HFSA 2021

ANNUAL SCIENTIFIC MEETING

WHERE **HEART FAILURE TEAMS** GATHER

FINAL Program

hfsa.org/annualscientificmeeting

Imaging In ATTR-CM — This is What We See

JOIN US

CONTEMPORARY FORUM
PRESENTATION FROM
IONIS PHARMACEUTICALS

Friday, Sept. 10th

7:30pm – 9:00pm Colorado A Meeting Room

PRESENTERS:

Sarah Cuddy, MBBCH

Associate Cardiologist at the Brigham and Women's Hospital, Boston

Instructor of Harvard Medical School

Prof. Marianna Fontana

Director of the University College London cMRI unit at the Royal Free Hospital

Professor of Cardiology and Honorary Consultant at the National Amyloidosis Centre, at University College London, UK

Ahmad Masri, MD MS

Director, Cardiac Amyloidosis Program

Director, Hypertrophic Cardiomyopathy Center

Assistant Professor of Medicine

Oregon Health & Science University

Mat Maurer, MD

Arnold and Arlene Goldstein Professor of Cardiology

Professor of Medicine

Columbia University Irving Medical Center

New York Presbyterian Hospital

This Industry Contemporary Forum is not part of the scientific program as planned by the HFSA Program Committee. This event is neither sponsored nor endorsed by HFSA. This event does not qualify for continuing education credits.

Ionis Pharmaceuticals is proud to sponsor the HFSA Annual Scientific Meeting 2021.

We encourage attendees to stop by Booth 102 to learn more about Ionis and our CARDIO-TTRansform clinical trial, which is currently enrolling. CARDIO-TTRansform is a study designed to evaluate the efficacy and safety of AKCEA-TTR-LRx (eplontersen) in participants with Transthyretin-Mediated Amyloid Cardiomyopathy (ATTR CM).

Learn more here: ionistrials.com/cardio-ttransform

IONIS™

VISIT US: BOOTH 102

HFSA 2021 ASM ••• FINAL PROGRAM

Table of Contents

HFSA 2021 President's Message

I'm excited to welcome you to Denver and virtually for the 25th Annual Scientific Meeting of the Heart Failure Society of America. ASM is THE place to be for all healthcare professionals and teams involved in heart failure, and I am thrilled that we are able to gather in person and online this year.

We've faced some difficult times over the past two years, both as providers caring for a high-risk category of patients in the midst of a pandemic and as individuals trying to navigate through our own uncertainty, distress and wellness in doing what is right for our loved ones and patients. We dug our heels in and tirelessly treated patients, offered our services to support COVID-19 units, and kept the momentum up for conducting research, writing, and presenting innovative and important science to improve treatment and quality of life of patients living with heart failure. I cannot stress enough how proud I am to serve alongside all members of HFSA who've helped to develop and maintain a strong foundation of knowledge and practice.

I am also proud that we were able to hold a successful virtual ASM in 2020 and look forward to our hybrid meeting this year – and what a year it will be! The numbers say it all:

- Over 340 abstracts
- Over 35 exhibitors
- 47 Scientific Sessions
- 8 Industry Expert Theaters
- 8 Contemporary Forums
- 8 Satellite Symposia
- 4 Workshops

In a year that is still facing uncertainty, the numbers reflecting ASM support are incredible and appreciated by all-fellow presenters and attendees. I know our meeting will be a great success this year and I look forward to being together again in 2022 in Washington, D.C., at the National Harbor Gaylord.

HFSA has had an exciting and busy 2021. We released the *Universal Definition and Classification of Heart Failure* alongside the Heart Failure Association-European Society of Cardiology (HFA-ESC) and the Japanese Heart Failure Society (JHFS) in collaboration with several heart failure societies around the world. It provides a definition that is clinically relevant and simple but conceptually comprehensive. This was promoted widely across the community, particularly fueled by the enthusiastic new editorial team at the *Journal of Cardiac Failure.*

We also launched a new online community – HFSA Connect – which features a private community where HFSA members can ask questions, share insights, and have conversations with colleagues around the world. We also held a successful Heart Failure Awareness event in February and a Board Certification Review course that was jam-packed with education.

We will soon launch the Optimal Medical Therapy in Heart Failure (OMT-HF) Certificate Program, which offers education to the non-specialists serving on your cardiology team, as well as a Heart Failure Certification Program (HF-Cert), that establishes a first-ever certification that is dedicated solely to themes associated with heart failure diagnosis, assessment, management and evaluation. HFSA also has several scientific statements set to be launched in the coming months, including one on COVID-19. Watch for it!

I urge you to visit the HFSA website, subscribe to the Weekly News Round-Up, follow HFSA on Twitter @HFSA, and engage – join a committee, sign up for a committee or task force, join the team of Social Media Catalysts, or otherwise find a way to get involved with HFSA. By doing so, you will not only help to advance the mission of HFSA, but you'll also help to advance the heart failure field.

I wish all of our HFSA 2021 attendees a productive and exciting meeting!

ABOUT HFSA / LEADERSHIP

About the Heart Failure Society of America

The Heart Failure Society of America (HFSA) is a multidisciplinary organization working to improve and expand heart failure care through collaboration, education, research, innovation, and advocacy. HFSA members include physicians, scientists, nurses, nurse practitioners, pharmacists, and patients.

2021 HFSA Board of Directors

2021 Elected Officers

President . . . . . Nancy M. Albert, RN, PhD FHFSA
President-Elect . . . . . Mark Drazner, MD, MSC
Secretary . . . . . Mona Fiuzat, PharmD, FHFSA
Treasurer . . . . . John Teerlink, MD, FHFSA
Immediate Past President . . . . . Biykem Bozkurt, MD, PhD FHFSA

Board Members

Maria Rosa Costanzo, MD
James Fang, MD, FHFSA
Michael Felker, MD, FHFSA
Gregg C. Fonarow, MD, FHFSA
Michael Givertz, MD, FHFSA
Colleen McIlvennan, PhD,DNP, ANP, FAHA, FHFSA

2021 Annual Scientific Meeting Program Committee

2021 Chair

Larry Allen, MD, MHS, FHFSA

2021 Co-Chairs

Katherine E. Di Palo, PharmD, BCACP, BCGP, FHFSA
Walter J. Koch, PhD
Marianne R. Piano, PhD, RN

Committee Members

David Lanfear, MD, MS – Chair
Rob DiDomenico, PharmD - Co-Chair
Daniel Garry, MD, PhD - Co-Chair
Cheryl Westlake, PhD, RN- Co-Chair
Alpesh Amin, MD, MBA
Mosi Bennett, MD, PhD
Akshay Desai, MD, MPH
Teri Diederich, NP
Megan Fraser, DNP, ANP-C
Alanna Morris, MD, MSc
Ajith Nair, MD
Amil Shah, MD, MPH
Jeffrey Teuteberg, MD
Sandip Zalawadlya, MD
Amrut Ambardekar, MD
Timothy Fendler, MD
Ashley Hardin, MD
Line Kemeyou, MD
Melissa Owen, RN, PhD
Jo Ellen Rodgers, PharmD
Emily Tsai, MD

CORPORATE MEMBERS *(as of 2021)*

HFSA Corporate Members

GOLD Level

ABIOMED — Recovering hearts. Saving lives.

AstraZeneca

Boehringer Ingelheim

Lilly

Cytokinetics

IMPULSE DYNAMICS — Hope is Here

NOVARTIS

Pfizer

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Alnylam PHARMACEUTICALS

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BRONZE Level

Abbott

Boston Scientific — Advancing science for life™

CVRx®

bridgebio | eidos — a bridgebio company

GETINGE

Medtronic

nuwellis™ — Restoring Fluid Balance. Transforming Care.

Otsuka

scPharmaceuticals®

Stealth BIOTHERAPEUTICS

Learn more about becoming an HFSA Corporate Member online at **https://hfsa.org/corporatemembership**.

GENERAL MEETING INFORMATION – IN-PERSON

Gaylord Rockies Hotel and Conference Center

All in-person meeting activities will be held in the Gaylord Rockies Hotel and Conference Center. All virtual meeting activities will be held in the Virtual Meeting Platform accessible to registered attendees at **meeting.hfsa.org**. Additional meeting information can be found in the following pages.

Timing

All schedules are listed in Mountain Daylight Time.

Registration Hours

The registration area will be located outside the Aurora Ballrooms on Level 2 (Lobby Level) of the Gaylord Rockies Hotel & Convention Center.

Thursday, September 9	12:00 PM – 5:00 PM
Friday, September 10	8:00 AM – 7:00 PM
Saturday, September 11	6:30 AM – 6:00 PM
Sunday, September 12	6:30 AM – 5:00 PM
Monday, September 13	6:30 AM – 2:00 PM

Included in registration fee:

In-Person + Virtual

Access to all meeting activities including in-person live sessions, exhibit hall, networking receptions, and more at the fabulous Gaylord Rockies. In addition, in-person attendees will also have access to the same virtual offerings such as livestreamed sessions if you choose to enjoy a session from your hotel room, an outdoor space, or elsewhere, and OnDemand recordings.

Virtual Only

Select livestream sessions and session recordings available OnDemand post-meeting. Please view the Schedule at a Glance (page 17) or the Virtual Meeting Platform at **meeting.hfsa.org** for virtual sessions.

Nurse Networking Luncheon

Pre-registration required. Stop by the registration desk to see if there is still room available.

Saturday, September 11 | 12:15 PM – 1:15 PM

Sponsored by ASM Networking Platinum Sponsor Novartis

Exhibit Hall Hours

Friday, September 10	6:00 PM – 7:30 PM
Saturday, September 11	9:30 AM – 10:00 AM 12:00 PM – 2:00 PM 3:00 PM - 3:30 PM 6:00 PM – 7:30 PM
Sunday, September 12	9:15 AM – 9:45 AM

Speaker Ready Room

Red Rock 10/11

Thursday, September 9	2:00 PM - 6:00 PM
Friday, September 10	7:00 AM - 6:00 PM
Saturday, September 11	7:00 AM - 5:00 PM
Sunday, September 12	7:00 AM - 5:00 PM
Monday, September 13	7:00 AM - 12:00 PM

Press Room

Red Rock 3

Friday, September 10	10:00 AM - 5:00 PM
Saturday, September 11	7:00 AM - 5:00 PM
Sunday, September 12	7:00 AM - 5:00 PM
Monday, September 13	7:00 AM - 01:00 PM

WIFI

Complimentary wifi is available in the education sessions.
Network Name: HFSA
Username: HFSA
Password: Denver

Courtesy of Bristol Myers Squibb™

Opening Reception

Exhibit Hall

Friday, September 10 . . . . . 6:00 PM - 7:30 PM

Poster Viewing Sessions &

GENERAL MEETING INFORMATION – IN-PERSON

Moderated Poster Sessions

ePoster Hub and Poster Theater – Exhibit Hall

Friday, September 10
Session I . . . . . 6:15 PM – 7:15 PM

Saturday, September 11
Session II . . . . . 12:15 PM – 1:30 PM
Poster Reception. . . . . .6:00 PM – 7:30 PM
Session III. . . . . 6:15 PM – 7:15 PM

Sunday, September 12
Session IV . . . . . 11:30 AM – 1:00 PM

Dress Code

Meeting attire is business casual. We suggest you dress in layers as meeting room temperatures often vary.

Food Policy

The Physician Payment Sunshine Act, part of the Affordable Care Act, requires that manufacturers of drug and devices report to CMS certain payments and items of value given to physicians. These items of value include meals at CME activities, such as this annual meeting. For this reason, the following food and refreshments provided at the HFSA Annual Scientific Meeting will be paid for out of registration fees and the HFSA operating budget: the Opening Reception, Poster Receptions, early morning refreshments, lunches, and coffee breaks. All coffee and tea stations, aside from continental breakfast areas will be in the Exhibit Hall.

Children

The HFSA does not allow children under the age of 16 in the Exhibit Hall at any time. Due to limited seating capacity and the technical nature of the program, children (under age 16) are not allowed into the scientific sessions.

Special Needs

The HFSA strives to hold meetings that are accessible to all. Please tell us what you require to help make your participation more enjoyable and meaningful. For questions and more information, contact Gudrun Echterhoff at **gudrun@gmimeetings.com**.

No Smoking Policy

HFSA and the Conference Center prohibit smoking in all meeting and hotel areas. Thank you for your cooperation.

Screen Recording and Photography Policy

HFSA staff members, HFSA photographers, HFSA videographers, preapproved videographers, and pre-approved photographers, are the only ones authorized to photograph and film events and virtual educational sessions throughout the meeting. Any photographs, screen shots, screen recordings, and videos taken by our HFSA Staff and HFSA photographers and videographers are used exclusively by HFSA for promotional purposes and continuing education offerings. They may be used in the society's publications, website, social media accounts, programs, or other HFSA promotional materials. If you are attending a virtual session and you do not wish to be photographed or recorded, please identify yourself via email to HFSA staff at **LPoko@hfsa.org**.

Questions

Visit the HFSA Membership Booth or the Registration Desk with questions or email HFSA staff at **info@hfsa.org**. Emailed responses may be delayed due to staff being onsite at the meeting.

Liability Statement

The Heart Failure Society of America (HFSA) cannot accept, and hereby specifically disclaims, any liability for death, injury, any loss, cost or expense suffered or incurred by any person if such loss is caused by, arises from or results from the act, default or omission of any person other than an employee or agent of HFSA. In particular, neither HFSA nor its agents can accept, and hereby specifically disclaims, any liability for losses arising from, caused by, or resulting from, the provision or non-provision of services provided by the hotels, companies, or transport operators. Neither HFSA nor its agents can accept, and hereby specifically disclaims, liability for losses suffered by reason of war including threat of war, riots and civil strife, terrorist activity, natural disaster, weather, fire, flood, drought, technical, mechanical or electrical breakdown within any premises visited by delegates and/or participants in connection with the meeting, industrial disputes, government action, regulations or technical problems that affect or may affect the services provided in connection with the meeting. HFSA is not able to warrant and does not warrant that a particular person will appear as a speaker. As a condition to any participation in or attendance at the Annual Scientific Meeting or any function associated or affiliated herewith, each attendee and participant accepts the foregoing Disclaimer.

Faculty and Abstract Reviewers

A full list of abstract reviewers can be found on the HFSA website and in the Virtual Meeting Platform.

Twitter

Tweet with us! Follow @HFSA and join the conversation on Twitter using #HFSA2021!

GENERAL MEETING INFORMATION - VIRTUAL

Virtual Meeting Platform

All virtual meeting activities will be held in the Virtual Meeting Platform accessible to registered attendees at meeting.hfsa.org.

Timing

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Included in registration fee:

Virtual Only

Select livestream sessions and session recordings available OnDemand post-meeting. Please view the Schedule at a Glance (page 17) or the Virtual Meeting Platform at **meeting.hfsa.org** for virtual sessions.

Virtual Exhibit Hall and ePoster Hall Hours

The Exhibit Halls and Poster Hall are accessible at any time for attendees.

Exhibit Hall A & B . . . . . Open 24 hours a day
(live Representatives available during Industry Chat Event times)

Poster Hall . . . . . Open 24 hours a day
(live Poster Presenters available during Poster Chat Event times)

Required Technology

The Virtual Meeting Platform supports the most current version of the popular browsers (Chrome, Safari, Edge, etc.) plus one version back. Chrome is the preferred browser.

Questions

Technical questions about the platform, including questions about required technology, live cast delays, freezing issues, etc., can be answered here: **https://eu.jotform.com/OEP_Support/freeman-virtual-support-portal**

HFSA 2021
ANNUAL SCIENTIFIC MEETING
SEPT 10-13 + Denver, CO + Virtual

Health and Safety Protocols

The health and safety of all HFSA 2021 attendees, exhibitors, HFSA staff, and event support staff is our top priority. HFSA has implemented a variety of precautions to ensure the safety of those attending the meeting onsite including:

1. Shortening sessions with lengthening transitions to allow lighter traffic flow and longer breaks to wash/sanitize hands
2. Enabling contact-less badge printouts
3. Limiting capacity in session rooms and the exhibit hall
4. Providing outdoor connection areas where attendees can view sessions live-streamed, if rooms are crowded
5. Hosting networking functions in outdoor spaces
6. Providing attendees with exhibit hall floor plans designed to ensure appropriate physical distancing and flow
7. Adding sanitizing stations throughout meeting rooms, hallways, and registration areas
8. Sanitizing all shared equipment and meeting amenities before and after each use. Including wiping down all podiums, microphones, and PowerPoint clickers between each speaker
9. All staff, vendors, and attendees will be asked to self-screen for symptoms or other risk factors of COVID-19 daily, using CDC's COVID-19 screen tool prior to admittance to meeting spaces.

