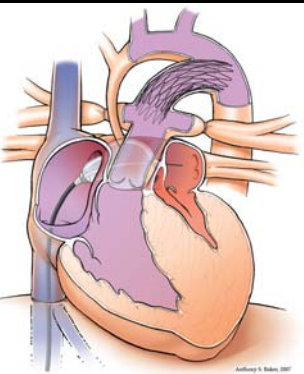


ISHAC

International Symposium on the
Hybrid Approach to Congenital Heart Disease
with live case presentations



Two Perspectives.
Single Focus.



Pocket Guide Syllabus

August 31- September 2, 2010
Hilton Easton
Columbus, OH USA

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WELCOME TO ISHAC



Dear Friends and Colleagues,

Thank you for joining us for the *5th International Symposium on the Hybrid Approach to Congenital Heart Disease (ISHAC)*. We welcome you to Columbus for this 2-day symposium with a special *1-Day Skills Workshop* featuring world renowned faculty. Additionally, we are honored to have Keynote addresses from Philipp Bonhoeffer MD, FSCAI, interventional cardiologist and innovator from London, UK and John G. Byrne MD, Chairman of Cardiac Surgery and pioneer in Hybrid therapies for adults with cardiovascular disease, Vanderbilt University, Nashville, Tennessee, USA.

Over the years, we have had faculty and participants from over 34 states, 50 countries, and 6 continents; this year is no exception. *ISHAC* truly has something for everyone – surgeons, cardiologists, anesthesiologists, nurses and nurse practitioners, perfusionists, allied health professionals, and research scientists. We hope the didactic lectures, moderated discussions, live case demonstrations, special noon presentations with box lunches, tours of the Hybrid Suites at Nationwide Children's Hospital, and direct access to our faculty for questions and answers will satisfy your educational needs. This year, procedures will be performed from Hybrid Suites at Rush Medical Center in Chicago, Miami Children's Hospital, and Nationwide Children's Hospital...with special Hybrid procedures broadcast from our University Laboratory Animal Resources Experimental Surgical Suites (ULAR).

As in the past, we are especially proud of the 1-day special Skills Workshop at ULAR to be held on Tuesday August 31st. This opportunity gives you, as participants, the opportunity to work directly with our faculty and have hands-on experiences with many forms of Hybrid therapies in our specially designed animal models. The Workshop is truly unique and allows you to return to your own institutions to initiate, expand, and improve Hybrid therapies.

New for 2010, we have expanded the abstract portion of this symposium to accept abstracts for both Oral and Poster presentations. The top 3 abstracts will be presented on Thursday, September 2nd as an 8 minute lecture with 2 minutes for discussion. In addition to adding selected oral abstract presentations for 2010, we have expanded research and outcome discussions on Hybrid therapies, added a session on Hybrid therapies in adults with cardiovascular disease and will close the *Symposium* with a "Hybrid Nightmare" session.

WELCOME TO ISHAC

Finally, we hope you will enjoy *ISHAC's* location this year. Located within the Easton Town Center; excellent shopping, entertainment, and dining are a few steps away. However, we don't want you to miss our Gala event on Wednesday, September 1st. It will be held at The Party Barn with an International Sports Theme...so bring your favorite sport team's attire to wear. Buses will be leaving from the hotel.

Thank you again for your participation in *ISHAC 2010*, and we hope you enjoy the entire schedule of events.

John P. Cheatham, MD, FSCAI
Co-Director, The Heart Center
Director, Cardiac Catheterization & Interventional Therapy
Nationwide Children's Hospital
Professor of Pediatrics and Internal Medicine, Cardiology
The Ohio State University College of Medicine
George H. Dunlap Endowed Chair in Interventional Cardiology

Mark Galantowicz, MD, FSCAI
Co-Director, The Heart Center
Chief, Cardiothoracic Surgery
Nationwide Children's Hospital
Associate Professor of Surgery
The Ohio State University College of Medicine
Murray D. Lincoln Endowed Chair in Cardiothoracic Surgery



ACCREDITATION

Continuing Medical Education

The Nationwide Children's Hospital is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The Nationwide Children's Hospital designates this educational activity for a maximum of 20.75 AMA PRA Category 1 Credit(s)TM. Physicians should only claim credit commensurate with the extent of their participation in the activity.

