

Daily News

MONDAY | NOV. 13, 2023



Wu

Teamwork matters

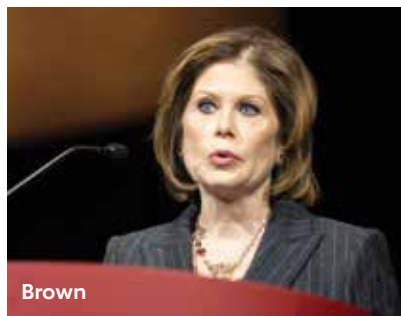
A pioneer and a leader in working with induced pluri-potent stem (iPS) cells, AHA President Joseph C. Wu, MD, PhD, FAHA, has earned a great deal of recognition in his career, including being among the top one-tenth-of-one-percent of the most highly cited investigators in the world from 2018 to 2022.

During an inspiring Lewis A. Conner Lecture at yesterday's President's Session, Dr. Wu explained that the greatest successes in life are never singular. They come through collaboration.

See **TEAMWORK**, page 14



Jones



Brown



Scientific Sessions: A meeting of health and hope

On the cusp of its 100th year, the American Heart Association's vision rings crystal clear: Advancing health and hope for everyone, everywhere.

That was the overarching message presented by Nancy Brown, AHA CEO, during yesterday's Presidential Session.

"We're excited to roll out our vision statement at such an exciting

time in our organization's history," she said. "After all, improving and extending the health of current and future generations is why we're all here. And hope inspires every See **PRESIDENTIAL SESSION**, page 14

Age: Is it a number, or a biology?

Champions of cardiovascular health and investigators in the aging domain unite to address age-old questions and present innovative insights

The prospects — and byproducts — of getting older can be difficult and disheartening, and many people believe that aging is inevitable. While age is a significant

factor of health, particularly cardiovascular health, surprisingly, it is not an immutable factor.

In the upcoming session, Aging as a Unique Determinant of Cardiovascular Health, speakers will address what it means for humans to age from chronological, biological, mechanical and epidemiological perspectives. Researchers and thought leaders also will examine additional aging factors, potential efforts to impact the aging process and outlooks on the future of aging science.

"In every risk equation assessing the burden of cardiovascular disease, the dominant risk variable is age," said Clyde W. Yancy, MD, MSc, MACC, FAHA. "Yet, the presumption that aging is a 'fait au complet' is rooted in empiricism, not data."



Yancy

Dr. Yancy is vice dean of diversity See **AGE**, page 15

UPCOMING SESSION

Aging as a Unique Determinant of Cardiovascular Health
Monday, Nov. 13
9:45–11 a.m.
Main Event II

Inside

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Drugs, diet and delivery can optimize hypertension outcomes **6**

Shocking decisions in AFib care **10**

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Today at Sessions

Late-Breaking Science

From Local to Global: Achieving Equity in Prevention

8-9:15 a.m. | Main Event I

- Hypertension Treatment in Nigeria Program: Early Results of a Type 2 Hybrid Effectiveness and Implementation Interrupted Time Series Trial (HTN Program)
- A Cluster Randomized Trial of Automated Referral to Centralized Pharmacy Services for Evidence-Based Statin Initiation in High-Risk Patients
- Effects of Intensive Blood Pressure Lowering Treatment in Reducing Risk of Cardiovascular Events (ESPIRIT)
- Effect of a Multifaceted Implementation Strategy on Blood Pressure Control in Low-Income Patients: A Cluster Randomized Trial (IMPACTS)

Artificial Intelligence at the Bedside

9:45-11 a.m. | Main Event I

- Screening for Peripartum Cardiomyopathies Using an Artificial Intelligence Enhanced Digital Stethoscope: A Randomized Clinical Trial (SPEC-AI)
- Novel AI Technology to Improve Risk Stratification of Patients Without Obstructive Coronary Artery Disease Undergoing CCTA: The Oxford Risk Factors and Non-Invasive Imaging (ORFAN) Study (ORFAN)
- Validation of a Speech Analysis Application to Detect Worsening Heart Failure Events in Ambulatory Heart Failure Patients
- Artificial Intelligence Enabled Rapid Identification of ST-Elevation Myocardial Infarction Using Electrocardiogram (ARISE): A Pragmatic Randomized Controlled Trial (ARISE)

Check the Mobile Meeting Guide app for updates.