Color-Coded Social Distancing Lanyards

HFSA will offer color-coded lanyards at the Registration area so attendees can visually indicate their level of comfort with social distancing. Lanyards will include:

- Green: Go! Handshakes and High Fives
- Yellow: Slow! Bumping Elbows
- Red: Stop! I'm keeping my distance, no physical contact

Visit the Health & Safety page at hfsa.org/hfsa2021 for more information.

Self-Screening

For the safety of all meeting participants, event staff, and hotel staff, please self-screen for risk factors. If you experience any of the following symptoms, please stream sessions from your hotel room until your symptoms cease and notify a member of HFSA staff at info@hfsa.org:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

We appreciate your cooperation in making HFSA 2021 a safe and healthy meeting space!

Social Distancing Outdoor Area

The Front Range Lawn area will be setup as a social distancing livestream area, where attendees are welcome to bring their personal devices to stream sessions while staying socially distanced. The schedule at a glance indicates which sessions will include a livestream.

HFSA 2021
ANNUAL SCIENTIFIC MEETING
SEPT 10-13 + Denver, CO + Virtual

NETWORKING & RECEPTIONS – ONSITE ATTENDEES

Networking and Reception Activities

Opening Reception

Friday, September 10
6:00 PM – 7:30 PM
Exhibit Hall

Nurse Networking Lunch — *By invitation only*

Saturday, September 11
12:15 PM – 1:15 PM
Exhibit Hall – HFSA Lounge
Sponsored by ASM Platinum Networking Sponsor Novartis

HF Cardiovascular Team Reception

Saturday, September 11
5:00 PM – 6:00 PM
Front Range Lawn
Sponsored by ASM Platinum Networking Sponsor Novartis

Speed Mentoring — *By invitation only*

Saturday, September 11
5:00 PM – 6:00 PM
Front Range Lawn

Women in HF Reception

Saturday, September 11
6:00 PM – 7:30 PM
Exhibit Hall – HFSA Lounge

Cocktail Chat with Meena Srinivasan, MA - *Connecting the Dots with a Successful Woman Executive*
Meena Srinivasan is the Chief Financial Officer at Ginger.io. She is the ex-CFO of Fitbit. Learn how Women in Technology have overcome their challenges and become successful. Join the HFSA Women in Heart Failure Committee for a Cocktail Chat and Networking Reception to connect the dots between Women in Technology and Medicine.
Sponsored by ASM Platinum Networking Sponsor Novartis

HFSA Town Hall

Sunday, September 12
3:30 PM – 4:30 PM
HFSA Town Hall and Social Media Lounge

President's Reception including Joint HFSA & University of Colorado Cocktail Hour

Sunday, September 12
6:30 PM – 8:00 PM
Front Range Lawn
Sponsored by ASM Platinum Networking Sponsor Novartis and the University of Colorado

Journal of Cardiac Failure Reception — *By invitation only*

Sunday, September 12
7:30 PM – 9:00 PM
Juniper Patio

FHFSA Fellows Lounge

Willow Lake 1 & 2

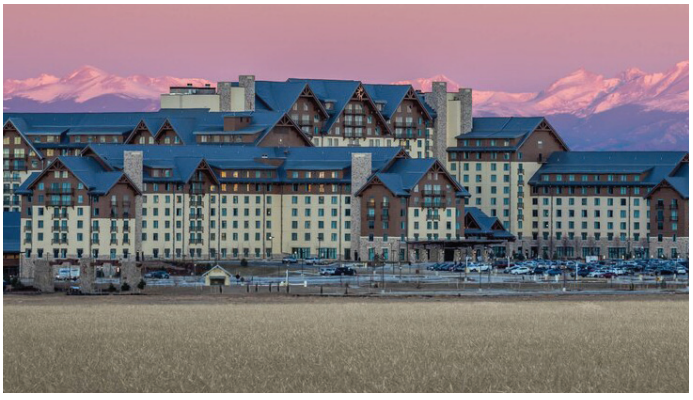
Join other Fellows of the Heart Failure Society of America in the Fellows Lounge! Open during meeting hours Friday-Sunday. Learn more about becoming an HFSA Fellow by visiting Hfsa.org/fellowship.

Meet the Editors of the JCF

Join JCF Editor-in-Chief Robert J. Mentz, MD, and Deputy Editor Anuradha Lala, MD, at the HSFA Membership Booth.
Saturday, September 11 | 12:00 PM - 1:00 PM

Thank you the HFSA ASM Platinum Networking Sponsor

NOVARTIS



ATTENDEE CONTESTS

#HFSAChallenge21 Twitter Challenge – Onsite Attendees

Compete with onsite attendees in an exciting scavenger hunt through the meeting space! Each day find the challenge spot featuring the challenge for that day. Complete the activity and you'll be entered to win.

One entry per attendee per day.

Grand Prize Winner: One (1) winner will be chosen per day to receive a $50 Amazon gift card! Tweet daily for a chance to win multiple times!

*HFSA2021 Selfie Challenge Signs – look for them onsite to play!

#HFSAChallenge21 Twitter Challenge – Virtual Attendees

Attendees registered for Virtual Only can also participate in the daily Twitter challenge! Simply tweet a photo that matches that day's challenge, tag it #HFSAChallenge21 and #HFSA2021, and you'll be entered into daily drawings!

One entry per attendee per day.

Friday, September 10: Get **nostalgic** with a throwback photo of a past HFSA meeting

Saturday, September 11: Snap a selfie in your home or office setup

Sunday, September 12: Tell us about your favorite presentation, speaker, poster or exhibitor

Monday, September 13: Tell us why you can't wait for #HFSA2022! Who are you looking forward to seeing in person, what sessions are you most excited to see? #Seeyouin22

Grand Prize Winner: One (1) winner will be chosen per day to receive a $50 Amazon gift card! Tweet daily for a chance to win multiple times!

No HFSA Annual Scientific Meeting sponsorship revenue is being utilized to fund prizes for attendee contests and raffles. All prizes are being funded solely by the Heart Failure Society of America.

SUPPORTING COMPANIES

Thank you to our Sponsors, Supporters, and Partners!

Satellite Symposium (CEUs)

Supported by unrestricted educational grants from:

American Regent
Amyloidosis Research Consortium
AstraZeneca Pharmaceuticals
Bristol Myers Squibb
Boehringer Ingelheim Pharmaceuticals, Inc. and Eli Lilly and Company
Cytokinetics Incorporated
Eidos Therapeutics
Ionis Pharmaceuticals
Merck & Co., Inc
Pfizer
Vifor Pharma

Hands-on & Interactive Workshops (CEUs)

The Heart Failure Society of America acknowledges the following for providing an unrestricted educational grant and/or in-kind donations to support this year's workshops.

Supported by unrestricted educational grants from:
Abbott
ABIOMED

Supported by in-kind education donations from:
Abbott
ABIOMED
ActiCare Health
Eko
Medtronic
Vyaire Medical

Industry Expert Theaters (No CEUs)

Abbott
Boehringer Ingelheim Pharmaceuticals, Inc./Lilly USA, LLC
Boston Scientific
CareDx, Inc.
CVRx
Cytokinetics
Getinge
Merck & Co., Inc.

Contemporary Forums (No CEUs)

ABIOMED
Alnylam Pharmaceuticals
Bristol Myers Squibb
Cytokinetics
Impulse Dynamics
Ionis Pharmaceuticals, Inc.
Pfizer

Pre-Meeting Workshop (No CEUs)

ABIOMED

Additional Meeting Supporters

AstraZeneca Pharmaceuticals
Boehringer Ingelheim Pharmaceuticals, Inc./Lilly USA, LLC
Bristol Myers Squibb
Cytokinetics
Eidos Therapeutics
Medtronic
Merck & Co., Inc.
Novartis Pharmaceuticals Corporation
Ionis Pharmaceuticals, Inc.
Pfizer

HFSA 2021
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SEPT 10-13 + Denver, CO + Virtual

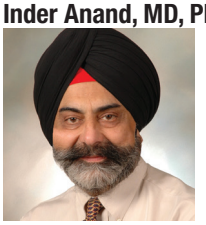
2021 AWARD RECIPIENTS

Visit hfsa.org/annualscientificmeeting/award-winners for complete biographies on all winners.

2021 Lifetime Achievement Award

Supported by Cytokinetics

Inder Anand, MD, PhD



The HFSA Lifetime Achievement Award is presented by the Executive Council of the HFSA to recognize a lifetime body of work by an individual who has made a significant and sustained contribution to the field of heart failure.

2021 Lifetime Achievement Award

Supported by Cytokinetics

Lynne Warner Stevenson, MD

The HFSA Lifetime Achievement Award is presented by the Executive Council of the HFSA to recognize a lifetime body of work by an individual who has made a significant and sustained contribution to the field of heart failure.

2021 HFSA Nursing Research Leadership Award

Supported by Cytokinetics

Victoria Vaughan Dickson, PhD, RN, FAHA, FHFSA, FAAN

HFSA's Nursing Research Leadership Award honors those with extraordinary achievement and excellence in nursing science that improves outcomes of patients with heart failure.

2021 HFSA Nursing Clinical Excellence Leadership Award

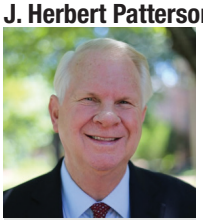
Supported by Bristol Myers Squibb

Lydia Albuquerque, DNP, RN, ACNP-BC, CCRN

HFSA's Nursing Clinical Excellence Leadership Award honors and supports clinical nursing excellence by a registered nurse who works directly with heart failure (HF) patients, their families, and other nurses providing HF services.

2021 Distinguished HFSA Member Award

J. Herbert Patterson, PharmD, FHFSA



The Distinguished HFSA Member Award is intended to celebrate a member's body of work in the field of heart failure and their work and service to the Heart Failure Society of America. The Award is intended for non-physician members of HFSA.

2021 HFSA Pioneer Award

JoAnn Lindenfeld, MD, FHFSA

The Pioneer Award is given to an innovator and pioneer in the field of heart failure. The Award notes the HFSA member's innovative role in heart failure which helps to set the stage for future generations of heart failure providers.

2021 AWARD RECIPIENTS

Visit **hfsa.org/annualscientificmeeting/award-winners** for complete biographies on all winners.

2021 HFSA Distinguished Leadership Award

Mariell Jessup, MD

The Distinguished Leadership Award celebrates a leader in the field of heart failure in the areas of education and mentorship.

2021 Tom Force Lectureship Keynote Lecture: *Kinase Signaling in Maladaptive Cardiac Hypertrophy*

Presented by
Jeffrey Molkentin, PhD

Nurse Investigator Award - Research and Clinical

Selected at the HFSA Annual Scientific Meeting 2021
Session: Monday, September 13 | 9:30 AM – 10:30 AM | Red Rock 8/9
Announcement: Monday, September 13 | 12:15 PM | Colorado A

JNC New Investigator Award - Basic, Translational, and Clinical

Selected at the HFSA Annual Scientific Meeting 2021
Session: Monday, September 13 | 9:30 AM – 10:30 AM | Colorado D
Announcement: Monday, September 13 | 12:15 PM | Colorado A

VISIT US AT **BOOTH 509**

VERQUVO is the **FIRST AND ONLY** HFrEF treatment **INDICATED EXCLUSIVELY** to reduce the risk of CV death and HF hospitalization (HFH) following hospitalization for HF or outpatient IV diuretic use in adults with symptomatic chronic HF and ejection fraction less than 45%.

Help keep patients moving forward following a worsening HF event

CV, cardiovascular; HF, heart failure; HFH, heart failure hospitalization; HFrEF, heart failure with reduced ejection fraction; IV, intravenous.

Indications and Usage

VERQUVO is indicated to reduce the risk of cardiovascular death and heart failure (HF) hospitalization following a hospitalization for HF or need for outpatient IV diuretics, in adults with symptomatic chronic HF and ejection fraction less than 45%.

SELECTED SAFETY INFORMATION

WARNING: EMBRYO-FETAL TOXICITY

Females of reproductive potential: Exclude pregnancy before the start of treatment. To prevent pregnancy, females of reproductive potential must use effective forms of contraception during treatment and for one month after stopping treatment. Do not administer VERQUVO to a pregnant female because it may cause fetal harm.

- VERQUVO is contraindicated in patients with concomitant use of other soluble guanylate cyclase (sGC) stimulators.
- VERQUVO is contraindicated in pregnancy.
- **Embryo-Fetal Toxicity:** Based on data from animal reproduction studies, VERQUVO may cause fetal harm when administered to a pregnant woman. Advise females of reproductive potential of the potential risk to a fetus. Obtain a pregnancy test before the start of treatment. Advise females of reproductive potential to use effective contraception during treatment with VERQUVO and for at least one month after the final dose.
- In a clinical trial, the most commonly observed adverse events with VERQUVO vs placebo, occurring at a frequency ≥5%, were hypotension (16% vs 15%) and anemia (10% vs 7%).
- Concomitant use of VERQUVO with PDE-5 inhibitors is not recommended due to the potential for hypotension.
- There are no data on the presence of vericiguat in human milk, the effects on the breastfed infant, or effects on milk production. Because of the potential for serious adverse reactions in breastfed infants from VERQUVO, advise women not to breastfeed during treatment with VERQUVO.

Before prescribing VERQUVO, please read the accompanying Prescribing Information, including the Boxed Warning about embryo-fetal toxicity. The Medication Guide also is available.

MERCK

Verquvo® (vericiguat) tablets 2.5 mg, 5 mg, 10 mg

SCHEDULE-AT-A-GLANCE

*All times in Mountain Time (MT). *As of September 2, 2021. Schedule subject to change.

LV LIVE OD ON DEMAND

KEY: CEUs | Contemporary Forum | Industry Expert Theater | Networking | Satellite Symposia | Scientific Session | Workshop

FRIDAY, SEPTEMBER 10

		LOCATION
1:00 PM – 5:00 PM	Heart Recovery is Possible (No CEUs) *Sponsored by ABIOMED*	Colorado B
	TEACH Workshop *Joint session with Cardiovascular Research Foundation (CRF)* *Seating limited; first come, first served*	*Rescheduled. Details to follow.*
6:00 PM – 7:30 PM	Opening Reception *Exhibit Hall Open*	Exhibit Hall
6:15 PM – 7:15 PM	Poster Viewing Session I	ePoster Hub
	Moderated Poster Session I	Poster Theater
	When CRT is Not an Option: Barostim for HFrEF with Narrow QRS (No CEUs) *Sponsored by CVRx*	Industry Expert Theater 1
	Addressing the Unmet Need for Patients with Heart Failure – Improving Identification for Modern Device (No CEUs) *Sponsored by Abbott*	Industry Expert Theater 2
7:30 PM – 8:30 PM	Imaging in ATTR-CM – This Is What We See (No CEUs) *Sponsored by Ionis Pharmaceuticals, Inc.*	Colorado A
	Easing the Burden of Hypertrophic Cardiomyopathy: Progress in Understanding & Addressing its Pathophysiology *Supported by an educational grant by Bristol Myers Squibb*	Colorado B

SATURDAY, SEPTEMBER 11

		LOCATION
7:00 AM – 8:00 AM	Annual Forum – Novel Care Models to Improve Value and Address Disparities in HF (No CEUs) *Sponsored by Cytokinetics*	Colorado A
8:15 AM – 9:30 AM	CCM® – A New Category of Device-Based Interventional HF Therapy (No CEUs) *Sponsored by Impulse Dynamics*	Colorado A
	Bridging the Iron Deficiency Chasm in Heart Failure: The Revolutionary Role of Intravenous Iron in Optimizing Outcomes *Supported by an independent educational grant from American Regent*	Colorado B
	Cardiac Amyloidosis: What Heart Failure Clinicians Need to Know (CEUs) *Supported by education grants provided by the Amyloidosis Research Consortium, Eidos Therapeutics, Ionis Pharmaceuticals and Pfizer*	Colorado C
10:00 AM – 12:00 PM	Opening Remarks: President's Address and Award Announcements	Aurora Ballroom
	Plenary Session: Lessons for HF Care from the Pandemic: Imagining a Better New Normal (CEUs)	Aurora Ballroom
12:00 PM – 2:00 PM	Lunch Break *Exhibit Hall Open*	Exhibit Hall
12:15 PM – 1:15 PM	Moderated Poster Session II	Poster Theater
	Nurse Networking Lunch *By invitation only • Sponsored by ASM Platinum Networking Sponsor: Novartis*	Exhibit Hall: HFSA Lounge

SCHEDULE-AT-A-GLANCE

*All times in Mountain Time (MT). *As of September 2, 2021. Schedule subject to change.