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LIVE CASES - SUMMARY

Wednesday

9:40-10:15 am - Live Case

11:30 am-12:00 pm - Live Case

2:40-3:15 pm - Live Case

Thursday

9:20-10:00 am - Live Case

3:15-4:00 pm - Live Case

*This pocket guide presents the program as of August 10th.
Please check with the reception desk for any last minute
changes to the schedule.*

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ISHAC COURSE DIRECTORS & FACULTY

Program Directors: John P. Cheatham, MD, FSCAI & Mark Galantowicz, MD, FSCAI.

Keynote Speakers: Philipp Bonhoeffer, MD, FSCAI & John G. Byrne, MD

Workshop Directors: Ralf J. Holzer, MD, FSCAI & Alistair Phillips, MD.

Program Co-Director: Sharon L. Hill, MSN, ACNP-BC.

Program Coordinator: Karen E. Heiser, PhD.

Perfusion Directors: Vincent Olshove, CCP; Daniel Gomez, CCP & Thomas J. Preston, CCP.

Guest Faculty: Valerie K. Bergdall, DVM - University Laboratory Animal Resources, Columbus, OH; Philipp Bonhoeffer, MD, FSCAI - University College, London, UK; John G. Byrne, MD - Vanderbilt Heart, Nashville, TN; Christopher Caldarone, MD - University of Toronto, Toronto, ON; Qi-Ling Cao, MD - Rush University Medical Center, Chicago, IL; Mario Carminati, MD, FSCAI - San Donato Milanese, Milan, Italy; John P. Cheatham, MD, FSCAI - Nationwide Children's Hospital, Columbus, OH; Curt Daniels, MD - Nationwide Children's Hospital, Columbus, OH; Timothy F. Feltes, MD - Nationwide Children's Hospital, Columbus, OH; Mark Galantowicz, MD, FSCAI - Nationwide Children's Hospital, Columbus, OH; Daniel Gomez, CCP - National Children's Hospital, Columbus, OH; Daniel Gruenstein, MD - Amplatz Children's Hospital, Minneapolis, MN; Ziyad M. Hijazi, MD, FSCAI - Rush University Medical Center, Chicago, IL; Sharon L. Hill, MSN, ACNP-BC - Nationwide Children's Hospital, Columbus, OH; Ralf J. Holzer, MD, FSCAI - Nationwide Children's Hospital, Columbus, OH; Shengshou Hu, MD - Cardiovascular Institute & Fuwai Hospital, Beijing, China; John P. Kovalchin, MD - Nationwide Children's Hospital, Columbus, OH; Pamela A. Lucchesi, PhD - Nationwide Children's Hospital, Columbus, OH; William T. Mahle, MD - Children's Healthcare of Atlanta, Atlanta, GA; Doff McElhinney, MD, FSCAI - Children's Hospital Boston, Boston, MA; Charles E. Mullins, MD - Texas Children's Hospital, Houston, TX; Richard G. Ohye, MD - University of Michigan, Ann Arbor, MI; Vincent Olshove, CCP - Nationwide Children's Hospital, Columbus, OH; Carlos Pedra, MD - Instituto Dante Pazzanese de Cardiologia, São Paulo, Brazil; Simone Fontes Pedra, MD - Instituto Dante Pazzanese de Cardiologia, São Paulo, Brazil; Thomas J. Preston, CCP - Nationwide Children's Hospital, Columbus, OH; Alistair Phillips, MD - Nationwide Children's Hospital Columbus, OH; Mark D. Rodefeld, MD - Indiana University School of Medicine, Indianapolis, IN; Daniel Rowlands, MD - Nationwide Children's Hospital, Columbus, OH; Carlos Ruiz, MD, PhD, FSCAI - Lenox Hill Hospital, New York, NY; Dietmar Schranz, MD - Universitätsklinikum Giessen, Giessen, Germany; Nikolay V. Vasilyev, MD - Children's Hospital Boston, Boston, MA; Zhen Xu, PhD - University of Michigan, Ann Arbor, MI; Evan Zahn, MD, FSCAI - Miami Children's Hospital Miami, FL and David Zhao, MD - Vanderbilt Heart, Nashville, TN.