Today's Main Events

8-9:15 a.m. | Main Event II
AI in the Clinic and Lab: Promise, Pitfalls and the Data Police

9:45-11 a.m. | Main Event II
Aging as a Unique Determinant of Cardiovascular Health

9:45-11 a.m. | 114/Nutter Theater
Henning Lecture Session | Atrial Fibrillation: Novel Mechanisms Unveil Future Therapeutic Approaches

3:15 p.m.-4:05 p.m. | Main Event II
Closing Session and Program Highlights



Featured Science

Novel Approaches in MI — Hype or Hope?

8-9:15 a.m. | Room 203AB

- Half-Dose Tenecteplase or Primary PCI in Older Patients With ST-Elevation Myocardial Infarction: The STREAM-2 One-Year Mortality Follow-up Results (STREAM-2)
- Pre-Hospital Rule-Out of Non-ST-Segment Elevation Acute Coronary Syndrome by a Single Troponin Measurement: Final One-Year Outcomes of the ARTICA Randomized Trial (ARTICA)
- Association of Use and Dose of Lipid Lowering Therapy Post-Acute Myocardial Infarction in the Elderly With Five-Year Survival: The French Registry on ST-Elevation and Non-ST-Elevation Myocardial Infarction (FAST-MI) Registry (FAST-MI)
- Interleukin-1 Blockade With RPH-104 (Goflikcept) in Patients With ST-Segment Elevation Myocardial Infarction (STEMI)
- Prehospital High-Dose Glucocorticoid Treatment for Post-Cardiac Arrest Syndrome Following Resuscitated Out-of-Hospital Cardiac Arrest: The STEROHCA Trial (STEROHCA)

Exercise is Life (and Death) — Approaches in Athletes, Arrhythmias and Heart Failure

9:45-11:15 a.m. | Room 203AB

- Incidence and Causes of Sudden Cardiac Death in National Collegiate Athletic Association Athletes: A 20-Year Study
- Vigorous Exercise in Individuals With Long QT

Syndrome (LQTS): Primary Results of the Prospective, Multinational Lifestyle and Exercise in LQTS (LIVE-LQTS) Study (LIVE-LQTS)

- Safety and Efficacy of the Jewel, A Novel Patch Wearable Cardioverter Defibrillator: Results From the Jewel Investigational Device Exemption Study
- Effect of a Walking Intervention on Functional Capacity in Patients With Chronic Heart Failure With Reduced Ejection Fraction: The WATCHFUL Trial (WATCHFUL)
- The Liraglutide Effect on Atrial Fibrillation (LEAF) Study (LEAF)

From Artery to Veins — A Fantastic Journey

1:30-2:45 p.m. | Room 203AB

- A Multicenter, Randomized, Warfarin-Controlled Trial of Edoxaban in Patients With Chronic Thromboembolic Pulmonary Hypertension: KABUKI Trial (KABUKI)
- Ultrasound-Assisted Catheter-Directed Thrombolysis Versus Surgical Pulmonary Embolectomy for Intermediate-High or High-Risk Pulmonary Embolism: A Randomized Phase II Non-Inferiority Study (SPECIAL)
- Nicotinamide Riboside to Improve Walking Performance in Peripheral Artery Disease: A Randomized Clinical Trial (NICE)
- Pemafigrate Reduces Incidence of Lower Extremity Ischemic Ulcer and Gangrene: Evidence From PROMINENT (PROMINENT)



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Artificial intelligence shows promise and pitfalls, experts say

AI can be a benefit in cardiovascular care, but a responsible approach is needed

Artificial intelligence is making its way into more aspects of medical care — and cardiovascular care is no exception.

But while the full potential of this technology has yet to be realized, its use should be approached with caution and care, said Randi Foraker, PhD, MA, FAHA, FAMIA, director of the Center for Population Health Informatics at the Washington University Institute for Informatics in St. Louis, Missouri.

Dr. Foraker, along with Jessica L. Mega, MD, MPH, cardiologist at Stanford Health Care in Palo Alto, California, will lead Monday's session, *AI in the Clinic and Lab: Promise, Pitfalls and the Data Police*.

One of the main uses for AI in cardiovascular care is in imaging, Dr. Foraker said.

"AI methods are really designed to pick out patterns and abnormalities in those patterns," she said. "That's why it's ideal for images, because normal images look alike and are very predictable in that look, but abnormalities in images are easy to ascertain through AI. The subtleties in those abnormalities are detectable. Those could be blood vessels of the heart or areas in the brain during a stroke."

In addition to imaging, AI has been evaluated for numerous other areas, Dr. Mega said.