LV LIVE OD ON DEMAND

KEY: CEUs | Contemporary Forum | Industry Expert Theater | Networking | Satellite Symposia | Scientific Session | Workshop

SATURDAY, SEPTEMBER 11 [CONTINUED]

12:15 PM –1:30 PM		Poster Viewing Session II	ePoster Hub
12:30 PM – 1:30 PM	LV OD	Implementing GDMT in Severe Heart Failure Patients – Easy or Challenging? A Debate (No CEUs) *Sponsored by Cytokinetics*	Industry Expert Theater 1
	OD	Jardiance® (empagliflozin) tablets: A Review of the Latest Data (No CEUs) *Sponsored by Boehringer-Ingelheim Pharmaceuticals, Inc., and Lilly USA, LLC*	Industry Expert Theater 2
2:00 PM – 3:00 PM	LV OD	Crash & Burn: Cardiogenic Shock in 2021	Colorado A
	LV OD	Sarcoidosis	Colorado B
	LV OD	Psychosocial Evaluation for Advanced HF Therapies: Are we evaluating patients fairly?	Colorado C
	OD	FDA Special Session – Focus on HFSA Research Network	Colorado D
	OD	The Right Heart: No More the Forgotten Side *Joint Session with the Canadian HF Society (CHFS)*	Red Rock 8/9
2:00 PM – 3:15 PM	OD	Interactive Workshop: CPET (CEUs)	Red Rock 6/7
3:30 PM – 4:30 PM	LV OD	Digesting EMPEROR-Preserved: The Evolving Treatment of HFpEF and Use of SGLT2i	Colorado A
	LV OD	Referral for Advanced HF	Colorado B
	LV OD	Beyond PVR: Assessing and Managing the Dysfunctional Right Ventricle	Colorado C
	OD	Deep Learning for HF Medicine: A Practical Primer	Colorado D
	OD	Women in HF	Red Rock 8/9
5:00 PM – 6:00 PM		HF Cardiovascular Team Reception *Sponsored by ASM Platinum Networking Sponsor: Novartis*	Front Range Lawn: Hospitality Zone
		Speed Mentoring *By invitation only*	Front Range Lawn: *Connection Zone*
6:00 PM – 7:30 PM		Poster Reception • *Exhibit Hall Open*	Exhibit Hall
		Women in HF Reception *Sponsored by ASM Platinum Networking Sponsor: Novartis*	Exhibit Hall Lounge
6:15 PM – 7:15 PM		Poster Viewing Session III	EPoster Hub
		Moderated Poster Session III	Poster Theater
6:15 PM – 7:15 PM	OD	Present and Future Innovation in the Care of Heart Transplant Recipients (No CEUs) *Sponsored by CareDx, Inc.*	Industry Expert Theater 1
		A Treatment Option for Heart Failure Patients with Reduced Ejection Fraction (No CEUs) *Sponsored by Merck & Co., Inc.*	Industry Expert Theater 2
7:30 PM – 9:00 PM	LV OD	Improving the Recognition of HCM and its Progression to Heart Failure: an Expert Review of Challenging Cases (No CEUs) *Sponsored by Bristol Myers Squibb*	Colorado A
	LV OD	Demystifying Pharmacologic Therapy in HFrEF: Pivotal Opportunities to Improve Patient Outcomes (CEUs) *Supported by an independent educational grant from Vifor Pharma*	Colorado B
	LV OD	Improving Pump Function and Outcomes in Patients with Heart Failure with Reduced Ejection Fraction: Challenges and Opportunities *Supported by an independent educational grant from Cytokinetics Incorporated*	Colorado C

SCHEDULE-AT-A-GLANCE

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LV LIVE OD ON DEMAND

KEY: ✸ CEUs | Contemporary Forum | Industry Expert Theater | Networking | Satellite Symposia | Scientific Session | Workshop

SUNDAY, SEPTEMBER 12		LOCATION
6:45 AM – 7:45 AM	✸ LV OD Expert Perspectives on SGLT2 Inhibitors: Reviewing Their Role in Type 2 Diabetes, Heart Failure and Chronic Kidney Disease *Supported by an independent medical education grant from Boehringer Ingelheim Pharmaceuticals, Inc. and Eli Lilly and Company*	Colorado A
	LV OD Multispecialty Perspectives on Recognizing, Diagnosing, and Managing Polyneuropathy Caused by hATTR Amyloidosis (No CEUs) *Sponsored by Alnylam Pharmaceuticals*	Colorado B
	LV OD Protected PCI as a Treatment Option for Heart Failure Patients (No CEUs) *Sponsored by ABIOMED*	Colorado C
8:00 AM – 9:15 AM	✸ LV OD Recent Advances and Update on Myocarditis *Joint Session with the Myocarditis Foundation*	Colorado A
	✸ LV OD Applying Genetics & Genomics in HF: Current Landscape & Future Directions	Colorado B
	✸ LV OD Substance use in Transplant and LVAD Candidates	Colorado C
	✸ OD COVID and the HF Clinician	Colorado D
	✸ OD Burned Out: Identifying and Managing Clinician Burnout and Mental Wellness *Joint Session with the American Association of Heart Failure Nurses (AAHFN)*	Red Rock 8/9
8:00 AM – 9:30 AM	✸ Hands-On Workshop: Acute Management of Cardiogenic Shock (CEUs) *Seating limited; first come, first served*	Red Rock 6/7
9:45 AM – 11:15 AM	✸ LV OD Late Breaking Clinical Trials I	Colorado A
	LV OD Cardio-oncology	Colorado B
	LV OD International Session - Universal Definition and Classification of HF *Joint Session with the Heart Failure Association of the European Society of Cardiology (HFA-ESC) and the Japanese Heart Failure Society (JHFS)*	Colorado C
	OD Optimizing LVAD Management	Colorado D
	OD Failing Organs in Patients with Advanced HF, Will a Cardiac Fix Fix the Rest?	Red Rock 8/9
11:15 AM – 1:15 PM	Lunch Break • *Exhibit Hall Open*	Exhibit Hall
11:30 AM – 1:00 PM	Poster Viewing Session IV	ePoster Hub
11:45 AM – 12:45 PM	Moderated Poster Session IV	Poster Theater
	OD HeartLogic™ Clinical Data and Integration Into Clinical Practice (No CEUs) *Sponsored by Boston Scientific*	Industry Expert Theater 1
	OD Deceptively Simple Problem of Cardiogenic Shock (No CEUs) • *Sponsored by Getinge*	Industry Expert Theater 2
1:30 PM – 2:45 PM	✸ LV OD Innovation in Heart Transplant: The Future of the Field	Colorado A
	✸ LV OD HFpEF	Colorado B
	✸ LV OD Role of Diet, Nutrition, & Body Composition in Patients with HF	Colorado C
	✸ OD Dismantling Historical Systems of Inequity to Improve Access to Advanced Heart Failure Therapies for Diverse Populations	Colorado D
3:15 PM – 4:30 PM	✸ LV OD Pulmonary Arterial Hypertension: Providing Comprehensive Care Based on Risk	Colorado A
	✸ LV OD Virtual Health	Colorado B
	✸ LV OD Best of *Journal of Cardiac Failure (JCF)* and *HF Journal* Round Table	Colorado C
3:15 PM – 4:30 PM	✸ OD Innovative Strategies for Better LVAD Outcomes	Colorado D

SCHEDULE-AT-A-GLANCE

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LV LIVE OD ON DEMAND

KEY: CEUs | Contemporary Forum | Industry Expert Theater | Networking | Satellite Symposia | Scientific Session | Workshop

SUNDAY, SEPTEMBER 12 [CONTINUED]			LOCATION
3:30 PM – 4:30 PM		HFSA Town Hall	HFSA Town Hall (Level 2)
3:15 PM – 6:15 PM	CEUs OD	Excellence in Translational Science (CEUs) • Thomas L. Force Memorial Lecture Reception to follow	Adams Ballroom
5:00 PM – 6:00 PM	Contemporary Forum OD	Recognizing Transthyretin Amyloid Cardiomyopathy (ATTR-CM) in practice: Highlighting the patient journey from diagnosis to treatment (No CEUs) *Sponsored by Pfizer*	Colorado A
	Industry Expert Theater CEUs LV OD	SGLT2 Inhibition and Heart Failure: Translating the Evidence to Clinical Practice (CEUs) *Supported by an educational grant from AstraZeneca Pharmaceuticals*	Colorado B
	Industry Expert Theater CEUs LV OD	Emergence of Novel Therapies for the Management of HFrEF *Supported by an educational grant from Merck & Co., Inc*	Colorado C
6:30 PM – 8:00 PM		President's Reception *including* Joint HFSA & University of Colorado Cocktail Hour *Sponsored by ASM Platinum Networking Sponsor: Novartis and the Univ. of Colorado*	Front Range Lawn
7:30 PM – 9:00 PM		*Journal of Cardiac Failure* Reception *By invitation only*	Juniper Patio (Level 1)

MONDAY, SEPTEMBER 13			LOCATION
8:00 AM – 9:15 AM	Scientific Session CEUs LV OD	Reexamining the 2018 Change in Heart Transplant Allocation Decisions: Are We Better Off Now?	Colorado A
	Scientific Session CEUs LV OD	Defining Constructs of HF: Biomarkers to Symptoms	Colorado B
	Scientific Session CEUs LV OD	Emerging Devices/Procedures for Heart Failure	Colorado C
	Scientific Session CEUs OD	Care Transitions: Methods, Medications, Metrics, and More!	Red Rock 8/9
9:30 AM – 10:30 AM	Scientific Session CEUs LV OD	DEBATE: Optimal Medical Therapy for HFrEF, Death of HVAD, and Oral Inotropy	Colorado A
	Scientific Session CEUs LV OD	Peripartum Cardiomyopathy	Colorado C
	Scientific Session CEUs OD	JNC New Investigators Award	Colorado D
	Scientific Session CEUs OD	Nursing New Investigator Award	Red Rock 8/9
11:00 AM – 12:00 PM	Scientific Session CEUs LV OD	Late Breaking Clinical Trials II	Colorado A
	Scientific Session CEUs LV OD	Clinical Conundrums (Multidisciplinary Case Discussion)	Colorado B
	Scientific Session CEUs LV OD	Revascularization in HF *Joint Session with the Inter-American Society of Cardiology (IASC)*	Colorado C
	Scientific Session CEUs OD	Unintended Side Effects: Polypharmacy, Adherence, & Financial Toxicity of Evolving GDMT for HF	Colorado D
12:15 PM – 1:15 PM	Scientific Session CEUs LV OD	Hyde Park *JNC and Nursing Award Announcements*	Colorado A
	Scientific Session CEUs LV OD	Cardiac Amyloidosis	Colorado B
	Scientific Session CEUs OD	*Joint Session with the Korean Society of Heart Failure (KSHF)*	*Rescheduled. Details to follow.*
1:15 PM		Meeting Adjourns	
VIRTUAL ONLY	Workshop	Remote HF Monitoring (No CEUs) *Virtual Only*	OnDemand *Watch at your convenience*

Satellite Symposia (CEUs)

Easing the Burden of Hypertrophic Cardiomyopathy: Progress in Understanding & Addressing its Pathophysiology

Friday, September 10, 2021
7:30 PM – 8:30 PM
Colorado B
Chair: Daniel Jacoby, MD
Supported by an educational grant by Bristol Myers Squibb

Bridging the Iron Deficiency Chasm in Heart Failure: The Revolutionary Role of Intravenous Iron in Optimizing Outcomes

Saturday, September 11, 2021
8:15 AM – 9:30 AM
Colorado B
Chair: Stefan Anker, MD, PhD
Supported by an independent educational grant from American Regent

Cardiac Amyloidosis: What Heart Failure Clinicians Need to Know

Saturday, September 11, 2021
8:15 AM – 9:30 AM
Colorado C
Chair: Mazan Hanna, MD
Supported by education grants provided by the Amyloidosis Research Consortium, Eidos Therapeutics, Ionis Pharmaceuticals and Pfizer.

Demystifying Pharmacologic Therapy in HFrEF: Pivotal Opportunities to Improve Patient Outcomes (CEUs)

Saturday, September 11, 2021
7:30 PM – 9:00 PM
Colorado B
Chair: Ileana Pina, MD, MPH
Supported by an independent educational grant from Vifor Pharma

Improving Pump Function and Outcomes in Patients with Heart Failure with Reduced Ejection Fraction: Challenges and Opportunities

Saturday, September 11, 2021
7:30 PM – 9:00 PM
Colorado C
Chair: G. Michael Felker, MD
Supported by an independent educational grant from Cytokinetics Incorporated

Expert Perspectives on SGLT2 Inhibitors: Reviewing Their Role in Type 2 Diabetes, Heart Failure and Chronic Kidney Disease

Sunday, September 12, 2021
6:45 AM – 7:45 AM
Colorado A
Chair: Richard Pratley, MD
Supported by an independent medical education grant from Boehringer Ingelheim Pharmaceuticals, Inc. and Eli Lilly and Company

SGLT2 Inhibition and Heart Failure: Translating the Evidence to Clinical Practice

Sunday, September 12, 2021
5:00 PM - 6:30 PM
Colorado B
Chair: Javed Butler, MD, MPH, MBA
Supported by an educational grant from AstraZeneca Pharmaceuticals

Emergence of Novel Therapies for the Management of HFrEF

Sunday, September 12, 2021
5:00 PM - 6:30 PM
Colorado C
Chair: Paul Armstrong, MD
Supported by an educational grant from Merck & Co., Inc.

Industry Expert Theaters (No CEUs)

Industry Expert Theaters are non-CEU educational activities that allow industry experts to provide clinical updates and educate attendees on current therapies, disease states, products, and pipeline activities. Sessions are formatted for learning and are a great way to receive higher level interaction and engagement with company representatives.

Educational activities held in the exhibit hall do not provide continuing education credit.

When CRT is Not an Option: Barostim for HFrEF with Narrow QRS

Friday, September 10, 2021
6:15 PM – 7:15 PM
Industry Expert Theater 1
Faculty
JoAnn Lindenfeld; Marat Fudim; Brian Howard

Description
Join this session to learn more about Barostim – Baroreflex Activation Therapy – as a new option for HFrEF patients with narrow QRS who are not candidates for CRT. An excellent faculty Drs. JoAnn Lindenfeld, Marat Fudim and Brian Howard will discuss the need for new device options for HFrEF, Barostim clinical evidence, patient selection and patient experience with the therapy.
Learning Objectives:
- Appreciate the need for new device therapies in HFrEF patients
- Understand the mechanism of action of autonomic modulation for heart failure
- Understand Barostim clinical evidence
- Identify appropriate patients for Barostim therapy

Sponsored by CVRx

Addressing the Unmet Need for Patients with Heart Failure – Improving Identification for Modern Device

Friday, September 10, 2021
6:15 PM – 7:15 PM
Industry Expert Theater 2
Faculty
Philip B. Adamson, MD, MSc, FACC, FRCP (Ed); Jennifer A. Cowger, MD, MS, FACC; Jacob Abraham, M.D.; Farooq Sheikh, M.D., FACC
Moderator
Philip B. Adamson, MD, MSc, FACC, FRCP (Ed)
Panelists
Jennifer A. Cowger, MD, MS, FACC
Jacob Abraham, M.D.
Farooq Sheikh, M.D., FACC

Description
Join Abbott for a panel discussion with key opinion leaders from across the country, who will discuss opportunities to optimize outcomes in patients with heart failure. They will also highlight novel innovations in heart failure management.

Addressing the Unmet Need for Patients with Heart Failure – Improving Identification for Modern Device (continued)

Learning Objectives:
- Define key factors for identifying appropriate patients who may benefit from new heart failure therapies and devices
- Review the current management and treatment options for heart failure, both preserved and reduced ejection fraction, including MitraClip™ Therapy, CardioMEMS™ HF System and HeartMate 3™ LVAD Therapy
- Identify the components of a heart team to optimize outcomes for patients with heart failure

Sponsored by Abbott

Implementing GDMT in Severe Heart Failure Patients – Easy or Challenging? A Debate

Saturday, September 11, 2021
12:30 PM – 1:30 PM
Industry Expert Theater 1
Faculty
Carolyn S.P. Lam; Nancy M. Albert; Gregg C. Fonarow

Description
Explore the complexities of implementing GDMT in severe heart failure patients. Your peers will provide highlights of the new universal definition of heart failure, identify clinical challenges and best practices in implementing GDMT, and discuss implications of the new universal definition of heart failure in the severe patient population.
Learning Objectives:
- Provide an overview of the new universal definition of heart failure
- Identify clinical challenges and best practices in implementing GDMT
- Discuss implications of the new universal definition of heart failure in the severe patient population

Sponsored by Cytokinetics

Industry Expert Theaters (No CEUs)

Jardiance® (empagliflozin) tablets: A Review of the Latest Data

Saturday, September 11, 2021
12:30 PM – 1:30 PM
Industry Expert Theater 2
Faculty
Kris Vijay, MD

Description
This program will review recent clinical trial data for JARDIANCE. It will also provide information on JARDIANCE initiation and dosing, as well as guidance for monitoring patients on JARDIANCE. Attendees will have the opportunity to ask the faculty questions about the data presented.
Learning Objectives:
- This program will review recent clinical trial data for JARDIANCE. It will also provide information on JARDIANCE initiation and dosing, as well as guidance for monitoring patients on JARDIANCE.