Honorable Guest Faculty: Steve Allen, MD, CEO, Nationwide Children's Hospital, Columbus, OH; and Abigail S. Wexner, Chairman, Board of Trustees, Nationwide Children's Hospital, Columbus, OH.

Organizing Committee: Becky Williams, MEd; Jennifer English; Jeanne Green; Stephanie Cannon, MS; and Donna Teach, MS.

ISHAC REGISTRATION: MONDAY

6:00-8:00 pm - Registration in Lobby of Hilton at Easton

SKILLS WORKSHOP: TUESDAY SESSIONS

Skills Workshop Directors: *Ralf J. Holzer, MD;*
Alistair Phillips, MD & Valerie Bergdall, DVM

7:00 am - Buses Take Session 1 Group to Workshop

7:30-8:00 am - Continental Breakfast

- **Welcome and Overview of Stations** - *Ralf J. Holzer, MD & Alistair Phillips, MD*

8:00 am-12:00 pm - Skills Stations (Group 1) - *Faculty*
or

12:30-4:30 pm - Skills Stations (Group 2) - *Faculty*

- I. Periventricular VSD Closure
- II. Intraoperative Stents
- III. Hybrid Stage I HLHS Palliation
 - PA Bands
 - PDA Stent
 - PA Flow Restrictors
- IV. Perfusion Station
 - Emergency ECLS System

11:30 am - Buses Take Group 2 to Workshop

12:00 pm - Lunch Provided for Groups 1 & 2

1:00 pm - Buses Return Group 1 to Hilton

4:30 pm - Buses:

- Return Group 2 to Hilton or To NCH for Tours
- From Hilton to NCH for Tours

5:00-6:15 pm - Tour of Hybrid Suites at NCH

6:15 pm - Buses Return to Hilton from NCH

6:00-8:00 pm - Registration in Lobby of Hilton at Easton

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Nationwide Children's Hospital*

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PERFUSION WORKSHOP: TUESDAY SESSIONS

Workshop Directors: *Vincent Olshove, CCP; Daniel Gomez, CCP & Thomas J. Preston, CCP*

7:00 am - Busses Take Session 1 Group from Hilton to Workshop

SESSION 1

7:30-8:00 pm - Continental Breakfast

- **Welcome & Overview of Stations:** *Vincent Olshove, CCP*

8:00-8:30 am - Perfusion Role in Cardiac Hybrid OR & Cath Suite Design

8:30-11:30 am - Skills Station - Faculty

- V. Hybrid Perfusion Circuit Design
- VI. Incorporating Cardioplegia & Suckers
- VII. Converting from Bypass to ECMO
- VIII. New Technologies for the Cath Lab

12:00 pm - Lunch Provided

1:00 pm - Return Session 1 Group to Hilton

SESSION 2

1:00-1:15 pm - Welcome & Overview of Stations:
Vincent Olshove, CCP

1:15-1:45 pm - Perfusion Role in Cardiac Hybrid OR & Cath Suite Design

1:45-4:30 pm - Skills Station - Faculty

- IX. Hybrid Perfusion Circuit Design
- X. Incorporating Cardioplegia & Suckers
- XI. Converting from Bypass to ECMO
- XII. New Technologies for the Cath Lab