"AI in cardiology is being discussed in a number of broad settings, including the diagnosis, treatment and prevention of disease," she said. "Administrative AI tools are also working their way into clinical

practice through technologies, such as voice recognition software and health care claims processing."

Artificial intelligence could be an important tool for cardiovascular care because it can spot patterns a human eye might miss, Dr. Mega said.

"AI can be used to detect signals or patterns that are not easily recognizable on the surface," she

said. "This type of anomaly detection can be used in different ways, from identifying particular populations of people who are being undertreated to finding cases of medical overtreatment."

Dr. Foraker said AI has the potential to dig deeper into data and uncover biases that otherwise might

See **AI**, page 11



UPCOMING SESSION

AI in the Clinic and Lab: Promise, Pitfalls and the Data Police
Monday, Nov. 13
8-9:15 a.m. | Main Event II

PAID ADVERTISEMENT

PLEASE JOIN US FOR AN

Industry-Sponsored Learning Studio Breakfast Presentation
at AHA Scientific Sessions 2023

Clinical Insights in NVAF: Reducing the Risk of Stroke and Systemic Embolism

Monday, November 13, 2023 • 9:30 AM – 10:15 AM

LOCATION

Pennsylvania Convention Center

Learning Studio I
Philadelphia, Pennsylvania

PRESENTER

Ronald Uszenski, MD, FACC

Cardiologist
Lake Norman Regional Medical Center Heart and Vascular Institute
 Mooresville, North Carolina

PROGRAM DESCRIPTION

Patients with nonvalvular atrial fibrillation (NVAF) are at risk of stroke. This lecture will present an option for reducing the risk of stroke in NVAF patients, including those with obesity.

This event is not part of the official Scientific Sessions Conference 2023 as planned by the AHA Committee on Scientific Sessions Program.

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Heart failure late-breaking science

Three abstracts highlight aspirin-free LVAD regimen, TEAMMATE and POCKET-COST-HF trials

Saturday's Late-Breaking Science Session, Heart Failure — VADS, Kids and Money, found that:

- Removing aspirin from LVAD medical regimen reduces bleeding events and costs, without increasing risk of thromboembolic events.
- TEAMMATE shows everolimus is safe in children, young adults following heart transplant.
- Heart failure medication cost information affects treatment discussions and costs.

Aspirin-free LVAD regimen reduced bleeding events and costs

The first international trial comparing the use of a modern left ventricular assist device (LVAD) with and without aspirin as part of an antithrombotic regimen found that removing aspirin reduced non-surgical bleeding events (relative risk=0.66, p=0.002) with no increase in stroke or other thromboembolic events.

Aspirin avoidance was also associated with a 41% reduction in the cost of care related to bleeding complications.



Mehra

“This is a huge step forward for the benefit of patients supported with LVADs, that the simple removal of aspirin from LVAD antithrombotic regimens improves the lives of patients,” said Mandeep R. Mehra, MBBS, MSc, FRCP, the William Harvey Distinguished Chair in Advanced Cardiovascular Medicine, executive director of the Center for Advanced Heart Disease at Brigham and Women’s Hospital, and professor of medicine at Harvard Medical School.

“We can reduce bleeding complications by 44% by simply removing aspirin with no increase in stroke risk, pump malfunction or thromboembolic events,” he said.

The global ARIES-HM3 trial randomized 628 patients with advanced heart failure implanted with a fully magnetically levitated LVAD to receive either aspirin 100 mg daily (314 patients) or placebo (314 patients), in addition to a vitamin K antagonist with target INR between 2.0-3.0.

The study was conducted at 51 centers across nine countries. The mean age of patients was 60, 18% were female and 39% non-White (ARIES 1); the majority of patients (85%) were enrolled in North America.

The primary non-inferiority endpoint was a survival free of a major nonsurgical hemocompatibility-related adverse event, including stroke, pump thrombosis, major bleeding or arterial peripheral thromboembolism, at 12 months after LVAD implantation. The principal secondary endpoint was nonsurgical bleeding events.

ARIES-HM3 clearly demonstrated non-inferiority for the aspirin-free regimen with a between-group difference of 6.04% (p<0.001), Dr. Mehra said. The aspirin-free regimen showed a reduction of 14.5 bleeding events per 100 patient years of follow-up.

“We have always used aspirin for decades as part of ventricular assist device therapy, but it has never been adequately tested in a conclusive, randomized trial before,” Dr. Mehra said. “Our subgroup analysis also



fully supports aspirin removal even in those with prior bypass surgery, stroke, coronary stent, or diabetes, characteristics you would think are associated with higher thrombosis risk. This is a huge win for patients on LVAD.”

