

## Advances in Pulmonary Hypertension CME Section

### Program Overview

Pulmonary arterial hypertension (PAH), an incurable disease, is characterized by medial hypertrophy, intimal fibrosis, and in situ thrombi in small muscular pulmonary arteries. PAH was considered a rapidly fatal illness with a median survival of 2.8 years in the 1980s when no evidence-based therapies were available. Since then the treatment of this disease has made tremendous advances, and the last 10 years have seen the discovery of new medications that have positively influenced the prognosis and survival of patients with PAH.

This self-study activity is based on 3 articles that review the latest information on recent clinical trials and new therapies for PAH.

This activity is jointly sponsored by the University of Michigan Medical School and the Pulmonary Hypertension Association and supported by an unrestricted education grant from Actelion Pharmaceuticals US, Inc, Gilead Sciences, Inc, Pfizer, Inc, and United Therapeutics Corporation.

### Target Audience

This self-study activity is appropriate for cardiologists, pulmonologists, rheumatologists, and other physicians who treat patients with pulmonary hypertension.

### Learning Objectives

Upon completion of this activity participants will be able to:

1. Appreciate the complexity in clinical trial design for pulmonary hypertension and recognize meaningful endpoints for future trials
2. Understand the pathophysiology of PAH and the opportunities for novel therapeutics to target specific aspects of the disease biology
3. Appreciate the value of prostanoid therapy for PAH and the progress being made toward an oral prostanoid

### Self-Assessment Examination

See pages 37 and 38 for self-assessment questions, answer key, and evaluation form.

### Faculty

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### Agenda

#### Near-Term Novel Therapies for PAH

David Langleben, MD

#### Evaluating Recent Therapeutic Trials in PAH:

##### Raising the bar in Clinical Investigation

Murali Chakinala, MD

#### Update on the Development of Oral Prostacyclin Analogs for the Treatment of PAH

R. James White, MD, PhD

### **Accreditation Statement**

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the University of Michigan Medical School and the Pulmonary Hypertension Association. The University of Michigan is accredited by the ACCME to provide continuing medical education to physicians.

### **Credit Designation**

The University of Michigan Medical School designates this activity for a maximum of *2.0 AMA PRA Category 1 Credits™*. Physicians should claim credit commensurate with the extent of their participation in the activity.

### **Instructions for Earning Credit**

This activity is a self-study program; a self assessment examination is included on page 37 to help physicians review important points. A form is also included on page 38 for physicians to evaluate the CME activity. Completion of this activity involves reading the journal and completing the self-assessment examination and evaluation form, which may take up to 2 hours. Credits for this self-study program are available from August 6, 2009 through August 6, 2010. There is no fee for this program.

Please note that this self-study program may also be viewed online at: <http://www.cme.med.umich.edu>.

### **University of Michigan Privacy Statement**

<http://www.cme.med.umich.edu/privacy.asp>

### **Sponsorship**

This CME self-study program is jointly sponsored by the University of Michigan Medical School and the Pulmonary Hypertension Association.

### **Support**

This CME self-study program is supported by an educational grant from Actelion Pharmaceuticals US, Inc., Gilead Sciences, Inc., Pfizer, Inc., and United Therapeutics Corporation.

### **Oversight and Accreditation**

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### **Disclosures**

The Accreditation Council for Continuing Medical Education and the Association of American Colleges have standards and guidelines to ensure that individuals participating in CME activities are aware of relationships between authors and commercial companies that could potentially affect the information presented. To be disclosed to participants are all personal financial relationships with a commercial interest whose products are relevant to the content of this CME activity. The University of Michigan Medical School follows these national policies to ensure balance, independence, objectivity, and scientific rigor in all its CME activities. Each author was asked to complete a disclosure information form for this activity. Disclosures are reported below.

R. James White, MD, PhD, in the past 12 months has served as a paid consultant for United Therapeutics and Gilead. He received research funds from United Therapeutics, Gilead, Actelion, and Eli Lilly.

David Langleben, MD, in the past 12 months has received clinical research support from Actelion, Bayer, Glaxo-SmithKline, Eli Lilly, Myogen, Northern Therapeutics, Novartis, Pfizer, and United Therapeutics. He has served on scientific advisory committees for Northern Therapeutics, Novartis, and Pfizer and has acted as a consultant or speaker for Actelion, Bayer, Glaxo-SmithKline, Myogen, Northern Therapeutics, Novartis, Pfizer and United Therapeutics.

Murali Chakinala, MD, FCCP, is on the speaker's bureau of Actelion Pharmaceuticals Ltd, Gilead, United Therapeutics, and Pfizer Inc. He receives research support from Actelion Pharmaceuticals Ltd, Gilead, United Therapeutics, Pfizer Inc, and Lilly.

Arlene Bradford, BA, has no relevant personal financial relationships to disclose.

### **CME Reviewer**

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Dr Chan has no relevant personal financial relationships to disclose.