

# CorNotes

## AMERICAN HEART ASSOCIATION RESEARCH FUNDING OPPORTUNITIES

The National Research Program of the American Heart Association now offers two deadlines annually (July and January) for submission of Scientist Development Grants, Established Investigator Grants, and Grants-in-Aid.

Electronic submission is mandatory for all applicants. Listed below are the new submission dates:

SDG's: July 16, 2001 and January 14, 2002

EIG's: July 17, 2001 and January 14, 2002

GIA's: July 18, 2001 and January 15, 2002

For program descriptions, application instructions and forms, visit the following AHA website:

<http://www.americanheart.org/research/app/>

## RECENT PUBLICATIONS FROM THE CVI

Lin, K.M., Lin, B., Lian, I.Y., Mestri, R., Scheffler, I.E., Dillmann, W.H. Combined and individual mitochondrial HSP60 and HSP10 expression in cardiac myocytes protects mitochondrial function and prevents apoptotic cell deaths induced by simulated ischemia-reoxygenation. *Circulation* 103(13):1787-1792, 2001.

Walenga, J.M. Argatroban-A viewpoint. *Drugs* 61(4):523-524, 2001.

Ahmad, S., Jeske, W.P., Ma, Q., Walenga, J.M., Fareed, J. Inhibition of tissue factor-activated platelets by low-molecular-weight heparins and glycoprotein IIb/IIIa receptor antagonist. *Thromb. Res.* 102(2):143-151, 2001.

Bayer A.L., Ferguson, A.G., Lucchesi, P.A., Samarel, A.M. PYK2 expression and phosphorylation in neonatal and adult cardiomyocytes. *J. Mol. Cell. Cardiol.* 33(5):1017-1030, 2001.

Iqbal, O., Aziz, S., Hoppensteadt, D.A., Ahmad, S., Walenga, J.M., Bakhos, M., Fareed, J. Emerging anticoagulant and thrombolytic drugs. *Emerging Drugs* 6(1):111-135, 2001.

## CVI SEMINAR SERIES

The next CVI seminar will be held on **Thursday, June 21, 2001 at 4:00 p.m.** in the Medical Education Building, **Room 360**. Our speaker is:

**Samuel C. Dudley, M.D., Ph.D.**  
**Assistant Professor of Medicine and Physiology**  
**Emory University**

The title of Dr. Dudley's talk is:

**"Modeling Arrhythmia with Stem Cell Derived Cardiomyocytes"**

For further information, contact Dr. Leanne Cribbs at x72817.

## CVI JOURNAL CLUB

June 14.....Dr. Mestri

June 28.....Dr. Scrogin

For further information, contact Dr. Ken Byron at x72819.

## FALK FELLOW MAKES THE COVER OF JMCC!

Check out the cover of the May, 2001 issue of the *Journal of Molecular and Cellular Cardiology*. It features an article by Falk Cardiovascular Research Fellow Allison Bayer, Ph.D. concerning the nonreceptor protein tyrosine kinase PYK2. The paper is the first description of PYK2 expression and activation in the neonatal and adult rat heart. The cover photos are dual fluorescent confocal images of PYK2 and f-actin localization in neonatal and adult cardiomyocytes obtained using the CIF's Zeiss LSM 510 Microscope. Dr. Bayer's coauthors on the study are Alan Ferguson, Pam Lucchesi, and Allen Samarel.

## CELSUS AND LOYOLA PRESENT NEW ANTICOAGULANT AT ISTH

Celsus Laboratories, Inc. (Cincinnati OH) and the Cardiovascular Institute of Loyola University Medical Center will be presenting at the XVIIIth Congress of the International Society on Thrombosis and Haemostasis the preliminary results of their joint research project on intimatan, a novel anticoagulant. This research project to develop intimatan in cardiac surgery has received funding from the National Heart, Lung, and Blood Institute of the National Institutes of Health. Intimatan is a patented complex carbohydrate comprising a rare disaccharide sequence of repeating L-iduronic acid→N-acetyl-D-galactosamine 4,6-O-disulfate units joined by 1,3 and 1,4 linkages. Intimatan uniquely inhibits thrombin bound to the blood vessel wall, fibrin clots, and surfaces of blood-interacting biomaterials. It also inhibits the activation of complement. Complement activation is deleterious to the vascular wall and myocardial tissues and is associated with ischemic-reperfusion injury and inflammation during cardiopulmonary bypass (CPB) surgery. Pre-clinical animal pharmacology studies, thus far, have shown intimatan to be an effective inhibitor of: (i) surface-bound thrombin generation and activity; (ii) acute coronary thrombosis and (iii) neointimal hyperplasia (restenosis). By inhibiting thrombin bound to surfaces, suppressing inflammation, minimizing bleeding and thus, the need for protamine, intimatan offers a potentially significant improvement over heparin for the critical care management of CPB and other thrombotic indications. Moreover, intimatan in combination with the GPIIb/IIIa antagonist, Integrilin®, enhanced the inhibition of human platelet activation caused by thrombin.

The initial development of intimatan will focus on its use as the preferred anticoagulant for CPB. The administration of heparin also contributes to the incidence of heparin-induced, type II, thrombocytopenia (HIT) and its associated thrombosis also known as the white clot syndrome. Patients with HIT are at high risk for thromboembolic complications. HIT is caused by heparin-related and platelet activating antibodies which may be present up to 100 days after the cessation of heparin therapy. Alternative anticoagulants are therefore needed in patients with HIT. Dr. Jeanine M. Walenga, Director of the Thoracic & Cardiovascular Surgery Research Laboratories within the Cardiovascular Institute and the main investigator of this grant at Loyola, has found that that intimatan does not cross-react with heparin antibody to cause activation of platelets at therapeutic concentrations. Moreover, in *in vitro* studies with blood from HIT patients, it ameliorates the activation of platelets induced by heparin and the HIT immune complex.