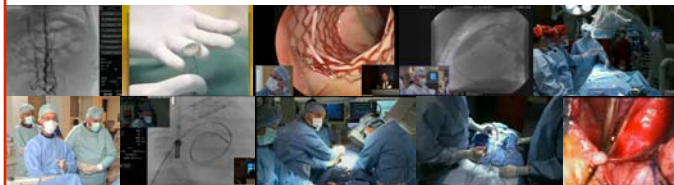
4:30 pm - Return Session 2 Group to Hilton or Tour NCH

5:00-6:15 pm - Tour of Hybrid Suites at NCH

6:15 pm - Buses Return to Hilton from NCH

6:00-8:00 pm - Registration in Lobby of Hilton at Easton

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ISHAC: WEDNESDAY MORNING SESSIONS

ISHAC Directors: *John P. Cheatham, MD & Mark Galantowicz, MD*

7:00-7:45 am - Continental Breakfast & Registration; Posters & Display

7:45-8:00 am - Welcome - *Steve Allen, MD & Abigail S. Wexner*
Introductory Remarks - *John P. Cheatham, MD & Mark Galantowicz, MD*

HYPOPLASTIC LEFT HEART SYNDROME - PART I

Moderators: Ziyad M. Hijazi, MD & Alistair Phillips, MD

8:00 -8:20 am - Update from the Single Ventricle Reconstruction Trial - *Richard G. Ohye, MD*

8:20-8:40 am - Hybrid Update from Giessen, Germany
- *Dietmar Schranz, MD*

8:40-9:00 am - Hybrid Update from Columbus, Ohio
- *Mark Galantowicz, MD*

9:00-9:20 am - Update from Fetal Experience at CHB
- *Doff McElhinney, MD*

9:20-9:40 am - Discussion

9:40-10:15 am - LIVE CASE

10:15-10:30 am - Break

HYPOPLASTIC LEFT HEART SYNDROME - PART II

Moderators: William T. Mahle, MD & Simone Fontes Pedra, MD

10:30-10:45 am - PDA Stent Histopathology
- *Pamela A. Lucchesi, PhD*

10:45-11:00 am - Echo/Angio . . . The Retrograde Aortic Arch
- *John P. Kovalchin, MD*

11:00-11:15 am - Cerebral Blood Flow & Neurodevelopment After Hybrid Stage I - *Sharon L. Hill, MSN, ACNP*

11:15-11:30 am - Discussion

11:30 am-12:00 pm - LIVE CASE

12:00-1:00 pm - Box Lunch Provided

12:30-1:00 pm -

- **Learning Curve in Hybrid Approach to HLHS**
- *Carlos Pedra, MD*
- **How to Analyze Early Results Using the Hybrid Approach to HLHS** - *Daniel Gruenstein, MD*
- **Other Strategies for Retrograde Aortic Arch Flow**
- *Christopher Caldarone, MD*

ISHAC: WEDNESDAY AFTERNOON SESSIONS

FONTAN

Moderators: Richard G. Ohye, MD & Doff McElhinney, MD

1:00-1:20 pm - Fontan Completion After Hybrid Stage I & Comprehensive Stage II - Mark Galantowicz, MD

1:20-1:40 pm - Outcomes for HLHS Get Real
- William T. Mahle, MD

1:40-2:00 pm - VAD Assisted Fontan A Glimpse of the Future - Mark D. Rodefeld, MD

2:00-2:20 pm - Transcatheter Fontan Experience Past, Present, & Future - John P. Cheatham, MD