Sponsored by Boehringer Ingelheim Pharmaceuticals, Inc./Lilly USA, LLC

Present and Future Innovation in the Care of Heart Transplant Recipients

Saturday, September 11, 2021
6:15 PM – 7:15 PM
Industry Expert Theater 1
Faculty
Jeffrey Teuteberg; David Baran; Shelley Hall

Description
Please join CareDx at the HFSA Annual Scientific Meeting for a session focused on the future of non-invasive surveillance of heart transplant recipients. The session will include discussion with Dr. Jeffrey Teuteberg, Dr. David Baran, and Dr. Shelley Hall around the latest data and their experiences with HeartCare, the complementary combination of dd-cfDNA and gene expression profiling technologies.
Learning Objectives:
- Learn more about different applications of the combination of dd-cfDNA and gene expression profiling technologies

Sponsored by CareDx, Inc.

A Treatment Option for Heart Failure Patients with Reduced Ejection Fraction

Saturday, September 11, 2021
6:15 PM – 7:15 PM
Industry Expert Theater 2

Description
Review safety and efficacy of a treatment option for patients with symptomatic chronic HF with EF <45%
Sponsored by Merck & Co., Inc.

HeartLogic™ Clinical Data and Integration Into Clinical Practice

Sunday, September 12, 2021
11:45 AM – 12:45 PM
Industry Expert Theater 1
Faculty
Andrew Sauer, MD; Adrian F. Hernandez, MD, MHS; Marat Fudim, MD

Description
The HeartLogic™ Heart Failure diagnostic is a personalized, remote heart failure diagnostic and monitoring solution which uses multiple, novel physiologic sensors to detect worsening heart failure with high sensitivity and low-alert burden providing weeks of advanced notice to prompt proactive clinical intervention. Available for patients within the Boston Scientific RESONATE™ family of CRT-Ds and ICDs, HeartLogic has become increasingly integrated into heart failure patient management and supported by both growing clinical data and examples of successful implementation into clinical practice. This session will address foundational data supporting HeartLogic, recently published data from the MANAGE-HF Clinical Trial and examples of real-world implementation into clinical practice.
Learning Objectives:
- Discuss current heart failure (HF) remote patient monitoring landscape.
- Review HeartLogic HF diagnostic and foundational clinical trial data.
- Share results from MANAGE-HF Clinical Trial—Phase I
- Highlight real-world implementation and utilization of HeartLogic in clinical practice

Sponsored by Boston Scientific

The Deceptively Simple Problem of Cardiogenic Shock: Challenges and Potential Solutions

Sunday, September 12, 2021
11:45 AM – 12:45 PM
Industry Expert Theater 2
Faculty
Dr. David Baran; r. Arvind Bhimaraj

Sponsored by Getinge

Contemporary Forums (No CEUs)

Heart Recovery is Possible

Friday, September 10, 2021
1:00 PM – 5:00 PM
Colorado B
Faculty
Adam Devore, MD, MHS
Cindy L. Grines, MD, MSCAI, FACC
Mir Babar Basir, DO
Shelley Hall MD, FACC, FHFSA, FAST
A. Reshad Garan, MD, MS
David Wohns, MD
Navin Kapur, MD
Daniel Goldstein, MD
Jeff Teuteberg, MD
Manreet Kanwar, MD
Jaime Montfort-Hernandez, MD
Bobbi Bogaev, MD

Description
This session reviews data around the lack of assessment of coronary artery disease in patients with new onset systolic heart and the potential for heart recovery with a complete revascularization strategy by a heart team approach. Clinical trials demonstrating improvement in heart failure metrics utilizing a high-risk PCI approach will be reviewed as well as an introduction to current clinical trials for patients with complex CAD and HFrEF who could benefit from high-risk PCI (PROTECT IV) or high-risk CABG (IMPACT). This session will also illustrate the phenotypic differences between AMI-CS and HF-CS patients as well as the heterogeneity in treatment for both patient populations. Lessons learned from the NCSI that have guided best practices in the AMI-CS population will be highlighted as well as the lack of real-world evidence in the HF-CS population.

Learning Objectives
- Highlight the lack of assessment of CAD for patients diagnosed with new onset heart failure
- Review the benefits of complete revascularization to patients with complex CAD and systolic heart failure
- Emphasize the importance of a heart team approach to optimize outcomes for complex CAD patients with HFrEF
- Define the phenotype of patients who would benefit from LV unloading to achieve heart recovery
- Appreciate the growing incidence of heart failure (HF) cardiogenic shock
- Identify patients with a high risk of mortality who present with ADHF and cardiogenic shock

Sponsored by ABIOMED

Imaging in ATTR-CM – This is what we see

Friday, September 10, 2021
7:30 PM – 9:00 PM
Colorado A
Faculty
Sarah Cuddy
Marianna Fontana
Ahmad Masri
Mat Maurer

Description
Transthyretin-mediated amyloid cardiomyopathy (ATTR-CM) is a condition which courses with heart failure, arrhythmias and eventually leads to death. The disease is caused by accumulation of transthyretin protein (TTR) in the myocardium and has two main forms, hereditary (variant; genetic alteration in the TTR gene) or wild-type (no genetic alteration). The hereditary form is considered rare, but the wild-type form has been showing an increasing prevalence lately.

One of the reasons for the increasing in diagnosis of ATTR-CM is the fact that a treatment has been recently approved in US and other regions (tafamidis; tafamidis meglumine). Also, the diagnosis process may be non-invasive (not needing a biopsy) based on imaging techniques and ruling out differential diagnosis.

Imaging in ATTR-CM can be very helpful to establish a diagnosis and prognosis, and potentially determining therapeutic response.

Learning Objectives
Understand the current imaging techniques in ATTR-CM
- Heview echocardiographic findings specific for ATTR-CM
- Understand the use of scintigraphy with bone tracers to assess ATTR-CM
- Learn about recent cMRI advances in assessing ATTR-CM burden in the myocardium
- Discuss potential imaging surrogate endpoints for future research

Sponsored by Ionis Pharmaceuticals, Inc.

Contemporary Forums (No CEUs)

Novel Care Models to Improve Value and Address Disparities in HF

Saturday, September 11, 2021
7:00 AM – 8:00 AM
Colorado A
Faculty
Nasrien E. Ibrahim
Nihar R. Desai
Robert J. Mentz
Ileana L. Piña

Description
This session will comprise of thought-provoking presentations about disparities in the treatment of heart failure. Expert leaders in this area will review contemporary challenges of addressing disparities and inequities in heart failure practice amidst the growing economic burden. The need to transition heart failure care from volume to value, with focus on the high-risk patient population, will be discussed by our panel of experts. The faculty will discuss the process, results, challenges, and learnings from innovative risk sharing models implemented at Yale and Duke, including how these partnerships are paving the way to help to bridge this important gap of disparity and inequity.
Learning Objectives
- Gain insight into the current and future landscape of disparities and inequities in heart failure treatment
- Explain the need for value-based care, shifting from volume to value in heart care to improve patient outcomes
- Understanding of innovative models that have helped to bridge the disparity gap in heart failure

Sponsored by Cytokinetics

CCM® – A New Category of Device-Based Interventional HF Therapy

Saturday, September 11, 2021
8:15 AM – 9:30 AM
Colorado A
Faculty
John P. Boehmer
Javed Butler
Jean-Bernard Durand
Nirav Y. Raval
Andrew J. Sauer

Description
Modulation therapy is, how it works, and what you can expect in terms of outcomes when utilizing this treatment for NYHA Class III patients who remain symptomatic in spite of guideline directed medical therapy. The faculty panel will discuss the MoA of CCM® therapy, provide an overview of the clinical trials both historical and ongoing, and share their experience of how to identify appropriate candidates for this device therapy who have few or no other options available to them. Finally, this panel will engage in a discussion of their patient experience dealing with the difficult question of quality of life versus quantity of life and how they feel about the research that has been done specifically with this heart failure population of patients.
Learning Objectives
- Identify the indications for cardiac contractility modulation for the management of heart failure
- Describe the mechanism of action of cardiac contractility modulation and its effects on calcium cycling and genetic expression
- Review the data and clinical experience with CCM therapy and ongoing clinical research
- Review and share best practices for screening heart failure patients that remain symptomatic despite guideline directed medical treatment
- Discuss and review updated ESC Guidelines for the management of heart failure with device therapy
- Discuss Quality of Life versus Quantity of Life and how to approach this topic with patients

Sponsored by Impulse Dynamics

Contemporary Forums (No CEUs)

Improving the Recognition of HCM and its Progression to Heart Failure: an Expert Review of Challenging Cases

Saturday, September 11, 2021
7:30 PM – 9:00 PM
Colorado A
Faculty
David Fermin
Matthew W. Martinez
Iwona Bucior

Description
Join experts as they strive to improve clinical recognition of HCM by discussing its pathophysiology, burdensome symptomatology, and progression to heart failure through the lens of challenging patient cases encountered in clinical practice.
Learning Objectives
- Understand HCM and its progression to heart failure
- Elucidate findings that raise the index of suspicion for HCM and facilitate its accurate diagnosis
- Gain insights into effective structural imaging of patients for the diagnosis and monitoring of patients with HCM

Sponsored by Bristol Myers Squibb

Multispecialty Perspectives on Recognizing, Diagnosing, and Managing Polyneuropathy Caused by hATTR Amyloidosis

Sunday, September 12, 2021
6:45 AM – 7:45 AM
Colorado B
Faculty
John David Eatman, MD
Sumeet Mitter, MD
Jim McNinch

Description
Join our distinguished faculty as they discuss their experiences recognizing, diagnosing, and managing adult patients with polyneuropathy caused by hereditary transthyretin-mediated (hATTR) amyloidosis. They will provide an overview of hATTR amyloidosis and discuss their collaborative approach to diagnosis, share 2 case studies, and review the clinical profile of ONPATTRO® (patisiran). ONPATTRO has warnings and precautions for infusion-related reactions (IRRs) and reduced serum vitamin A levels with recommended supplementation. The most common adverse reactions are upper respiratory tract infections and IRRs. For additional information about ONPATTRO, please see the Important Safety Information and full Prescribing Information.
Learning Objectives
- Provide multidisciplinary perspectives on the hATTR amyloidosis diagnostic process
- Highlight the signs and symptoms that may help identify patients with the polyneuropathy of hATTR amyloidosis through case-based discussion
- Review the clinical profile of ONPATTRO® (patisiran) to understand how it may be used for the treatment of the polyneuropathy of hATTR amyloidosis in adults

Moderator
Jim McNinch
Faculty
John David Eatman, MD; Sumeet Mitter, MD
Sponsored by Alnylam Pharmaceuticals, Inc.

Contemporary Forums (No CEUs)

Protected PCI as a Treatment Option for Heart Failure Patients

Sunday, September 12, 2021
6:45 AM – 7:45 AM
Colorado C
Faculty
Jason Wollmuth, MD
Gregg Stone, MD
Navin Kapur, MD
Bobbi Bogaev, MD

Description
This session will highlight the heart failure improvement in patients with complex CAD and HFrEF who received complete revascularization with LV unloading and PCI in the RESTORE EF study. Clinical outcomes and safety events from the PROTECT III trial will also be discussed. PROTECT IV, an ongoing heart failure study assessing high-risk PCI for complete revascularization in complex CAD patient with HFrEF, will be reviewed in detail, including the HF medical management of randomized patients in both arms.

Learning Objectives
- Review long-term safety and effectiveness outcomes of Protected PCI
- Discuss landmark PROTECT IV clinical trial inclusion criteria and clinical endpoints

Sponsored by ABIOMED

Recognizing Transthyretin Amyloid Cardiomyopathy (ATTR-CM) in practice: Highlighting the patient journey from diagnosis to treatment

Sunday, September 12, 2021
5:00 PM – 6:00 PM
Colorado A
Faculty
Nitasha Sarswat, MD

Description
Transthyretin amyloid cardiomyopathy (or ATTR-CM) is an under-recognized and underdiagnosed progressive disease that presents as heart failure. This presentation will provide an overview of ATTR-CM, highlighting how to recognize the signs and symptoms that raise suspicion of ATTR-CM, while introducing approaches to achieve a differential diagnosis. Throughout the program a hypothetical patient case will be used to illustrate the patient journey from suspicion of ATTR-CM through to diagnosis. The program will end with a review of the clinical data for a treatment option for ATTR-CM.
Sponsored by Pfizer

Clinical Trial Row

CTR-001

A PHASE 2, ADAPTIVE, DOUBLE-BLINDED, PLACEBO CONTROLLED, RANDOMIZED, MULTI-CENTER TRIAL TO EVALUATE THE SAFETY, TOLERABILITY AND EFFICACY OF INTRACORONARY INFUSION OF NAN-101 IN SUBJECTS WITH NEW YORK HEART ASSOCIATION (NYHA) CLASS III NON-ISCHEMIC HEART FAILURE

Acronym: ASK-CHF
Sponsor: Asklepios
Supporter: Bayer

Description: We are initiating a Phase 2 adaptive, double-blinded, placebo-controlled, randomized, multi-center trial study to evaluate the safety and efficacy of a single dose of a novel Adeno-Associated Vector, AAV2i8, that is cardiotropic and de-targets the liver to deliver a constitutively active protein phosphatase 1 inhibitor 1 (I-1c) - AAV2i8.I-1c, administered via antegrade epicardial coronary artery infusion, in adults with non-ischemic cardiomyopathy and NYHA Class III symptoms of heart failure. Subjects will be randomized into one of three treatment groups in a 1:1:1 fashion: 1) Dose 1 - N=30; 2) Dose 2 - N=30; 3) Placebo - N=30. Doses will be determined based on the completion of Phase 1-expexted at end of September 2021. An independent Data Safety Monitoring Board (DSMB) will provide safety oversight for this study. This committee will meet at least quarterly, or more frequently as required. Prior to the first DSMB data review meeting, a DSMB charter will be finalized by the DSMB in collaboration with the Sponsor.
Primary Objective: The primary objective of this Phase 2 study is to evaluate the efficacy of a single antegrade epicardial coronary artery infusion of AAV2i8.I-1c compared to placebo infusion in subjects with non-ischemic cardiomyopathy and New York Heart Association (NYHA) Class III symptoms of heart failure.
Secondary Objectives: To evaluate the impact of AAV2i8.I-1c on cardiac function, exercise capacity, quality of life, and cardiac biomarkers.
Safety Endpoints: The safety endpoints will be assessed over the 52-week follow-up period as indicated in the Schedule of Activities: o Adverse Events (AEs) and Serious Adverse Events (SAEs) o Observed and changes from baseline in Clinical laboratory tests o Observed and changes from baseline in Vital signs o Observed and changes from baseline in Electrocardiograms (ECGs).
Efficacy Endpoints: Efficacy endpoints will be assessed from baseline to 52-weeks following administration of AAV2i8.I-1c as indicated. These endpoints include: *Primary Efficacy Endpoint • Win Ratio at 52-weeks as defined by hierarchical evaluation of the following assessments in the given order:* o 52-week NYHA Classification (Ordinal) o 52-week LVEF change from baseline (Binary, <5% increase or >=5% increase) o 52-week Peak VO2 change from baseline (Binary, < 1.5 mL/kg/min increase or <= 1.5 mL/kg/min increase) o 52-week six-minute walk test (6MWT) change from baseline (Continuous) *Secondary Efficacy Endpoints • Functional Status: Observed and changes from baseline in NYHA Classification*o LVEF change from baseline (Binary, <5% increase or >=5% increase) o Peak VO2 change from baseline (Binary, < 1.5 mL/kg/min increase or <= 1.5 mL/kg/min increase) o Observed and changes from baseline in Peak VO2 assessed by cardiopulmonary exercise testing o Observed and changes from baseline in 6MWT • *Physiologic Assessments at baseline, Weeks 4, 12, 24, 36 and 52* o Observed and changes from baseline in Echocardiographic assessments of: a. LVEF – Left ventricular diastolic volume (LVEVD) & left ventricular end diastolic index (LVEDVI); b. Left ventricular end systolic volume (LVESV), & left ventricular end systolic volume index (LVESVI); c. Sphericity index (SpI); d. Global longitudinal strain (GLS) and e. Degree of mitral regurgitation o Observed and changes from baseline in Biomarkers (NT-proBNP level) • *Quality of Life at baseline, Week 8, 12, 24, 36 and 52* o Health related quality of life as assessed by Minnesota Living with Heart Failure Questionnaire (MLWHFQ) o The Kansas City Cardiomyopathy Questionnaire as assessed by a 15-item, self-administered instrument that quantifies physical function, symptoms (frequency, severity, and recent change), social function, self-efficacy and knowledge, and quality of life. • The following endpoints will also be measured over the 52-week follow-up period and long-term follow-up period (until month 60 pos...