ARIES-HM3 was published simultaneously in the Journal of the American Medical Association.

TEAMMATE shows everolimus is safe in children, young adults following heart transplant

The first clinical trial of everolimus to prevent rejection in children and young adults after heart transplant found the agent is similarly safe as standard immunosuppression when initiated six months after transplant. Everolimus, a proliferation signal inhibitor, has been shown to reduce the risk of rejection and other transplant complications, but carries a black box warning against use in heart transplant due to an increased risk of mortality due to infection when initiated early.



Almond

“Everolimus combined with low-dose tacrolimus is safe in children and young adults when initiated at 6 months after transplant,” said Christopher S. Almond, MD, MPH, professor of pediatrics at Stanford University. “The primary strategy to prevent rejection, a combination of tacrolimus and mycophenolate mofetil (MMF), has a median survival of just 18 years, which means many who are transplanted as children fail to survive to adulthood.”

The TEAMMATE trial randomized 211 heart transplant patients at 25 children’s hospitals across the U.S. to everolimus + low-dose tacrolimus (EVL group, 107) or standard-dose tacrolimus + MMF (MMF group, 104) and followed them for 30 months. The primary efficacy endpoint was the Major Adverse Transplant Event (MATE-3) score, a composite of biopsy-proven acute cellular rejection, cardiac allograft vasculopathy, chronic kidney disease. The primary safety endpoint was the MATE-6 score, MATE-3 plus serious infection, post-transplant lymphoproliferative disorder (PTLD), and antibody-mediated rejection.

The mean age of patients was 8.2 years, half were female, 20% non-White, and 25% Hispanic. Half the cohort was transplanted for cardiomyopathy and 49% had public insurance.

At 30 months, there was no significant safety difference in MATE-6 score between the two groups. EVL had a numerically

lower score for cardiac allograft vasculopathy, chronic kidney disease, and rejection with a higher score for infection and PTLD.

Nor was there a significant difference in efficacy by MATE-3 score. EVL had a numerically lower score for cardiac allograft vasculopathy and chronic kidney disease and a higher score for cellular rejection. The cumulative burden of cardiac allograft vasculopathy, chronic kidney disease, cellular rejection, and CMV infection was 30% lower in the EVL group versus the MMF group ($p=0.03$). Stomatitis was more common in the EVL group, 32% versus 7%, and drug discontinuation due to adverse events was more common in the MMF group, 21% versus 12% ($p<0.001$ for both).

Adding cost information can affect patient-clinician treatment discussions, decisions in heart failure POCKET-COST-HF, the first randomized trial of adding cost information to patient-clinician discussions of heart failure therapy, showed a modest but important effect on treatment decisions and adherence.

When patients and clinicians were provided with out-of-pocket costs of recommended heart failure medications, cost issues were included in treatment discussions 19% more often than when patients and clinicians were unaware of potential out-of-pocket costs.

Patients also may be less likely to defer decisions and start the medications that they decide on with their clinicians when they know those costs.

“Out-of-pocket cost is a huge concern in general related to medications and to heart failure in particular,” said Neal Dickert, MD, PhD, associate professor and Thomas R. Williams Professor of Medicine at Emory University School of Medicine and interim director of the Emory Health Services Research Center.



Dickert

“Guidelines now recommend a number of medications that can have appreciable out-of-pocket costs. What used to be an inexpensive set of a few generic drugs for heart failure with reduced ejection fraction is now a bigger set of drugs, some of which can have appreciable costs.”

Researchers randomized 240 patients at three academic clinical sites in Georgia and three in Colorado. All patients and clinicians had the same list of recommended heart failure medications. Half of the patients and clinicians also had the out-of-pocket costs of each of the non-generic medications, while a control group had the checklist without out-of-pocket cost

information. All patient encounters were recorded and transcribed.

The primary endpoint was cost-informed decision-making, defined by the presence or absence of heart failure medication cost discussions. Secondary endpoints included the nature and quality of medication/cost discussions, patient satisfaction, medication changes and adherence, the value of cost conversations and perceptions regarding the checklist and costs of medications.

Inclusion of out-of-pocket cost information showed a nonsignificant 10% increase in cost discussions in unadjusted analysis, 55% in the control group versus 65% in the intervention group ($p=0.131$).