2:20-2:40 pm - Discussion

2:40-3:15 pm - LIVE CASE

3:15-3:30 pm - Break

VSD & STENTS

Moderators: Charles E. Mullins, MD; Dietmar Schranz, MD & Daniel Gruenstein, MD

3:30-3:45 pm - Hybrid Approach to RVOT Obstruction
- Shengshou Hu, MD

3:45-4:00 pm - Endoscopic Guidance in the O.R.
- Alistair Phillips, MD

4:00-4:15 pm - Intraoperative Stents - Evan Zahn, MD

4:15-4:30 pm - Exit Angiography - Ralf J. Holzer, MD

4:30-4:45 pm - Periventricular MVSD Closure - Catheter Based - Ziyad M. Hijazi, MD

4:45-5:00 pm - Periventricular MVSD Closure - Surgical Based - Nikolay V. Vasilev, MD

5:00-5:15 pm - Discussion

5:15-5:30 pm - WRAP-UP - John P. Cheatham, MD & Mark Galantowicz, MD

6:30 pm - Buses Leave Hotel for Gala Dinner

7:00-11:00 pm - Gala Dinner at The Party Barn with Entertainment & Dancing - International Sports Theme

Remember to check with the reception desk for any last minute changes to the schedule.

ISHAC: THURSDAY MORNING SESSIONS

ISHAC Directors: *John P. Cheatham, MD & Mark Galantowicz, MD*

7:00-7:45 am - Continental Breakfast, Posters & Displays

7:45-8:00 am - Update & Announcements

- *John P. Cheatham, MD & Mark Galantowicz, MD*

8:00-9:00 am - KEYNOTES (see speaker bios on page 14)

- **Having an Idea and Bringing it to Reality . . . the Melody Experience & Beyond** - *Philipp Bonhoeffer, MD*
- **Characteristics of a Successful Hybrid Program** - *John G. Byrne, MD*

9:00-9:20 am - Discussion

9:20-10:00 am - LIVE CASE

10:00-10:15 am - Break

NEW MATERIALS & TECHNOLOGIES FOR HYBRID THERAPIES

Moderators: Christopher Caldarone, MD & David Zhao, MD

10:15-10:30 am - Biodegradable Stents - *Dietmar Schranz, MD*

10:30-10:45 am - 3-D Rotational Angiography - *Evan Zahn, MD*

10:45-11:00 am - MRI Imaging - *Philipp Bonhoeffer, MD*

11:00-11:15 am - Histotripsy - *Zhen Xu, PhD*

11:15-11:30 am - Discussion

TOP ABSTRACT PRESENTERS

*Moderators: Ziyad M. Hijazi, MD; Mario Carminati, MD;
Timothy F. Feltes, MD & Shengshou Hu, MD*

11:30-11:40 am - #1 Abstract - TBD

11:40-11:50 am - #2 Abstract - TBD

11:50 am-12:00 pm - #3 Abstract - TBD

12:00-1:00 pm - Box Lunch Provided

**12:15-1:00 pm - Designing Hybrid Suites Outside Columbus . . .
Obstacles & Rewards** - *Evan Zahn, MD & Daniel Gruenstein, MD*

Be sure to see the
CONGENITAL CARDIOLOGY TODAY
ISHAC Job Board Poster

ISHAC: THURSDAY AFTERNOON SESSIONS

OTHER HYBRID THERAPIES

Moderators: Curt Daniels, MD & Alistair Phillips, MD

1:00-1:20 pm - Hybrid Approach in Adult Cardiac Surgery
- David Zhao, MD

1:20-1:40 pm - Current Therapy with Aortic Valves
- Ziyad M. Hijazi, MD

1:40-2:00 pm - Possibilities for Pulmonary Valves
- Philipp Bonhoeffer, MD

2:00-2:20 pm - Percutaneous Transapical Perivalve Leak Closure Using CT Guidance - Carlos Ruiz, MD

2:20-2:40 pm - Possibilities in Fetal Cardiac & Pulmonary Interventions - Carlos Pedra, MD

2:40-3:00 pm - Discussion

3:00-3:15 pm - Break

3:15-4:00 pm - LIVE CASE

4:00-4:15 pm - How Should We Determine Reality from Fairytales in Evaluating Outcomes for New Therapies?
- William T. Mahle, MD