CTR-002

A Study Of Mavacamten In Participants With HFpEF And Chronic Elevation Of Cardiac Troponin And/or NT-proBNP (EMBARK-HFpEF)

Acronym: EMBARK-HFpEF
Sponsor: Myokardia Inc., wholly-owned subsidiary of Bristol Myers Squibb
Supporter: Myokardia Inc., wholly-owned subsidiary of Bristol Myers Squibb

Description: *Study Description:* Phase 2a proof-of-concept study to assess safety, tolerability, and preliminary efficacy of mavacamten treatment on biomarker levels in participants with heart failure with preserved ejection fraction (HFpEF) and chronic elevation of cardiac troponin I (cTnI) and/or NT-proBNP. Data will inform future study designs of mavacamten in patients with HFpEF.

Study Design: Interventional, open-label, single-arm, phase 2a of mavacamten (MYK-461) treatment for 26 weeks in approximately 35 participants with HFpEF and chronic elevation of cardiac biomarkers. Key Inclusion Criteria: 1. Age ≥ 50 years. 2. Documented prior objective evidence of heart failure. 3. NYHA class II or III symptoms. 3. One or more of the following criteria: (a) hs-cTnI >99th percentile at screening, OR (b) NT-proBNP >300 pg/mL at screening if not in AF (atrial fibrillation or atrial flutter) or >750 pg/mL if in AF, OR (c) If either of African descent or body mass index ≥30.0 kg/m2, a screening NT-proBNP >240 pg/mL if not in AF or >600 pg/mL if in AF. 4. Left ventricular ejection fraction (LVEF) ≥60% at screening and no history of prior LVEF ≤ 45%. 5. Documented elevated left ventricular mass index by 2-dimensional imaging (>95 g/m2 if female or >115 g/m2 if male) OR maximal left

ventricular wall thickness ≥12 mm. 6. Adequate acoustic windows on resting transthoracic echocardiography.

Key Exclusion Criteria: 1. Prior diagnosis of hypertrophic cardiomyopathy or a known infiltrative or storage disorder causing HFpEF and/or cardiac hypertrophy. 2. Known moderate or severe aortic valve stenosis, hemodynamically significant mitral stenosis, or severe mitral or tricuspid regurgitation. 3. Severe chronic obstructive pulmonary disease, or other severe pulmonary disease. 4. Body mass index ≥45.0 kg/m2. Primary outcomes: 1. Frequency and severity of treatment-emergent adverse events, adverse events of special interest (including significant LVEF reduction), and serious adverse events; 2. Mavacamten effect on cTnI levels, specifically, change from baseline to Week 26 in cTnI, as assessed by a high-sensitivity assay; 3. Mavacamten effect on NT-proBNP levels, specifically, change from baseline to Week 26 in NT-proBNP.

ClinicalTrials.gov Identifier: NCT04766892
Study Status: Recruiting Sponsor: Myokardia Inc., wholly-owned subsidiary of Bristol Myers Squibb.
For info on how to get involved in EMBARK-HFpEF, contact: **MG-EMBARKClinOps@bms.com**; for info on clinical trials, contact: **clinical.trials@bms.com**. For info on how to get involved in EMBARK-HFpEF, contact: **MG-EMBARKClinOps@bms.com**; for info on clinical trials, contact: **clinical.trials@bms.com**.

CTR-003

Attr-pop

Acronym:ATTR-POP
Sponsor: Pfizer, Inc.
Supporter: Pfizer, Inc.

Description: B3461087: Global Prevalence of Transthyretin Amyloid Cardiomyopathy (ATTR-CM) in Participants with Heart Failure with Preserved Ejection Fraction (HFpEF)
Transthyretin amyloid cardiomyopathy (ATTR-CM) is a life-threatening, progressive condition caused by aggregation of wild-type or variant (hereditary) transthyretin (TTR) amyloid fibrils in the myocardium, ultimately leading to heart failure (HF). ATTR-CM continues to be underdiagnosed and is often not considered as an underlying cause of heart failure in older people. The primary objective of the B3461087 trial (NCT04424914) is to assess the prevalence of ATTR-CM in patients with HFpEF within a clinically at-risk population. Secondary objectives include assessment of the country, regional and global-level prevalence of wild-type and hereditary ATTR-CM. The correlation of clinical status and medical history with scintigraphy and disease status for patients with ATTR-CM will be investigated as an exploratory objective. Key inclusion criteria include a) males and females aged ≥60 years; b) with a history of HF with at least 1 episode with clinical evidence of HF (without hospitalization) or 1 prior hospitalization for HF; c) left ventricular ejection fraction >40% and d) end-diastolic interventricular septal wall thickness ≥12 mm. Key exclusion criteria include: a) prior clinical history of myocardial infarction, coronary artery bypass graft or multi-vessel obstructive coronary disease (>50% stenosis of ≥2 epicardial coronary arteries); b) presence/history of any severe valvular heart disease; c) confirmed diagnosis of a non-amyloid infiltrative cardiomyopathy, muscular dystrophies, cardiomyopathy with reversible causes, hypertrophic obstructive cardiomyopathy with known genetic etiology, or known pericardial constriction and d) any type of diagnosed amyloidosis, or prior diagnosis of ATTR-CM. The study will include 2000 patients with HFpEF. There will be 4 study visits: Screening; Study Visit 1; Follow-up Visit 1 and Follow-up Visit 2. At Screening Visit, informed consent, echocardiography assessment (unless obtained within 6-months prior to Screening Visit with available results), complete medical history and demography, and a physical exam with vital signs will be completed. Study Visit 1 will record current medications, New York Heart Association classification; Kansas City Cardiomyopathy Questionnaire and Health Care Resource Utilization Questionnaire, and scintigraphy. Blood and urine samples will be collected to assess N-terminal pro B-type natriuretic peptide, primary (light chain) amyloidosis, ATTR-CM biomarkers, and *TTR* genotype. If tests have been obtained ± 6 months of the Screening Visit with available results, data will also be recorded for 6-Minute Walk Test, creatinine, albumin and cardiac troponin. At Follow-up Visit 1 (remote or in-person; within 14 days [+ 10 days] of Study Visit 1), patients will be informed of their diagnosis, and adverse events and research related injuries will be collected. At Follow-up Visit 2 (remote or in-person; 6 months after Follow-up Visit 1 [± 30 days], or at early study discontinuation), patients with scintigraphy grade ≥1 will be assessed for current medications, vital status, and biopsy status or scintigraphy follow-up testing. The first participant enrolled in B3461087 in December 2020, and the study is ongoing.

CTR-004

Evaluation Of Blood Volume Analysis-Guided Management Of Decompensated Heart Failure

Acronym: EBVAG-MDHF
Sponsor: NHLBI
Supporter: Daxor

Description: Introduction: Over 6 million Americans suffer from heart failure (HF). High rates of rehospitalization and mortality and high treatment costs have persisted for decades despite advances in care. Clinical guidelines recommend assessment of congestion and clinical management to euvolemia, but standard methods of diagnosing volume status are unreliable. FDA-cleared Blood Volume Analysis (BVA) [Daxor BVA-100TM] is based on the gold standard indicator dilution technique. BVA quantifies otherwise undiagnosed volume derangements. A recent retrospective analysis of BVA-guided HF therapy versus propensity-matched controls (n=245) demonstrated a significant all-cause readmission and mortality benefit to BVA-guided care. This study's primary objective is to determine if guideline-directed care informed by BVA in addition to usual care results in more appropriate treatment

and consistent achievement of euvolemia than usual care alone. This Phase I randomized clinical trial will demonstrate and validate the efficacy of a treatment protocol with decisions informed by BVA. KEY ELIGIBILITY CRITERIA:Inclusion:1. Age > 18 years.2. Admission to the hospital with a primary diagnosis of ADHF, inclusive of all ejection fraction. 3. Able and willing to provide informed written consent. Key Exclusion criteria:1. Evidence of acute coronary syndrome or myocardial infarction during qualifying ADHF hospitalization. 2. Evidence of hypertensive crisis or acute valvular regurgitation.3. Revascularization procedure, placement on cardiac transplant list, or other major cardiac or other surgery within 3 months of enrollment.4. Planned intermittent or continuous intravenous positive inotropic therapy. 5. Severe chronic kidney disease (eGFR < 15 ml/min). 6. Evidence of active bleeding or active hemolysis.7. Hemoglobin measured below 7 g/dl or hematocrit measured below 21%.8. Receipt of a heart transplant and/or currently treated with mechanical circulatory support.9. Patients implanted with invasive hemodynamic monitors (i.e. CardioMEMS).10. Known hypersensitivity to iodine or eggs.Protocol: In the BVA guided care group, investigators may choose to implement or stop therapies or adjust intensity/dose of therapy to correct Total Blood Volume (TBV) and/or Red Blood Cell Volume (RBCV) in order to target euvolemia, defined as +10% of ideal TBV and within ±10% of ideal RBCV as quantified by BVA. Adjustments in medications will be monitored with serial clinical assessments and laboratory assessments consistent with current usual care. In the standard care group, investigators will choose to implement or stop therapies or adjust intensity/dose of therapy as considered appropriate based on usual care clinical assessment and clinical response. Outcome Measures:Primary: Quantitative assessment of progress to the BVA euvolemic target (+10% of ideal TBV and within ±10% of ideal RBCV) for both subjects and controls. Secondary: 30-day all-cause readmission and mortality outcomes will be quantified for both treatment arms; Quantitative assessment of continuous outcome metrics (e.g. weight change, net fluid balance, and brain natriuretic peptide [BNP]). Statistical power: 32 patients (16 treatment, 16 control) will be needed to support the objectives of validating BVA in a proof-of-concept pilot. The sample size was calculated to observe differences due to treatment between hypervolemic and non-hypervolemic patients, based on data from the earlier retrospective HF outcome study. The results from this Phase I proof of concept study will support the power calculation of a subsequent Phase II randomized controlled trial.

Study Information: Source of support: NHLBI Phase I Small Business Innovation Research (SBIR) award. ClinicalTrials.gov registration: **https://clinicaltrials.gov/ct2/show/NCT04855097** Trial design: Prospective, two-center, parallel design, interventional, single-blinded, randomized pilot study of the potential for BVA to positively impact acute dec

CTR-005

Evaluation Of The Efficacy And Safety Of Eplontersenin Patients With Transthyretin-mediated Amyloid Cardiomyopathy: The Cardio-ttransform Study

Acronym:CARDIO-TTRansform

Sponsor: A Phase 3 Global, Double-Blind, Randomized, Placebo-Controlled Study to Evaluate the Efficacy and Safety of ION-682884 in Patients with Transthyretin--Mediated Amyloid Cardiomyopathy (ATTR-CM)

Supporter: Ionis Pharmaceuticals

Description: Background: Transthyretin amyloidosis cardiomyopathy (ATTR-CM) is a fatal condition, leading to heart failure (HF) and ultimately death. ATTR-CM is caused by misfolding and aggregation of the transthyretin (TTR), a protein produced by the liver. Depending on the presence or absence of a destabilizing mutation in the TTR gene, the disease can be classified as hereditary ATTR-CM (hATTR-CM) or wild-type ATTR-CM (wtATTR-CM), respectively. Despite the treatment with a TTR stabilizer, tafamidis, recently approved in the United States for the treatment of ATTR-CM, disease progression still occurs. Eplontersen (previously known as IONIS TTR-LRx, AKCEA-TTR-LRx or ION-682884) is an antisense oligonucleotide that inhibits the production of TTR. It has a similar design and sequence as inotersen (the parent compound), but is conjugated to a triantennary N-acetyl galactosamine (GalNAc) moiety for selective receptor-mediated delivery to hepatocytes, the principle source of systemically circulating TTR. This delivery approach has yielded an up to 30-fold increase in potency and improved the safety and tolerability profiles of ASOs in human clinical trials. Conjugation with GalNAc allows the use of a lower dose to achieve identical pharmacodynamic results. In a phase 1, randomized, placebo-controlled study, eplontersen given at a 45 mg, 60 mg or 90 mg dose, by subcutaneous (SC) injection every four weeks in 36 healthy volunteers achieved a mean pre-steady state reduction in serum TTR of 86%, 91% and 94%, respectively, compared to baseline. The dosage regimen of 45 mg SC every four weeks (approximate 30-fold increased potency relative to 300 mg weekly SC dose of the unconjugated 2′-MOE-modified ASO inotersen) was chosen for the pivotal phase 3 study. Study Design and Methods: CARDIO-TTRansform (ClinicalTrials.gov NCT04136171) is a Phase 3 global, double-blind, randomized, placebo-controlled study assessing the efficacy and safety of eplontersen in hATTR-CM or wtATTR-CM patients receiving available background standard of care (SoC) therapy. Approximately 750 patients around the world with a history of HF due to ATTR-CM will be randomized 1:1 to receive either eplontersen 45 mg or placebo administered by SC injection once every 4 weeks. Key inclusion criteria include diagnosis of ATTR-CM by biopsy or positive PYP/DPD/HMDP scan, interventricular septum thickness >12mm, NT-proBNP >600 pg/mL, NYHA class I-III and 6-minute walk distance (6MWD) >150 m. Key exclusion criteria include, platelet count < 125 × 109/L and urine protein/creatinine ratio ≥ 750 mg/g. Concomitant treatment with tafamidis as SoC for ATTR-CM is allowed. The study consists of a 120-

week Treatment Period. Primary efficacy endpoint is the composite of cardiovascular (CV) mortality and recurrent CV clinical events at Week 120 study visit using the Andersen-Gill method. Secondary endpoints include the change from baseline in the 6MWD, KCCQ score, CV clinical events, and all-cause of mortality at Week 120. Conclusions: Despite recent advances, additional efficacious, safe and convenient treatment options for ATTR-CM are needed. The CARDIO-TTRansform trial is a large Phase 3 trial designed to evaluate the clinical efficacy and safety of eplontersen compared to placebo for the treatment of ATTR-CM

CTR-006

Monitoring Outpatient Blood Volume In Heart Failure (MOVE-HF)

Acronym: MOVE-HF
Sponsor: CAPCaT
Supporter: Daxor

Description: Introduction: Over 6 million Americans suffer from heart failure (HF). High rates of rehospitalization and mortality and high treatment costs have persisted for decades despite advances in care. Clinical guidelines recommend assessment of blood volume and clinical management to euvolemia, but standard methods of diagnosing volume status are unreliable. FDA-cleared Blood Volume Analysis (BVA) [Daxor BVA-100TM] is based on the gold standard indicator dilution technique. BVA quantifies otherwise undiagnosed volume derangements. Retrospective analyses have demonstrated that BVA-guided HF care reduces rehospitalization and mortality.

Objectives: This is the first prospective study of volume change immediately following hospital discharge, a clinical phase that is understood to be challenging due to high variability of patient status, physiology, and compliance. The primary objective is to quantify changes to plasma volume (PV) and red blood cell volume (RBCV) over a 12-week period post-discharge for inpatient HF care.

Procedure: Hospitalized acute HF patients will be administered BVA tests prior to discharge, at first outpatient follow-up (7-10 days post-discharge), and after weeks 4, 8 and 12 post-discharge. BVA tests will be compared and analyzed over time to determine if and quantify how much subject BV and RBCV changes over time.

Study Information: Source of Support: Daxor as a subawardee to Center for Advancing Point of Care Technologies (CAPCaT) per NIH 5U54HL143541-03. Trial design: Prospective, single-center, observational open-label study. Leadership: Brendan Carry (Clinical and Site PI) and Jonathan Feldschuh (PI). Participating centers: Geisinger Medical Center, Danville PA Estimated study duration: August 1, 2021 - October 30, 2022

CTR-007

Prospective Comparison Of ARNI With ARB Given Following Stabilization In Decompensated HFpEF: The PARAGLIDE-HF Phase 3 Study

Acronym: PARAGLIDE-HF
Sponsor: Novartis Pharmaceuticals Corporation
Supporter: Novartis Pharmaceuticals Corporation

Description: There are limited data on the use of sacubitril/valsartan in patients with heart failure and preserved ejection fraction (HFpEF) who are hospitalized for acute decompensating heart failure (ADHF). PARAGLIDE-HF is a randomized, double-blind, double-dummy, parallel-group, active controlled study evaluating the effect of sacubitril/valsartan vs valsartan on changes in N-terminal pro B-type natriuretic peptide (NT-proBNP), clinical outcomes, safety, and tolerability in patients with HFpEF who have been stabilized during hospitalization and initiated in-hospital or within 30 days post-discharge. Key inclusion criteria include: male and female patients ≥40 years of age with current presentation or recent discharge (within 30 days) for ADHF, and eligible patients must be hemodynamically stabilized (systolic blood pressure ≥100 mmHg with no symptomatic hypotension and no increase in intravenous (IV) diuretic dose for 6 hours [in-hospital patients] or 24 hours [post-discharge patients] before randomization, no IV inotropic drugs for 24 hours [all patients] before randomization, and no IV vasodilators for 6 hours [in-hospital patients] before randomization). Also, eligible patients must be diagnosed with left ventricular ejection fraction (LVEF) >40% (within past 3 months) and elevated NT-proBNP or BNP (at screening). Key exclusion criteria include: any clinical event within the 90 days before randomization that could have reduced the LVEF and estimated glomerular filtration rate <20 mL/min/1.73 m2 measured within 24 hours before inpatient randomization or within 72 hours before outpatient randomization. Patients are randomized (in-hospital or post-discharge) 1:1 to sacubitril/valsartan or valsartan, and titrated up to a target dose of 97/103 mg twice daily or 160 mg twice daily, respectively. The maximum duration of the double-blinded treatment period is approximately 20 months (minimum 8 weeks). The primary end point is the time-averaged proportional change in NT-proBNP from baseline to weeks 4 and 8. Key secondary end points are: 1) the composite hierarchical outcome consisting of time to cardiovascular (CV) death, total heart failure (HF) hospitalizations, total urgent HF visits, and time-averaged proportional change in NT-proBNP (from baseline to weeks 4 and 8) using win ratio methodology; and 2) the cumulative number of recurrent composite events of HF hospitalizations, urgent HF visits, and CV death. The PARAGLIDE-HF trial (Clinicaltrials.gov: NCT03988634) started on June 27, 2019 and is actively enrolling in the United States and Canada. The targeted sample size for this study is 800 total patients. Estimated study completion date is October 2022. The study is open for additional sites. To participate, email Jon Ward at jon.ward@novartis.com.