Adjusting differences for patients’ financial well-being, time of year, age, sex, race, payer status, copay and other factors showed a 19% increase ($p=0.021$) in cost discussions, 49% in the control group versus 68% in the intervention group.

Initial results showed that 36% of control patients started a new medication versus 21% in the intervention group. But while 78% of control patients reported remaining on their new medication two weeks later, 92% of intervention patients said they were still taking the new medication.

“If you provide this information, patients and clinicians talk about it and use it,” Dr. Dickert said. “And while the intervention group made fewer medication changes, they seem to be more likely to follow through with those changes. We are eager to see the longer-term trends related to adherence.” •



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VERVE-101

9:45-10:15 a.m.
Monday, Nov. 13
CardioTalk I

ESPRIT

9:45-10:15 a.m.
Monday, Nov. 13
CardioTalk II

SPEC-AI Nigeria

1:30- 2 p.m.
Monday, Nov. 13
CardioTalk I

ARISE

1:30- 2p.m.
Monday, Nov. 13
CardioTalk II

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Grand Hall, Level 2

Broad Street Entrance, Level 1

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Drugs, diet and delivery can optimize hypertension outcomes

Investigators in four trials revealed findings during Saturday's Late-Breaking Science Session, Using Drugs, Diet and Delivery to Optimize Hypertension Outcomes. Results from these trials found:

- Reducing dietary sodium lowers systolic blood pressure for patients with and without hypertension.
- Improved postpartum blood pressure control has long-term blood pressure and cardiac benefits.
- Zilebesiran, an investigational RNA interference therapeutic agent, reduced blood pressure >15 mmHg.
- Blood pressure control could be linked to decreased dementia risk.



Food for thought: More patients to likely benefit from reducing dietary sodium

Dietary sodium intake can have a significant effect on blood pressure among people with and without hypertension (HTN), including those who are already on medications to lower blood pressure, researchers said.

Estimates from older studies suggest about 50% of people with HTN and 25% of people with normal blood pressure are salt sensitive. Are those numbers still accurate? That's among the questions asked in Effects of Dietary Sodium on Systolic Blood Pressure in Middle-Aged Individuals: A Randomized Order Cross-Over Trial (CARDIA-SSBP), a cohort of the Coronary Artery Risk Development in Young Adults (CARDIA) study that also included non-CARDIA participants from Birmingham, Alabama, and Chicago.

The randomized, crossover trial enrolled 213 people across the spectrum of blood pressure control, including people with normal blood pressure, controlled HTN, uncontrolled HTN and untreated HTN.

During the three-week trial, participants attended a baseline visit on their usual diet and were then randomized to a high sodium diet (2,200 mg sodium added to the usual diet) or a prepared, standardized low-sodium (500 mg daily total) diet for one week before crossing over to the opposite diet.

Blood pressure outcomes were

recorded using 24-hour ambulatory monitoring devices on the last day of each of the three weeks. Since most of the sodium we consume is excreted in urine, participants in the trial also collected urine for 24 hours on the final day of each week to assess the amount of sodium in their diet.

"On the low-sodium diet, participants achieved a median consumption of about 1,300 mg of sodium, which is a reduction of about 2,300 mg or one teaspoon of sodium from their usual diet," said Norrina Allen, PhD, the study's co-principal investigator and professor of epidemiology at Northwestern University. Compared with the usual diet, the high-sodium diet did not raise systolic blood pressure ($p=0.14$).



Gupta

"The baseline amount of sodium averaged around 4,500 milligrams of daily sodium, which suggests that the usual diet for most adults is already saturated with sodium and adding to it does not substantially increase blood pressure," said Deepak K. Gupta, MD, MSCI, the study's co-principal investigator and director of the Vanderbilt

Translational and Clinical Cardiovascular Research Center

However, the low-sodium diet induced a decline in systolic blood pressure in 72% of study participants compared with their blood pressure on the usual diet. The median within-individual change in systolic blood pressure between the high- and low-sodium diet was 7 mmHg ($p<0.001$). This decline in systolic blood pressure with the low-sodium diet was independent of HTN status and anti-hypertensive medication use, consistent across subgroups, and did not result in excess adverse events.

Participants taking medications to control their blood pressure had a similar reduction in blood pressure with the low-sodium diet as participants with HTN who were not on anti-hypertensive medications, emphasizing the importance of dietary sodium reduction in addition to medications to lower blood pressure.

"The decreases in blood pressure we observed could have a major impact on an individual's future risk of heart disease and death; prior studies have shown that every 5 mm Hg lower blood pressure significantly reduced the risk for all-cause mortality by up to 8%," Dr. Allen said.