4:15-4:20 pm - Discussion

4:20-5:00 pm - Hybrid Nightmare Cases - *Moderator:* Ralf Holzer, MD; *Panel:* Mario Carminati, MD; Carlos Ruiz, MD; Richard G. Ohye, MD & Christopher Caldarone, MD

5:00-5:15 pm - Closing Remarks - John P. Cheatham, MD & Mark Galantowicz, MD

OPTIONAL

Ohio State Football Game
Experience Fall & the Spirit in the "Big 10"

6:30 pm - Buses Leave Hilton to OSU

8:00 pm - OSU v. Marshall

Buses Return to Hilton After the Game

ISHAC: KEYNOTE SPEAKERS - Philipp Bonhoeffer, MD & John G. Byrne

Philipp Bonhoeffer, MD, FSCAI

Recipient of ETHICA Award

Grand Scientific Prize of Lefoulon-Delalande de L'Institute de France

Interventional Cardiologist

London, United Kingdom

Philipp Bonhoeffer, MD grew up in Germany, trained in medicine in Milan, Italy and specialized in Cardiology in Pavia. In 1996 he became the Director of the Catheterisation Laboratory at the Necker Hospital in Paris, France. In 2001 he moved to Great Ormond Street Hospital in London where he later became the Head of Cardiology and Professor of Cardiology at the Institute of Child Health at University College of London.

Early in his career Dr. Bonhoeffer showed an interest in the strategic organization of cardiology in developing countries, specifically in East Africa, where his interest in cardiovascular research led to the design of a cost-effective catheter for the treatment of mitral stenosis (Multi-Track System). In 1999 he began a research program with the aim of replacing the pulmonary valve without open heart surgery. He performed the world's first human trans-catheter heart valve implantation in France in September 2000. In 2004 he founded, with Carlos Ruiz, the *Transcatheter Valve Symposium* which joined *EuroPCR* in 2007. In 2003 he was the winner of the ETHICA award shared with Prof. Alain Cribier. He was awarded the Grand Scientific Prize of Lefoulon-Delalande de L'Institute de France, which was shared with Prof. Francis Fontan in 2006. Dr. Bonhoeffer is also an accomplished concert musician who has played to audiences worldwide.

John G. Byrne, MD

William S. Stoney Professor and Chairman

Department of Cardiac Surgery

Professor of Medicine in Cardiology

Vanderbilt University School of Medicine

Surgeon-in-Chief

Vanderbilt Heart and Vascular Institute

John G. Byrne, MD is the William S. Stoney Professor and Chairman of the Department of Cardiac Surgery at Vanderbilt University in Nashville, Tennessee. He is also Professor of Medicine in Cardiology, and the Co-Director and Surgeon-in-Chief of the Vanderbilt Heart and Vascular Institute.

Before moving to Vanderbilt in 2004, Dr. Byrne was Associate Chief and Residency Program Director in the Division of Cardiac Surgery at the Brigham & Women's Hospital and Associate Professor of Surgery at Harvard Medical School, Boston, MA. Dr. Byrne, a graduate of the University of California, Davis, received his medical degree in 1987 from Boston University. His postdoctoral training was completed at the University of Illinois in Chicago and the Brigham & Women's Hospital, Boston. Dr. Byrne is the author of more than 125 peer-reviewed articles in cardiac surgery and related areas. He serves on the editorial board of the *Journal of Thoracic and Cardiovascular Surgery* and is a guest examiner of the American Board of Thoracic Surgery. He is board certified in general and cardiothoracic surgery. His clinical interests include aortic root surgery, valve surgery, and Hybrid procedures. With his colleagues in cardiology Dr. Byrne developed the Hybrid operating room and together built the heart program, which now performs over 2000 major cardiac surgical procedures per year, including the adult and congenital programs.



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