Clinical Trial Row

CTR-008

Prospective Multi-Center Randomized Study For Evaluating The EVAHEART 2 Left Ventricular Assist System: The COMPETENCE Trial (COMPETENCE)

Acronym: COMPETENCE
Sponsor: Evaheart, Inc.
Supporter: Evaheart, Inc.

Description: Background: Over the last decade, Left Ventricular Assist Devices (LVADs) have become the first-line option for supporting patients awaiting cardiac transplantation (BTT) and for long-term use (DT) as an alternative to transplant. With the rising use of LVADs as long-term therapy options, the need for a more durable LVAD with fewer device-related complications are essential. The COMPETENCE trial aims to investigate the safety and effectiveness of the EVAHEART2 LVAS (EVA2) in the treatment of refractory NYHA Class IV heart failure. The EVA2 features a centrifugal blood pump mechanism with an "open-vane" impeller design that allows the device to operate at a lower speed to reduce blood trauma retaining aortic pulsatility. The impeller is suspended by an integrated hydrodynamic levitation system with sterile water circulation. Additionally, the novel double cuff tipless inflow cannula is designed to lie flush within the myocardium to minimize the risk of ventricular wall suction and blood stagnation that can lead to thrombus formation around the inflow cuff. Study

Design: The COMPETENCE trial is a prospective, multi-center, unblinded, randomized control, non-inferiority study comparing the EVA2 (n=266) to Heartmate 3 (HM3) (n=133) in 399 subjects (full cohort). During the safety phase, a total of 15 randomized EVA2 patients will be evaluated at up to 10 centers, then expand up to a total of 40 centers. The primary endpoints for this study examine the composite of survival to transplant, recovery (device removal), or survival on the primary LVAD support free from (1) disabling stroke as defined by a Modified Rankin Scale > 3 and (2) severe right heart failure at 6 months (short-term cohort) and 24 months (long-term cohort). The secondary endpoints assess Quality of Life as measured by the EuroQoL 5D-5L and Kansas Cardiomyopathy Questionnaire, 6-minute walk test, rehospitalizations, re-operations, device malfunctions, and STS-INTERMACS defined adverse events. A sub-study including 70 patients (35 EVA2: 35 HM3) will examine Von Willebrand Factor degradation profiles. Primary inclusion criteria include the NYHA Class IV heart failure refractory to optimal medical management, adult (age≥18), Body Surface Area (BSA) ≥ 1.4 m2, left ventricular ejection fraction (LVEF) ≤ 25%, inotrope dependent, or a cardiac index (CI) < 2.2 L/min/ m2 while not on inotrope. After the safety cohort, patients on Impella 5.0/5.5 can be eligible only when absence of pre-determined excessive hemolysis is confirmed. Patients on pre-operative ECMO and/or right ventricular assist device are not eligible.

CTR-009

Randomized Controlled Pivotal Trial Of Autologous Bone Marrow Mononuclear Cells Using The Cardiamp Cell Therapy System In Patients With NYHA Class II And III Ischemic Systolic Heart Failure

Acronym: CardiAMP Cell Therapy Trial
Sponsor: BioCardia Inc
Supporter: BioCardia Inc

Description: Direct injection of autologous bone marrow mononuclear cells (BM MNCs) into the myocardium of heart failure (HF) patients may result in improved cardiovascular outcomes, including functional recovery and symptoms relief. An extensive Cochrane meta-analysis of randomized controlled trials assessing application of BM MNCs in HF patients with ischemic heart disease (IHD) found that BM MNC treatment significantly reduced all-cause mortality, nonfatal MI, and arrhythmias at 12 months follow-up, although heterogeneity among the trials limited the robustness of the analysis. The totality of clinical trial evidence to date supports that intramyocardial delivery of autologous BM MNCs is safe. However, a robust randomized controlled trial is required to further establish clinical efficacy. The purpose of this trial is to determine the safety and efficacy of CardiAMP cell therapy for treating post-infarct heart failure.

CTR-011

Realm-dcm

Acronym: REALM-DCM
Sponsor: Pfizer, Inc.
Supporter: Pfizer, Inc.

Description: A Phase 3, Multinational, Randomized, Placebo-Controlled Study of ARRY-371797 (PF-07265803) in Patients with Symptomatic Dilated Cardiomyopathy due to a Lamin A/C Gene Mutation.
REALM-DCM (NCT03439514) is a multinational, Phase 3 study that will evaluate the efficacy, safety, and pharmacokinetics (PK) of ARRY-371797 (PF-07265803) in at least 120 patients with New York Heart Association (NYHA) functional Class II and III dilated cardiomyopathy (DCM) due to lamin A/C gene (LMNA) mutations (LMNA-related DCM). LMNA-DCM accounts for approximately 6% of idiopathic DCM cases and is a serious, and life-threatening condition with a high unmet medical need. Currently there is no disease-specific treatment available targeting the underlying cause of the disease. ARRY-371797 (PF-0765803) is a potent and selective, oral small molecule inhibitor of the p38′ mitogen activated protein kinase (MAPK) pathway, which demonstrated improvement in exercise capacity (6-minute walk test; 6MWT) in a 48-week, open-label, Phase 2 study among patients with symptomatic LMNA-DCM. Patients will be randomized 1:1 to ARRY-371797 (PF-07265803) 400 mg twice daily or placebo. Additional patients with LMNA-related DCM in NYHA functional Class IV

(up to 40) will also be enrolled, randomized (1:1), and be assessed for overall safety, in addition to PK and efficacy if feasible. The study will be conducted in 2 parts: a randomized, double-blind treatment period of 24 weeks, followed by an open-label period with patients treated with ARRY-371797 (PF-07265803). The primary outcome measure is change from baseline in 6MWT distance at 24 weeks. Secondary outcome measures include change from baseline in: 6MWT distance at 4 and 12 weeks; Kansas City Cardiomyopathy Questionnaire (Physical Limitation domain and Total Symptom Score domains) and Patient Global Impression of Severity and Change scores at 12 and 24 weeks; N-terminal pro-brain natriuretic peptide at 4, 12 and 24 weeks; a composite endpoint of All-Cause Mortality and Worsening Heart Failure (HF-related hospitalization or HF-related urgent care visit); and safety and tolerability. Key inclusion criteria are: adults aged >18 years with symptomatic LMNA-related DCM in NYHA Class II/III or Class IV (defined as gene positive for a pathogenic, likely pathogenic or variant of uncertain significance mutation in the LMNA gene as determined by the study central laboratory or by an accredited clinical laboratory testing, and left ventricular ejection faction <50%); with implantable cardioverter defibrillator/cardiac resynchronization therapy defibrillator (ICD/CRT-D); ICD implanted at least 4 weeks prior to initiation of study treatment or CRT-D initiated at least 6 months prior to initiation of study treatment; stable medical and/or device therapy consistent with American Heart Association, American College of Cardiology or European Society of Cardiology guidelines. Patients will be excluded if they have: other forms of cardiomyopathy contributing to HF or clinically significant cardiac anatomic abnormality; clinically significant coronary artery disease; uncorrected, hemodynamically significant primary structural valvular disease not due to HF; currently receiving or deemed at high risk of requiring chronic renal replacement therapy within 6 months; or a non-cardiac condition that limits lifespan to <1 year. REALM-DCM is currently ongoing in over 60 centers in 9 plus countries and anticipated to complete in 2024. This is the first phase 3 study evaluating a treatment in LMNA-DCM patients.

Emerging Innovations Row

Come Visit Emerging Therapies Row in theHFSA Exhibit Hall

Emerging Therapies Row is an exciting opportunity at this year's HFSA meeting. HFSA provides a unique forum for companies early in development of diagnostics and therapies to the heart failure space to share information about their emerging products. Located in a designated focus area in the Exhibit Hall, each participating company will have a table-top exhibit area to present their diagnostic or therapy.

EIR-Table 1

VisOne

Company Name: VisCardia, Inc.
Website: www.viscardia.com
Sponsor: VisCardia, Inc.
Supporter: VisCardia, Inc.

Description: VisCardia developed a novel therapy concept known as Synchronized Diaphragmatic Stimulation (SDS®) that recruits the respiratory diaphragm as a cardio-circulatory assist to improve blood circulation and thereby reduces the stress on the failing heart through an implantable system (VisONE®).

EIR-Table 2

Satera Ablation System

Company Name: Axon Therapies
Website: www.axontherapies.com
Sponsor: Howard Levin, MD
Supporter: Axon Therapies

Description: We address a root cause of heart failure with our frontline therapy by selectively ablating the right greater splanchnic nerve (GSN) in order to restore volume balance, stop disease progression and improve symptoms.

EIR-Table 3

JuxtaFlow

Company Name: 3ive Labs
Website: www.3ivelabs.com
Sponsor: 3ive Labs
Supporter: 3ive Labs

Description: 3ive Labs is the developer of the JuxtaFlow system-ureteral catheters capable of delivering renal Negative Pressure Treatment (rNPT) or mild controlled negative pressure into the collecting system of the kidney. Each nephron is an unobstructed fluid-filled column, therefore, negative pressure delivered into the renal pelvis will transmit through the tubules to Bowman's space. Regulation of the pressure gradient along the nephron promotes a reduction in the fractional reabsorption of water and electrolytes, enhancing renal homeostasis. rNPT targets renal and venous congestion, present in heart failure patients, by directly improving multiple kidney functions and restoring urine output.

The impact of venous congestion is seen in a variety of diseases and contributes significantly to poor outcomes in heart failure and cardiorenal patients, AKI, sepsis, and other illnesses. Decongestion is a difficult goal to achieve, with reliance on diuretics and use of UF/hemodialysis, as a last resort, leaving clinicians with tools to remove fluid but not to directly impact kidney function. These modalities partially replace one of the many vital kidney functions, and the impact of this incomplete treatment is seen in the poor patient outcomes. In fact, nearly half of all ADHF patients are unable to achieve clinical decongestion by the time they are discharged from the hospital, despite averaging an LOS of >7 days. These outcomes highlight the importance of being able to directly impact multiple kidney functions and enable the kidneys to restore homeostasis.

The JuxtaFlow system is currently deployed in a feasibility study - Volume Optimization Incorporating negative pressure Diuresis in HF (VOID-HF NCT04227977). The study population includes cardiorenal syndrome in ADHF patients with persistent congestion despite high dose IV diuretics following admission. Results from the first three patients are promising and demonstrate an increase in urine output, GFR, and sodium excretion.

EIR-Table 4

Bodyport

Company Name: Bodyport Inc.
Website: www.bodyport.com
Sponsor: Bodyport Inc.
Supporter: Bodyport Inc.

Description: Bodyport is a digital therapeutics company on a mission to address complex chronic conditions by embedding a sophisticated biomarker platform into simple, easy-to-use devices. With one step, Bodyport's platform gives every person at-home access to comprehensive health insights. A broad spectrum of hemodynamic biomarkers enables patients and their care teams to better predict, understand, and intervene in changes to heart function and fluid status. The company is tackling heart failure first, providing advanced insights through a familiar form factor to simplify and improve heart disease management. In addition, the company is exploring the application of the hemodynamic biomarker platform on a range of other chronic conditions.

The Bodyport Cardiac Scale is a novel device, measuring critical biomarkers for the management of heart failure (HF), cardiovascular & renal conditions. The Cardiac Scale captures physiological signals:

weight, electrocardiogram (ECG), ballistocardiography (BCG), and impedance plethysmography (IPG). These signals provide key markers of cardiovascular congestion & perfusion, including lower extremity edema, stroke volume, cardiac output, mean arterial pressure, systolic time intervals, HR, HRV, along with measures of balance.

Bodyport has created a full-stack solution for care providers to easily manage, triage, communicate with, and deliver care to their patients via the Bodyport Clinician Portal. Bodyport captures patient reported symptoms via text messages, to provide the care team with an additional layer of clinical information for remote patient care. Patients have access to a Bodyport Care Coach, who provides orthogonal educational content + support to empower patients to better self-manage their condition. With one step, the Bodyport Cardiac Scale + biomarker platform gives patients and their care teams comprehensive insights to tailor therapeutic actions — keeping people living with heart failure healthier and out of the hospital.

EIR-Table 5

Second Heart Assist Device

Company Name: Second Heart Assist, Inc.
Website: www.secondheartinc.com
Sponsor: Second Heart Assist, Inc
Supporter: Second Heart Assist, Inc.

Description: The Second Heart Assist device is a novel percutaneous VAD for treatment of both acute and chronic advanced heart failure(HF). It is an impeller driven pump that is mounted on a driveshaft placed inside a stent cage and placed in the descending aorta 10 cm above the renal arteries. Uniquely, the stent applies uniform radial force to the aortic wall along the length of each strut of the stent thereby eliminating the need to reposition the device for movement. It is the most efficient pump in the field as it operates at only 7,500 RPMs, vs 35,000 for Impella and 25,000 for Procyrion. Mock loop testing has shown that the device maintains and augments native pulsatile arterial flow by as much as 2.5 liters/min, providing up to a 50% increase in renal blood flow, thereby maintaining a normal perfusion gradient in the kidney leading to improved renal function and diuresis regardless of the degree of heart failure. Activation of the impeller leads to a 10 mm gradient across the device thereby reducing afterload, improving cardiac output, and lowering cardiac filling pressures. The first generation device is intended to support patients who develop Cardio-Renal Syndrome despite IV diuretics.

The second generation device will be the first percutaneous VAD intended for support of ambulatory Class III heart failure patients. It is unique in that it uses totally wireless power, operates at only 2,500 RPMs (minimize risk of hemolysis), and draw less than one watt of power for long term durability. The device utilizes very innovative technology that allows the attachment of the stent to the driveline to be demagnetized and the driveline removed completely, leaving the device in situ for chronic renal and cardiac support and prevent disease progression. One of the biggest innovations of the device and enhancements in patient quality of life is that it will be totally waterproof, allowing a VAD patient for the first time to enter any body of water with no wires attached for power.