CARDIA-SSBP suggests the majority of middle-aged adults can get a blood pressure benefit from reducing dietary sodium, even patients taking anti-hypertensive medication — and that salt sensitivity is more prevalent than

previously estimated.

"In our study, three out of four people benefited from lowering their dietary sodium intake," Dr. Gupta said. The study was published online in JAMA Network Open following the presentation.

Blood pressure control during postpartum has long-term CV impact

Affecting roughly 10% of women, pregnancy hypertension is common and results in adverse cardiac remodeling and an increased incidence of hypertension and future cardiovascular diseases.

Still, how blood pressure is managed in the weeks after pregnancy, as a patient's cardiovascular system recovers from the hypertensive episode, may be critically important for determining future cardiovascular health, according to the Long-Term Blood Pressure Control After Physician Optimized Postpartum Blood Pressure Self-Management: The POP-HT Randomized Clinical Trial.

The prospective, open-label, blinded endpoint trial enrolled 220 participants 18 years and older in the U.K. with pre-eclampsia or gestational hypertension who required antihypertensive medication on hospital discharge postnatally. They were randomized 1:1 to self-monitoring with a wireless blood pressure monitor and physician-optimized antihypertensive titration or usual postnatal care, which included a

#AHA23 Exhibitors

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Adult Congenital Heart Association		3121
Agepha Pharma FZ-LLC		1545
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Science & Technology Hall

Hours: Monday, Nov. 13 | 9 a.m.-3 p.m.

Visit the Heart Hub

At the heart of the Science & Technology Hall, explore these useful learning and networking opportunities.



Main Event I

Posters Zone 3

Posters Zone 4

Best of Specialty Conferences Posters

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Lp(a) Testing

AED = AED LOCATIONS

AHA Early Innovators Spotlight

Located in CardioTalk I

The Early Innovators Spotlight featured sessions with early career funded researchers presenting their in-progress work to a panel of AHA council leaders who interacted with these presenters.

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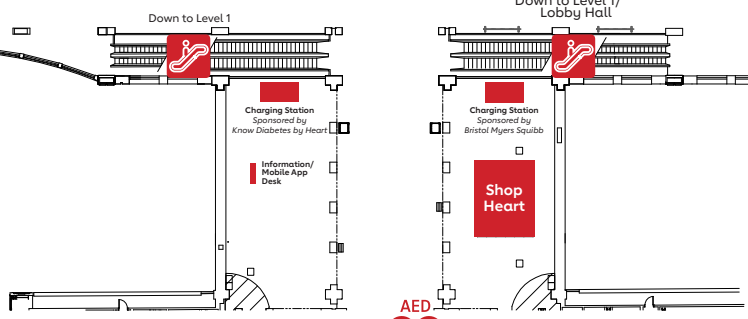
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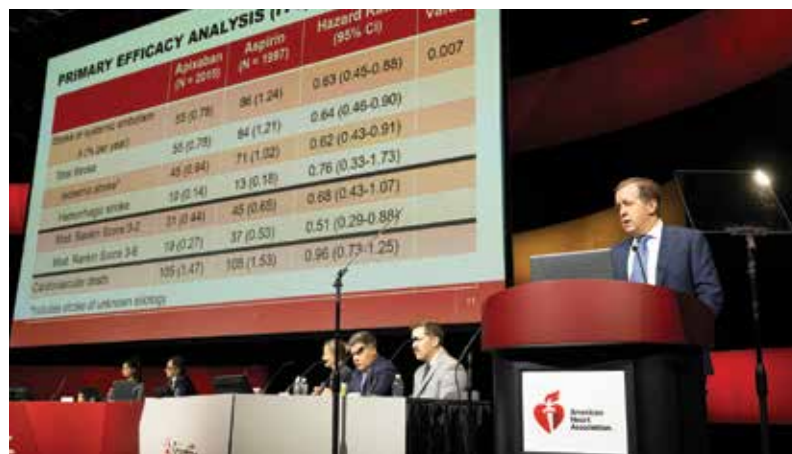


Shocking decisions in AFib care

Trials' results highlight the risks and benefits of oral anticoagulation, the superiority of dual direct cardioversion in patients with obesity and the potential for a novel factor XI inhibitor to reduce bleeding in patients with AFib at high risk of stroke

Investigators in four trials revealed results during their Late-Breaking Science Session on Sunday. They found:

- Patients with subclinical AFib may benefit from oral anticoagulation.
- Oral anticoagulation increased the risk of bleeding in patients with atrial high-rate episodes.
- Dual direct cardioversion restored sinus rhythm in more patients with obesity and AFib.
- Novel factor XI/Xa inhibitor holds promise as a next-generation anticoagulant.



