percent of lung adenocarcinomas have an LKB1 gene mutation, and high levels of the LKB1 protein in

> breast cancer cells have been shown to inhibit tumor growth significantly. The LKB1interacting protein is also structurally similar to Nischarin.

> > of E6AP, resulting in

cirrhosis and liver cancer in

mechanism for the enzyme

at the molecular level

which provides potential

strategies for designing

drugs to block E6AP

function in the case of the

Human Papillomavirus

and Hepatitis C virus.

The studies provide a description of the

the chronically infected.

Coming up

The Camp Tiger Benefit & Auction

The team suspected that the two suppressors might relate to each other, and they did in fact discover a functional and biochemical link between them. They showed that Nischarin and LKB1 regulate breast cancer cell migration, anchorage-independent growth, tumor growth, and metastasis. They also identified a new pathway by which LKB1 suppresses tumor cell movement, revealing a new target for treatment development.

The LSUHSC team also included Prachi Jain, Somesh Baranwal, Shengli Dong, Amanda Struckhoff, and Rebecca Worthylake from the Departments of Biochemistry and Molecular Biology and Oral Biology.

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can result in cancer or developmental defects.

The researchers focused on the E6AP enzyme. This enzyme regulates the functions of several dozen different proteins involved in key metabolic balance processes.

The genetic program of the Human Papillomavirus produces an E6 viral protein following infection that hijacks the E6AP enzyme to target a different set of cells, not only ensuring the ability of the virus to replicate but causing uncontrolled growth that can result in cervical cancer. The Hepatitis C virus exploits a similar strategy to ensure its replication in the liver by expressing a different protein that redirects the function



master regulators that control other cell functions, knowledge about it may also apply to future drug design for enzymes involved in many other diseases.



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