EIR-Table 6

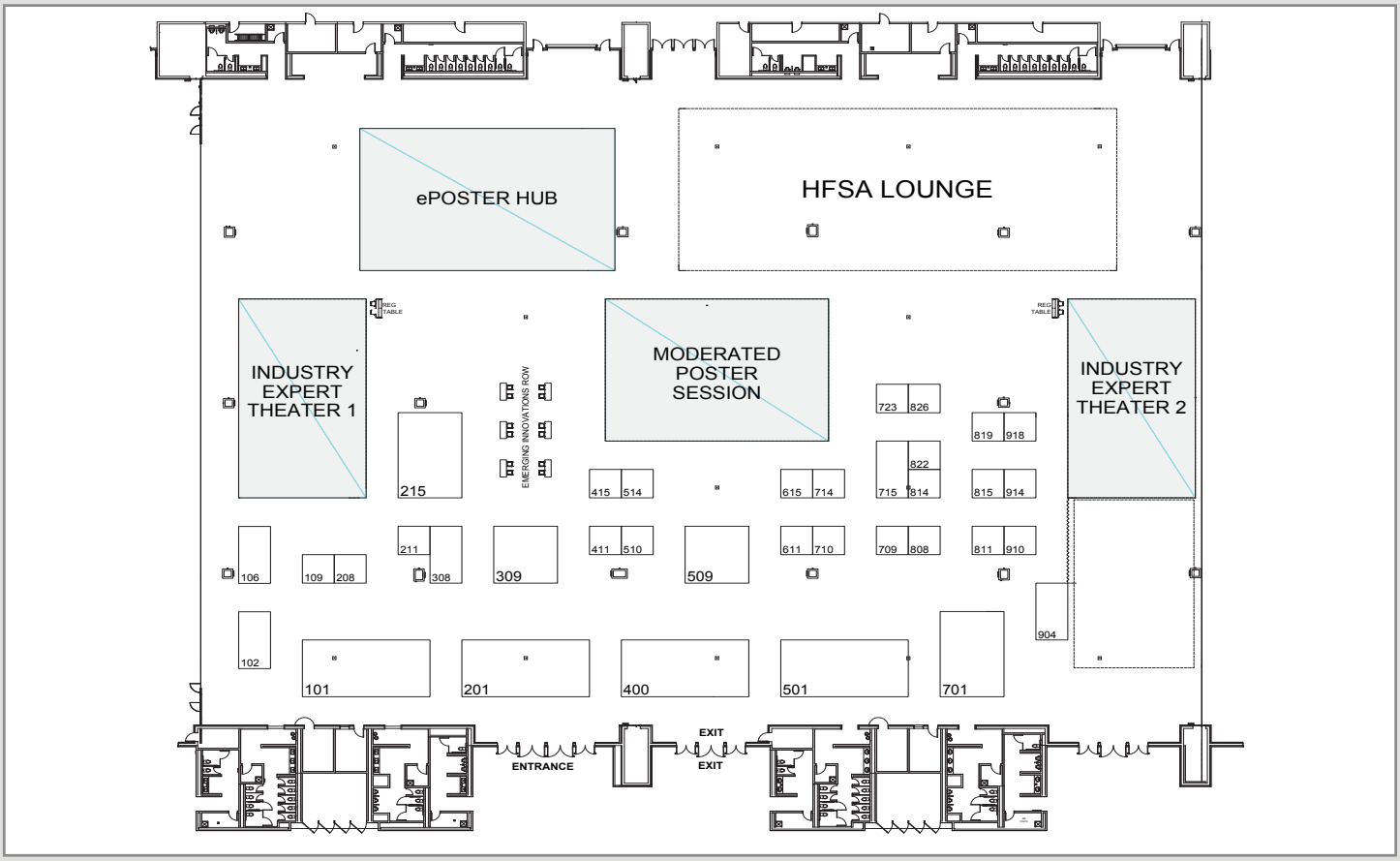
Revivent TC Transcatheter Ventricular Enhancement System

Company Name: BioVentrix, Inc.
Website: www.bioventrix.com
Sponsor: BioVentric, Inc.
Supporter: BioVentrix, Inc.

Description: Less Invasive Ventricular Enhancement™ (LIVE™) Therapy with the Revivent TC™ System is intended for use in patients suffering from ischemic heart failure symptoms with cardiac dysfunction caused by a previous myocardial infarction resulting in increased LV systolic volume and in a discrete, contiguous, acontractile (akinetic and/or dyskinetic) scar located in the left ventricle. The Revivent TC System is used to place permanent cardiac implants into the scarred portion on the heart for the purpose of reconfiguring abnormal cardiac geometry that is causing LV dysfunction. The implants are designed to exclude a discrete portion of the circumference of the ventricular wall decreasing the size of the chamber. LIVE Therapy is performed on a beating heart and is a closed chest, minimally invasive hybrid approach combining left-lateral mini-thoracotomy and venous catherization with septal puncture.

BioVentrix is a privately held medical device company headquartered in San Ramon, California (USA). BioVentrix's mission is to improve and expand the treatment available for congestive heart failure caused by ischemic cardiomyopathy (heart muscle disease with reduced blood flow), through the development of less invasive, catheter-based approaches. In the U.S., the company is currently enrolling patients in its pivotal trial, the ALIVE Trial. In Europe, LIVE therapy has received the CE Mark and is commercially available.

EXHIBITOR Directory At A Glance + FLOORPLAN



Booth Number	Exhibitor Name
701	Abbott
510	ABIOMED
309	Alnylam Pharmaceuticals
914	Ambry Genetics, A Konica Minolta Company
208	American Association of Heart Failure Nurses (AAHFN)
709	BioCardia, Inc.
710	Boehringer Ingelheim Medical Information
611	Boehringer Ingelheim Pharmaceuticals, Inc. / Lilly USA LLC
411	Boston Scientific
715	Bristol Myers Squibb
815	CardioVere
308	CareDx, Inc.
415	CCS Trials
106	CMP Pharmaceuticals
808	Cormeum
101	CVRx
201	Cytokinetics
109	Daxor Corporation
215	Eidos Therapeutics
814	Endotronix
501	Impulse Dynamics
714	Invitae
102	Ionis Pharmaceuticals, Inc.
514	Itamar Medical
001	Medtronic
509	Merck & Co., Inc
822	Natera
400	Novartis Pharmaceuticals Corporation
918	Nuwellis, Inc.
723	OM1
002	Pfizer Medical Affairs - Rare Disease
904	Sensible Medical Innovations
003	Stealth BioTherapeutics
811	SynCardia Systems, LLC
910	Ultromics
211	V-Wave, Inc.
615	Vyaire Medical
826	ZOLL Medical

EXHIBITOR DETAILS – DESCRIPTIONS

Abbott 701
8701 Bee Caves Road, Austin, TX
www.abbott.com
LinkedIn: www.linkedin.com/company/abbott-/
Facebook: http://www.facebook.com/Abbott
Twitter: @AbbottNews
Contact information:
Katherine Sutherland
katherine.sutherland@abbott.com | 737 900 3226
Description: Abbott is a global healthcare leader that helps people live more fully at all stages of life. Our portfolio of life-changing technologies spans the spectrum of healthcare, with leading businesses and products in diagnostics, medical devices, nutritionals and branded generic medicines. Our 109,000 colleagues serve people in more than 160 countries.

Connect with us at www.abbott.com, on LinkedIn at www.linkedin.com/company/abbott-/, on Facebook at http://www.facebook.com/Abbott and on Twitter @AbbottNews.

ABIOMED 510
22 Chery Hill Drive, Danvers, MA
www.abiomed.com
Twitter: @abiomedimpella
Contact information:
Joanna McNamara
jmcnamara@abiomed.com | 978 882 8469
Description: Abiomed (NASDAQ: ABMD) is a leading provider of groundbreaking medical technology that provides circulatory and oxygenation support. The Impella® heart pump platform is designed to enable the heart to rest and recover by improving blood flow and/or temporarily assisting with the pumping function of the heart. The Abiomed Breethe OXY-1 System™ is designed to provide oxygenation while supporting patient mobility.

Alnylam Pharmaceuticals 309
675 West Kendall Street, Cambridge, MA
www.alnylam.com
Contact information:
Meg Oldham
AlnylamMeetingsManagement@ashfieldhealthcare.com | 978 882 8469
Description: About Alnylam Pharmaceuticals
Headquartered in Cambridge, MA, Alnylam is leading the translation of RNA interference (RNAi) into a new class of medicines for rare genetic, cardio-metabolic, hepatic infectious, and central nervous system (CNS)/ocular diseases.
For more information visit www.alnylam.com

Ambry Genetics, A Konica Minolta Company 914
1 Enterprise, Aliso Viejo, CA
Contact information:
Zach Jensen
zjensen@ambrygen.com | 714 788 2540
Description: More than 1 in 200 people have an inherited cardiovascular condition. Ambry's mission is to provide the most advanced genetic testing information available to help you identity those at risk and determine the best treatment options. If we know a patient has a disease-causing genetic change, not only does it mean better disease management, but it also indicates that we can test others in the family and provide them with potentially life-saving information.

American Association of Heart Failure Nurses (AAHFN) 208
1120 Route 73, Suite 200, Mount Laurel, NJ
Contact information:
Jamie Dumoff
jdumoff@aahfn.org | 856 380 6917
Description: The American Association of Heart Failure Nurses is a non-profit society that unites professionals, patients and caregivers in the support and advancement of heart failure practice, education, and research. With the goal of promoting optimal patient outcomes.

BioCardia, Inc.. 709
125 Shoreway Road, Ste. B, San Carlos, CA
Contact information:
Anne Laluc
alaluc@biocardia.com | 650 255 4977
Description: BioCardia is developing cellular and cell-derived therapeutics for the treatment of cardiovascular and pulmonary disease. CardiAMP™ autologous and NK1R+ allogeneic cell therapies are the Company's biotherapeutic product candidates in clinical development. Current products include the Helix™ transendocardial delivery system, the Morph® steerable guide and sheath catheter portfolio and the AVANCE™ steerable introducer family.

Boehringer Ingelheim Medical Information. 710
www.boehringer-ingelheim.us
Description: Boehringer Ingelheim is working on breakthrough therapies that improve the lives of humans and animals. As a leading research-driven biopharmaceutical company, the company creates value through innovation in areas of high unmet medical need. Founded in 1885 and family-owned ever since, Boehringer Ingelheim takes a long-term perspective. Around 52,000 employees serve more than 130 markets in the three business areas, Human Pharma, Animal Health, and Biopharmaceutical Contract Manufacturing.
Learn more at www.boehringer-ingelheim.us

EXHIBITOR DETAILS – DESCRIPTIONS

Boehringer Ingelheim Pharmaceuticals, Inc./Lilly 611
900 Ridgebury Road, Ridgefield, CT
http://us.boehringer-ingelheim.com | www.lilly.com
Twitter: boehringerus
Contact information:
Rebecca Madrid
rebecca.madrid@boehringer-ingelheim.com
Description: Boehringer Ingelheim Pharmaceuticals, Inc. and Lilly USA welcome you and look forward to the opportunity to share the latest clinical information on our products. Visit http://us.boehringer-ingelheim.com or www.lilly.com. Follow us on twitter at @boehringerus. Our Diabetes Alliance also welcomes you to visit https://pro.boehringer-ingelheim.com/us/products/jardiance/.

Boston Scientific. 411
4100 Hamline Avenue North, Arden Hills, MN
Contact information:
Stephanie Nervegna
stephanie.nervegna@bsci.com | 612 770 1212
Description: Boston Scientific transforms lives through innovative solutions that improve the health of patients around the world. As a global medical technology leader for over 40 years, we advance science for life by providing a broad range of performance solutions that address unmet patient needs and reduce the cost of health care.

Bristol Myers Squibb 715
3401 Princeton Pike, Lawrence Township, NJ
Contact information:
Missy Lawson
missy.lawson@bms.com | 407 616 8529
Description: Bristol Myers Squibb is a leading global biopharma company focused on discovering, developing and delivering innovative medicines for patients with serious diseases in areas including oncology, hematology, immunology, cardiovascular, fibrosis and neuroscience. Our employees work every day to transform patients' lives through science.

CardioVere. 815
7324 Penn Avenue, Suite 200, Pittsburgh, PA
Contact information:
Veronica Rillo
rillov@chemimage.com | 412 241 7325
Description: For heart failure patients and their care teams, CardioVere enables detection of non-clinical and clinical congestion non-invasively across all care settings, including home. The device extends the reach and effectiveness of the medical team by providing an early warning sign for treatment of fluid retention to help mitigate the risk of readmission associated with volume overload. It is non-contact, safe and easy-to-use by any clinician, care team member, the patient or family members.

CareDx, Inc.. 308
1 Tower Place, 9th Floor, South San Francisco, CA
www.caredx.com
LinkedIn: https://www.linkedin.com/company/care-dx-inc/
Facebook: https://www.facebook.com/CareDx/
Twitter: @CareDx
Contact information:
Matt Rusk
mrusk@caredx.com | 415 287 2559
Description: CareDx, Inc. Is committed to improving transplant patient outcomes by providing innovative and intelligent solutions throughout the entire patient journey. We are a leading precision medicine solutions company focused on the discovery, development, and commercialization of clinically differentiated, high-value healthcare solutions for transplant patients and caregivers.

CCS Trials 415
75 Kneeland Street, Suite 702, Boston, MA
Contact information:
Lorraine Rusch
lrusch@ccstrials.com | 617 388 5708
Description: Cardiovascular Clinical Sciences (CCS) is a full-service cardiovascular CRO providing the highest level of clinical trial execution via integration of medical, site, and patient perspectives. With the thought leadership of key opinion leaders, site relationships of an academic research organization, and the client focus and scale of a commercial clinical research organization, our strengths make us the ideal partner for your global drug or medtech study. CCS facilitates innovation and improves patient outcomes through cardiovascular therapeutics and diagnostics clinical trial expertise — anchored by cardiovascular expertise, scientific acumen, operational rigor, and global reach. Our dedication to cardiovascular research — driven by the most advanced science — will help you achieve your development goals. For a partner who's driven by science and dedicated to heart, choose Cardiovascular Clinical Sciences.

CMP Pharmaceuticals 106
8026 US Highway, 264A, PO Box 147, Farmville, NC
www.cmppharma.com
Contact information:
Susan Dias
sdias@slate360inc.com | 774 219 7163
Description: CMP Pharmaceuticals | CaroSpir® CMP Pharma develops, manufactures and commercializes specialty pharmaceuticals, focused on niche oral liquid, injectable and topical products that solve unmet patient needs. CaroSpir® (Spironolactone Oral Suspension, 25 mg/5mL) is the first and only FDA-approved oral Suspension of the potassium-sparing diuretic spironolactone.

EXHIBITOR DETAILS – DESCRIPTIONS

Cormeum **808**
156 Danforth Street, #4, Portland, ME
Contact information:
Lesley Hanselman
lesley@ginkgoheart.com | 207 772 2528
Description: Cormeum is the smart heart failure app. Cormeum was designed to provide a comprehensive, yet simple way for patients to manage their heart failure metrics, empowering them to work more effectively in partnership with their healthcare providers.

CVRx **101**
9201 W Broadway Ave, Suite 650, Minneapolis, MN
Contact information:
Andrew Ganton
aganton@cvrx.com | 650 338 8623
Description: CVRx has developed Barostim - Baroreflex Activation Therapy - a new option for heart failure patients with narrow QRS who are not eligible for CRT. Barostim works by electrically stimulating carotid baroreceptors which, which activates in integrated autonomic response via the baroreflex, restoring balance between sympathetic and parasympathetic activity to the cardiovascular system. Barostim has been proven effective to reduce the symptoms of heart failure in the pivotal BeAT-HF study.

Cytokinetics **201**
280 East Grand Avenue, South San Francisco, CA
Contact information:
Laura Gschwind
lgschwind@cytokinetics.com | 650 678 2311
Description: Cytokinetics is a late-stage biopharmaceutical company focused on discovering, developing, and commercializing first-in-class muscle activators and next-in-class inhibitors as potential treatments for people with debilitating diseases in which muscle performance is compromised and/or declining.

Daxor Corporation **109**
109 Meco Lane, Oak Ridge, TN
www.daxor.com
Contact information:
Tina Gadd
tgadd@daxor.com | 865 425 0555
Description: Daxor Corporation is an innovative medical instrumentation and biotechnology company focused on blood volume measurement. We developed and market the BVA-100 (Blood Volume Analyzer), the first diagnostic blood test cleared by the FDA to provide safe, accurate, objective quantification of blood volume status and composition compared to patient-specific norms in a broad range of medical conditions.

Eidos Therapeutics **215**
232 Madison Ave, New York, NY
Contact information:
Rooney Nelson
rooney@hudsq.com | 917 763 3070
Description: Eidos is actively developing an investigational oral medicine for ATTR named acoramidis (AG10). Acoramidis is a small molecule, designed to selectively stabilize TTR and prevent the formation of amyloid fibrils that cause ATTR. We are working quickly to advance its development—knowing that every minute counts for patients and families suffering from this devastating disease.

Endotronix **814**
815 Odgen Ave, Lisle, IL
http://www.endotronix.com/
Contact information:
Amanda Poland
amanda.poland@endotronix.com | 630 296 4191
Description: Endotronix, Inc., a medical technology company, delivers an integrated platform that provides comprehensive, reimbursable health management innovations for patients suffering from advanced heart failure. Their solution, the Cordella™ Heart Failure System, includes a cloud-based disease management data system and at home hemodynamic management with a breakthrough implantable wireless pulmonary artery pressure sensor for early detection of worsening heart failure. Learn more at www.endotronix.com.

ImpediMed **004**
5900 Pasteur Ct, Ste 125, Carlsbad, CA
Contact information:
Lisa Keeley
lkeeley@impedimed.com | 760 585 2123
Description: ImpediMed is the leader in the design and manufacture of medical devices using bioimpedance spectroscopy. Our HF-Dex™ Analysis for Heart Failure, available on our SOZO® device, is a new point-of-care heart failure fluid assessment. Defined as extracellular fluid volume as a percent of total body water volume, HF-Dex is an objective measure of fluid burden to help clinicians manage heart failure patients.