Consider oral anticoagulant treatment for subclinical AFib

Current guidelines are uncertain about treating subclinical atrial fibrillation (SCAF) with oral anticoagulation. These short-lasting asymptomatic episodes of AFib, detected by long-term continuous monitoring by implanted devices, are common among patients with pacemakers and defibrillators and those over 65 with cardiovascular risk factors.

The presence of SCAF is associated with an increased risk of stroke. However, the absolute risk is lower than observed with traditional clinical AFib. The results of Apixaban for the Reduction of Thrombo-Embolism in Patients With Device-Detected Subclinical AFib, the ARTESIA trial, suggest a benefit to treat.

The international trial enrolled 4,012 people with SCAF lasting six minutes to 24 hours, detected by an implanted pacemaker, defibrillator or cardiac monitor, and who had additional stroke risk factors. Participants were randomized in a double-blind, double-dummy fashion to Apixaban 5 mg twice daily or 2.5 mg twice daily if participants met criteria for dose reduction, or aspirin 81 mg once daily, for an average of four years.

The mean CHA2DS2-VASc score for atrial fibrillation stroke risk was 3.9±1.1 and the median (25th, 75th) duration of their longest SCAF episode was 1.47 (0.2-4.95) hours.

Apixaban demonstrated a 37%

statistically significant reduction in stroke risk, from a rate of 1.24% per year, with a 49% reduction in disabling or fatal strokes, with a Modified Rankin Score of 3-6. The rate of major bleeding was higher for patients receiving apixaban (HR=1.80), with a risk of 1.7% per year.



Healey

“ARTESIA showed that Apixaban reduces stroke compared to aspirin; in particular, it reduces severe stroke. However, you do pay a price with an excess of major bleeding,” said Jeff Healey, MD, senior scientist with the Population Health Research Institute and professor of medicine at McMaster University in Hamilton, Ontario, Canada.

However, Apixaban did not result in any excess of the severe components of major bleeding, including bleeding in the brain, fatal bleeding or bleeding requiring transfusion, Dr. Healey said.

Overall, “we should consider oral anticoagulant treatment in patients with background subclinical atrial fibrillation,” he said. The study will be published in the *New England Journal of Medicine* following the presentation.

Oral anticoagulation is not effective in patients with atrial high-rate episodes ≥24 hours

Oral anticoagulation increased bleeding in patients with atrial high-rate episodes (AHRE) ≥24 hours, according to Efficacy and Safety of Anticoagulation With Edoxaban in Patients With AHRE Durations ≥24 Hours.

The study was a subanalysis of NOAH-AFNET 6, which found that oral anticoagulation with edoxaban did not reduce the primary outcome of stroke, systemic embolism or cardiovascular death compared to no anticoagulation in patients with AHRE with at least one stroke risk factor (age ≥65). But it increased the risk of major bleeding.

It is the first report on a randomized comparison of oral anticoagulation and placebo in patients with device-detected AHRE ≥24 hours.

The subanalysis included 259/2389 (11%) patients with AHRE ≥24 hours (77.5±6.6 years old, 37% women, median CHA2DS2-VASc score 4). Clinical characteristics did not differ between participants with AHRE ≥24 hours and those with shorter AHRE, except for more AHRE per patient.

Over a median follow-up of 1.8 years, the primary outcome of stroke, systemic embolism or cardiovascular death occurred in 9/132 patients with AHRE ≥24 hours with anticoagulation (4.3% patient/year) compared to 14/127

patients (6.9% patient/year) treated without anticoagulation.

Among patients with AHRE ≥24 hours with anticoagulation, ischemic stroke occurred in 2/132 patients (0.95% patient/year) and in 2/127 patients with placebo (0.97% patient/year). AHRE duration did not interact with the randomized treatment (P(interaction)=0.65). Compared to placebo, anticoagulation increased the risk of major bleeding. The overall stroke rate was low (1% patient/year) in patients with AHRE ≥24 hours with and without anticoagulation despite multiple clinical stroke risk factors and a median AHRE duration >2 days (53 hours). Patients with AHRE lasting ≥24 hours developed more atrial fibrillation compared to those with AHRE lasting <24 hours, detected by routine ECGs every six months.



