

# PROCEEDINGS OF THE 2010 HEART-BRAIN SUMMIT

SEPTEMBER 23–24, 2010

Presented by the Earl and Doris Bakken Heart-Brain Institute at Cleveland Clinic  
and the Society for Heart-Brain Medicine

Supplement 1 to Volume 78, August 2011 • [www.ccfm.org/content/78/Suppl\\_1](http://www.ccfm.org/content/78/Suppl_1)

## Summit Directors

MARC S. PENN, MD, PHD  
Director, Earl and Doris Bakken  
Heart-Brain Institute,  
Cleveland Clinic, Cleveland, OH

JEFFREY L. CUMMINGS, MD  
Director, Lou Ruvo Center for Brain Health,  
Cleveland Clinic,  
Las Vegas, NV

KATHERINE HOERCHER, RN  
Director, Earl and Doris Bakken  
Heart-Brain Institute,  
Cleveland Clinic, Cleveland, OH

## Contents\*

### Depression and Heart Disease

**The *Bypassing the Blues* trial: Collaborative care for post-CABG depression  
and implications for future research**..... S4

Bruce L. Rollman, MD, MPH, and Bea Herbeck Belnap, Dr Biol Hum

**Type D personality and vulnerability to adverse outcomes in heart disease**..... S13

Johan Denollet, PhD, and Viviane M. Conraads, MD, PhD

**Biofeedback in the treatment of heart disease** ..... S20

Christine S. Moravec, PhD, and Michael G. McKee, PhD

### Device-Based Therapies

**Electrical vagus nerve stimulation for the treatment of chronic heart failure** ..... S24

Hani N. Sabbah, PhD, FACC, FCCP, FAHA

**Treatment of chronic inflammatory diseases with implantable medical devices** ..... S30

Ralph J. Zitnik, MD

### Pioneer Lecture

**New frontiers in cardiovascular behavioral medicine: Comparative effectiveness of exercise  
and medication in treating depression** ..... S35

James A. Blumenthal, PhD

\* These proceedings represent several presentations made at the 2010 Heart-Brain Summit, but some were unable to be captured for publication here.

Copyright © 2011 The Cleveland Clinic Foundation. All rights reserved.

The statements and opinions expressed in this supplement to the *Cleveland Clinic Journal of Medicine* are those of the authors and not necessarily of the Cleveland Clinic Foundation or its Board of Trustees. They do not necessarily represent formal practice guidelines in effect at Cleveland Clinic.

The *Cleveland Clinic Journal of Medicine* [ISSN 0891-1150 (print), ISSN 1939-2869 (online)] is published 12 times yearly by the Cleveland Clinic Foundation.

Subscription rates: U.S. and possessions: personal \$115; institutional \$143; single copy/

back issue \$20. Foreign: \$160; single copy/back issue \$20. Institutional (multiple-reader) rate applies to libraries, schools, hospitals, and federal, commercial, and private organizations. Individual subscriptions must be in the names of and paid by individuals.

Postmaster address changes: *Cleveland Clinic Journal of Medicine*, 1950 Richmond Road, TR4-04, Lyndhurst, OH 44124. Subscription orders, editorial, reprint, and production offices (same address): 216-444-2661 (phone); 216-444-9385 (fax); [ccjm@ccf.org](mailto:ccjm@ccf.org) (e-mail); [www.ccfm.org](http://www.ccfm.org) (Web).

Printed in USA.

**AMM** Association of Medical Media

## Depression and Inflammatory Signaling in Alzheimer Disease

<b>Depression: A shared risk factor for cardiovascular and Alzheimer disease</b> .....	<b>S44</b>
Dylan Wint, MD	

<b>Inflammatory signaling in Alzheimer disease and depression</b> .....	<b>S47</b>
Robert Barber, PhD	

<b>Vascular signaling abnormalities in Alzheimer disease</b> .....	<b>S50</b>
Paula Grammas, PhD; Alma Sanchez, PhD; Debjani Tripathy, PhD; Ester Luo, PhD; and Joseph Martinez	

## Stress in Medicine

<b>Stress in medicine: Strategies for caregivers, patients, clinicians</b> .....	<b>S54</b>
--	------------

Michael G. McKee, PhD; A. Marc Gillinov, MD; M. Bridget Duffy, MD; Richard N. Gevirtz, PhD;  
and Carmen V. Russoniello, PhD

<b>The burdens of caregiver stress</b> —Michael G. McKee, PhD.....	<b>S54</b>
<b>Promoting better outcomes with stress and anxiety reduction</b> —A. Marc Gillinov, MD.....	<b>S56</b>
<b>Addressing the impact of clinician stress</b> —M. Bridget Duffy, MD.....	<b>S58</b>
<b>Biofeedback in the treatment of stress</b> —Richard N. Gevirtz, PhD.....	<b>S59</b>
<b>Biofeedback for extreme stress: Wounded warriors</b> —Carmen V. Russoniello, PhD.....	<b>S61</b>
<b>Panel Discussion</b> .....	<b>S63</b>

## Annual Review of Key Publications in Heart-Brain Medicine

<b>Key 2010 publications in behavioral medicine</b> .....	<b>S65</b>
Laura D. Kubzansky, PhD, MPH	

## Novel Findings in Heart-Brain Medicine

<b>Imaging for autonomic dysfunction</b> .....	<b>S69</b>
Stephen E. Jones, MD, PhD	

<b>Neurohormonal control of heart failure</b> .....	<b>S75</b>
Gary S. Francis, MD	

<b>Poster Abstracts</b> .....	<b>S80</b>	
Young Investigator Research Award Winner.....		<b>S82</b>

Topics and editors for supplements to the *Cleveland Clinic Journal of Medicine* are determined by the *Journal's* editor-in-chief and staff. Supplement editors are chosen for their expertise in the topics discussed and are responsible for the scientific quality of supplements, including the review process. The *Journal* ensures that supplement editors and authors fully disclose any relationships with industry, including the supplement underwriter. For full guidelines on grant-supported supplements to the *Journal*, go to [www.ccjm.org/site/misc/Supplement\\_Guidelines.pdf](http://www.ccjm.org/site/misc/Supplement_Guidelines.pdf).