Impulse Dynamics **501**
50 Lake Center Executive Parkway, Suite 100, Marlton, NJ
http://www.impulse-dynamics.com/
LinkedIn: https://www.linkedin.com/company/impulsedynamics/
Contact information:
Rick Chastain
rchastain@impulsedynamics.com | 970 331 5849
Description: CCM® therapy is a breakthrough treatment proven to help many people with heart failure feel better and reduce their symptoms. It's the first therapy of its kind designed to improve contractility of the heart, allowing more oxygen-rich blood to the body. Prior to its FDA-approval, eligible patients had few, or no, effective options available to them.

EXHIBITOR DETAILS – DESCRIPTIONS

Invitae 714
1400 16th Street, San Francisco, CA
www.invitae.com
Linkedin: https://www.linkedin.com/company/invitae
Facebook: https://www.facebook.com/Invitae/
Twitter: @Invitae
Contact information:
Pamela Balsley
pamela.balsley@invitae.com | 720 818 4350
Description: Invitae's mission is to bring comprehensive genetic information into mainstream medical practice to improve the quality of healthcare for billions of people. Our goal is to aggregate the world's genetic tests into a single service with higher quality, faster turnaround time and lower prices. Visit www.invitae.com

Ionis Pharmaceuticals, Inc. 102
2855 Gazelle Court, Carlsbad, CA
www.ionispharma.com
Contact information:
Alex Glover
aglover@ionisph.com | 760 268 4985
Description: For more than 30 years, Ionis has been the leader in RNA-targeted therapy, pioneering new markets and changing standards of care with its novel antisense technology. Ionis currently has three marketed medicines and a premier late-stage pipeline highlighted by industry-leading neurological and cardiometabolic franchises. Our scientific innovation began and continues with the knowledge that sick people depend on us, which fuels our vision of becoming one of the most successful biotechnology companies. To learn more about Ionis visit www.ionispharma.com

Itamar Medical 514
3290 Cumberland Club Drive, Atlanta, GA
Contact information:
Jill Brown
bjill@itamar-medical.com | 770 656 5159
Description: Itamar Medical™ is a medical device company focused on leading the integration of Sleep Apnea management into the cardiac patient care pathway. As one of the leading home sleep testing companies in the US, the company has pioneered an innovative sleep apnea management program for patients and healthcare professionals.

Medtronic 001
710 Medtronic Parkway NE, Minneapolis, MN
www.Medtronic.com
Contact information:
Emily Youngmark
emily.a.youngmark@medtronic.com | 952 406 0644
Description: Making healthcare better is our priority and we believe technology can play an even greater role in improving people's lives. In addition to alleviating pain, restoring health, extending lives, we work in partnership with others to create seamless, more efficient care. Learn how we're taking healthcare Further, Together at Medtronic. com

Merck & Co., Inc 509
2000 Galloping Hill Road, Kenilworth, NJ
Contact information:
Nadine Curtin
nadine.curtin@merck.com
Description: Merck has been inventing for life, bringing forward medicines and vaccines for many of the world's most challenging diseases. Today, Merck continues to be at the forefront of research to deliver innovative health solutions and advance the prevention and treatment of diseases that threaten people and animals around the world.

Natera 822
201 Industrial Rd., San Carlos, CA
Contact information:
Kamalia Kim
kkim@natera.com | 408 489 8683
Description: Natera is a global leader in cell-free DNA (cfDNA) testing. The mission of the company is to harness the power of DNA from a single blood sample to improve the management of patients in reproductive health, oncology, and organ transplantation. Developed by our trusted legacy in cfDNA, the Prospera transplant assessment test is optimized to be a precise and reliable tool for early, clinically meaningful rejection assessment in your heart transplant recipients.

EXHIBITOR DETAILS – DESCRIPTIONS

Novartis Pharmaceuticals Corporation 400
One Health Plaza, East Hanover, NJ
www.novartis.com
LinkedIn: https://www.linkedin.com/company/novartis/
Facebook: https://www.facebook.com/novartis
Twitter: @Novartis
YouTube: https://www.youtube.com/user/Novartis
Instagram: @Novartis
Contact information:
Marianne Santorelli
marianne.santorelli@novartis.com | 862 308 9826
Description: Novartis is reimagining medicine to improve and extend people's lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. We rank among the world's top companies investing in research and development, and our products reach nearly 800 million people globally.

Nuwellis, Inc.. 918
12988 Valley View Road, Eden Prairie, MN
Contact information:
Laura Serrano
laura.serrano@nuwellis.com | 612 438 5002
Description: Nuwellis is committed to transforming fluid management care through the development of solutions that are clinically proven, safe, and reliable.

We strive to provide a trusted partnership with caregivers who treat patients suffering from fluid overload. It is through this partnership that we seek to better understand their priorities and needs in treating these patients.

Our employees are passionate about delivering quality products and training to caregivers and are committed to improving the quality of life of their patients.

OM1 723
800 Boylston St, Ste 1410, Boston, MA
Contact information:
Renee Hurley
rhurley@om1.com | 617 620 9571
Description: Specializing in chronic diseases, OM1 is a leading real-world data and technology company. Available for licensing, analytics, and collaboration, the OM1 Heart Failure Registry is a longitudinal dataset of 171,000+ heart failure patients followed prospectively with deep clinical data, including LVEF measures, NYHA functional status, lab results and medication data.

Pfizer Medical Affairs – Rare Disease 002
www.pfizer.com
Facebook: https://www.facebook.com/Pfizer/
Twitter: @pfizer
Contact information:
Ashley Simmons
ashley.simmons2@pfizer.com
Description: About Pfizer: Breakthroughs That Change Patients' Lives
At Pfizer, we apply science and our global resources to bring therapies to people that extend and significantly improve their lives. We strive to set the standard for quality, safety and value in the discovery, development and manufacture of health care products, including innovative medicines and vaccines.

Sensible Medical Innovations 904
64 North Summit, Suite 207, Tenafly, NJ
Contact information:
Eran Kurman
eran.k@sensible-medical.com | 818 535 1665
Description: The ReDS™ system is a noninvasive tool that allows providers to rapidly – and accurately – measure lung fluid in Heart Failure patients at home. Measurements take 45 seconds and can be performed by caregivers daily, or as needed, when symptoms present themselves. The use of the ReDS™ system had shown to improve symptoms through early detection and treatment.

Stealth BioTherapeutics 003
140 Kendrick Street, Building C-West, Needham, MA
Contact information:
Amelia Stetler
amelia.stetler@stealthbt.com | 617 762 2562
Description: Stealth BioTherapeutics is an innovative biopharmaceutical company developing therapies to treat mitochondrial dysfunction associated with genetic mitochondrial diseases and common diseases of aging. We work with patients and advocacy organizations to better understand their journey with mitochondrial disease and raise awareness of the unmet need our programs seek to address.

SynCardia Systems, LLC. 811
1992 E. Silverlake Rd, Tucson, AZ
www.Syncardia.com
Facebook: https://www.facebook.com/SynCardia/
Twitter: @SynCardia
Contact information:
Kris Peiffer
kpeiffer@syncardia.com | 520 618 1859
Description: SynCardia Systems, LLC is the sole manufacturer and provider of the world's only commercially approved total artificial heart. In clinical use for more than 35 years, the SynCardia temporary Total Artificial Heart (TAH) is the most widely used and extensively studied total artificial heart in the world.

EXHIBITOR DETAILS – DESCRIPTIONS

Ultromics **910**
539 W. Commerce St, #1679, Dallas, TX
Contact information:
Stephen Hohnholt
stephen.hohnholt@ultromics.com | 720 284 4285
Description: Ultromics is a global health technology firm which provides autonomous echocardiography analysis through innovative AI solutions empowering physicians to make fast, accurate decisions when diagnosing cardiovascular disease.

V-Wave, Inc. **211**
29219 Canwood St. #100, Agoura Hills, CA
Contact information:
Nigel Tinberg
nigel@vwavemedical.com | 612 284 1678
Description: Sponsor of the RELIEVE-HF Clinical Trial, a multi-center international study evaluating a new investigational implantable medical device for patients diagnosed with heart failure.

Vyaire Medical **615**
26125 N. Riverwoods Blvd, Mettawa, IL
Contact information:
Keith Kwiatkowski
keith.kwiatkowski@vyaire.com | 714 318 2862

ZOLL Medical **826**
12400 Whitewater Dr., Suite 150, Minnetonka, MN
Contact information:
Seamus Jackson
sjackson@zoll.com | 312 804 8566
Description: The remed System is a pacemaker-like device, implanted transvenously by an electrophysiologist, to treat moderate to severe Central Sleep Apnea (CSA) in adults. remed activates automatically each night to stimulate the phrenic nerve, causing smooth contractions of the diaphragm that restore a more normal breathing pattern during sleep. Safety: https://remede.zoll.com/

Gaylord Rockies Hotel

Colorado Ballroom - **Level 3**

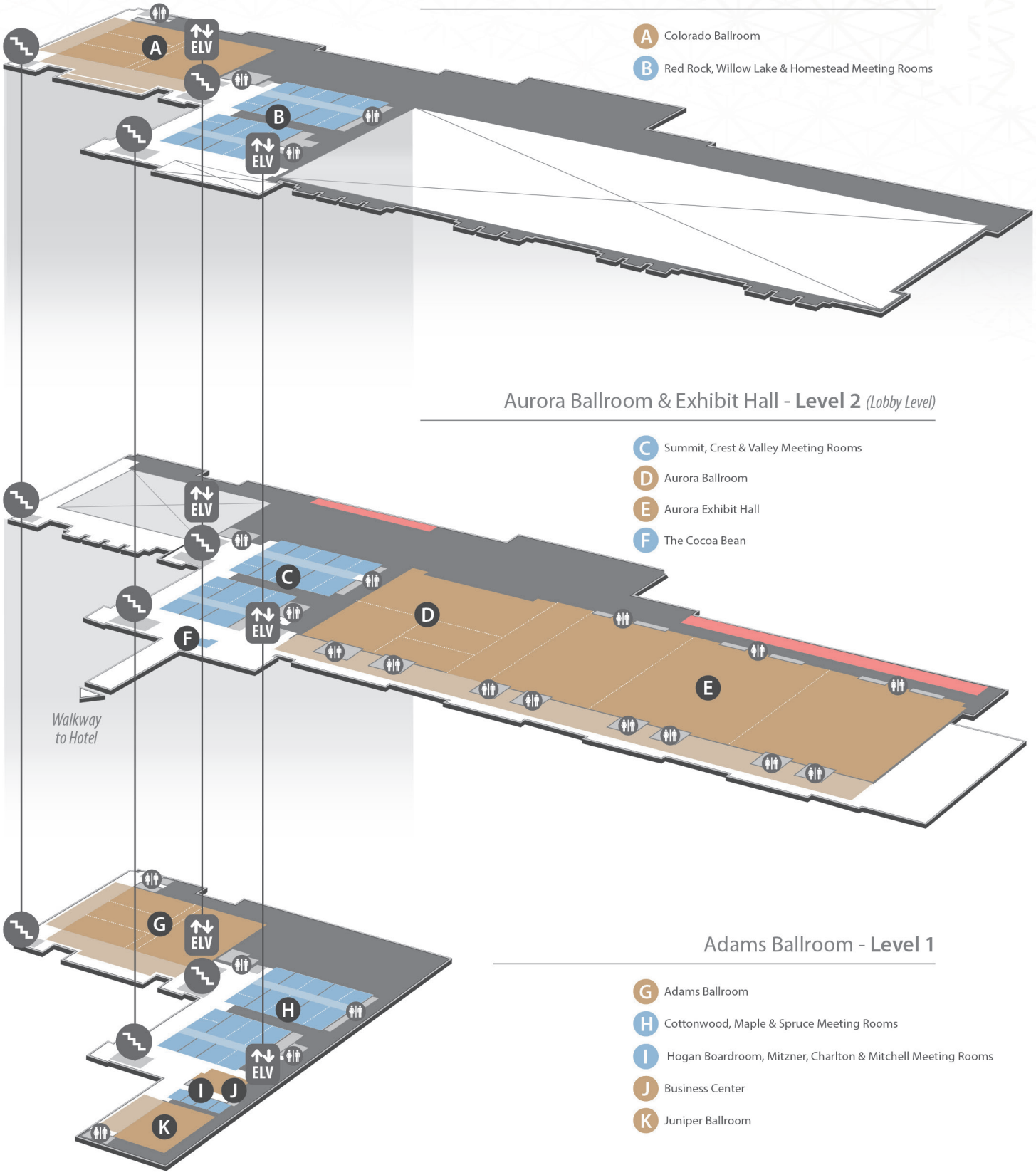
- A Colorado Ballroom
- B Red Rock, Willow Lake & Homestead Meeting Rooms

Aurora Ballroom & Exhibit Hall - **Level 2** *(Lobby Level)*

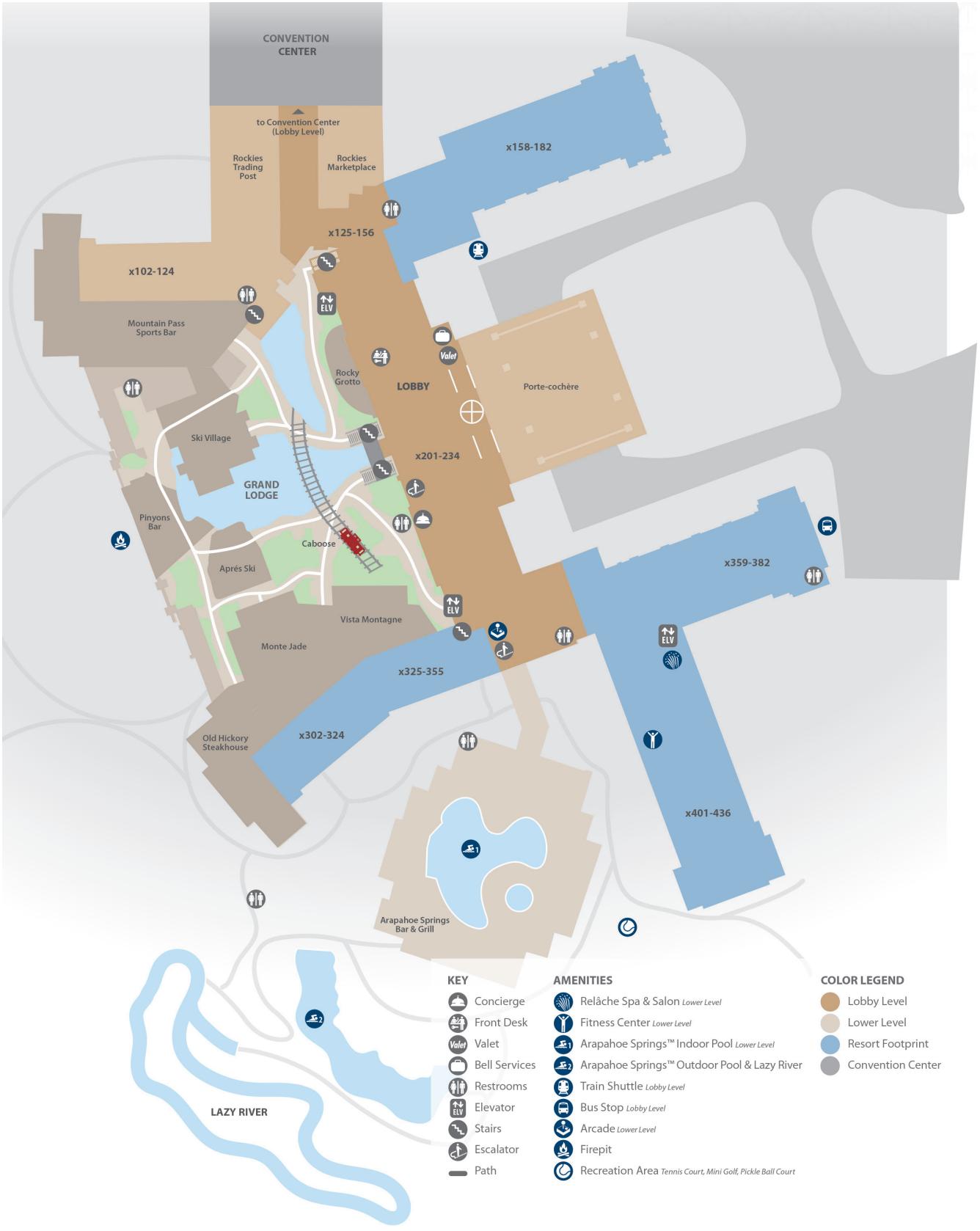
- C Summit, Crest & Valley Meeting Rooms
- D Aurora Ballroom
- E Aurora Exhibit Hall
- F The Cocoa Bean

Adams Ballroom - **Level 1**

- G Adams Ballroom
- H Cottonwood, Maple & Spruce Meeting Rooms
- I Hogan Boardroom, Mitzner, Charlton & Mitchell Meeting Rooms
- J Business Center
- K Juniper Ballroom



Gaylord Rockies Hotel



NOTES:

hfsa.org/annualscientificmeeting