Becher

“In this subanalysis, patients with AHRE ≥24 hours and multiple stroke risk factors, oral anticoagulation increased bleeding without a clear signal of reducing the primary outcome of stroke, systemic embolism and cardiovascular

death or the secondary outcome of ischemic stroke compared to placebo,” said Nina Becher, MD, cardiologist at University Medical Center Hamburg-Eppendorf and the study’s co-investigator.

“Considering the balance between anticoagulation-induced bleeding and stroke prevention, our findings suggest that patients with AHRE ≥ 24 hours can be managed without anticoagulation until the presence of atrial fibrillation is verified through an ECG.”

Dr. Becher noted that patients with AHRE ≥ 24 hours often develop ECG-documented AFib over time, underscoring the importance of regular ECG monitoring.

Further research is needed to identify patients with AHRE who are at high risk of stroke and determine how to balance the risk of major bleeding in these complex patients. The study will be published in the *European Heart Journal* following the presentation.

Dual cardioversion more effectively and safely restored sinus rhythm in patients with obesity

Dual cardioversion (dual-DCCV) — in which two sets of defibrillator pads simultaneously deliver two 200 Joule shocks totaling 400J — is safe and more effective in restoring sinus rhythm in patients with AFib, according to Efficacy and Safety of Dual Direct Current Cardioversion Versus Single Direct Current Cardioversion as an Initial Treatment Strategy in Obese Patients With AFib.

External direct current cardioversion, using a single set of defibrillator pads (single-DCCV), is a common treatment to restore sinus rhythm in patients with AFib. Still, it’s estimated to fail in 20% to 25% of patients with obesity, even with biphasic waveforms at maximal energy output.

The three-year, multicenter, prospective controlled trial randomized 200 patients with an average body mass index of 41 kg/m² and AFib 1:1 to single-DCCV or dual-DCCV at three sites in Louisiana. The single-DCCV group received a 200J shock using a single set of defibrillator pads. The dual-DCCV group received synchronized shocks using two sets of defibrillator pads, totaling 400J. Failure of the first cardioversion was followed by a maximum of two additional dual-



DCCV attempts in both groups.

The primary endpoint, successful cardioversion to sinus rhythm immediately following the first DCCV, occurred in 98% of patients in the dual-DCCV group compared to 86% of patients in the single-DCCV group ($P=0.002$). There were no adverse events in either cohort, including cardiovascular death or stroke. Moreover, there was no difference in chest discomfort.



Aymond

“This is strong evidence to support using dual-DCCV as opposed to conventional single-DCCV in patients with a body mass index of 35 or higher who are undergoing cardioversion for atrial fibrillation,” said Joshua Aymond, MD, of Ochsner Health in New Orleans, and the study’s co-investigator.

Abelacimab demonstrated a highly significant reduction in major bleeding in patients with afib

Abelacimab offers the potential for safer and more effective hemostasis-sparing anticoagulation, according to the results of Abelacimab, a Novel Factor XI/XIa Inhibitor, Versus Rivaroxaban in Patients With Atrial Fibrillation: Primary Results of the AZALEA-TIMI 71 Randomized Trial.

Abelacimab is a novel, highly selective, fully human monoclonal antibody with a dual mechanism of action that locks factor XI (FXI) in the inactive state — preventing the formation of the activated FXI (FXIa).

Direct oral anticoagulants (DOACs) effectively prevent

stroke in patients with AFib and are associated with low rates of life-threatening bleeding. Still, clinically significant bleeding frequently occurs, resulting in the undertreatment of patients.

The randomized, active-controlled trial conducted at 95 sites in the United States, Canada, Europe and Asia evaluated the safety and tolerability of two blinded doses of Abelacimab, 150 mg and 90 mg subcutaneous monthly, compared with open-label rivaroxaban in 1,287 patients with AFib at moderate to high risk of stroke.

Abelacimab, 150 mg and 90 mg, was associated with a 67% and 77% reduction in the primary endpoint, a composite of major or clinically relevant nonmajor bleeding, respectively. Both Abelacimab doses were associated with a 93% reduction in gastrointestinal bleeding, compared to rivaroxaban.

The trial, which was designed to continue until 166 patients experienced a primary endpoint, was stopped prematurely, after a median follow-up of 1.8 years, due to the overwhelming reductions in major and clinically relevant nonmajor bleeding. Abelacimab was well tolerated, with no statistically significant difference in ischemic or adverse events.

“AZALEA-TIMI 71 shows that factor XI inhibition, particularly with Abelacimab, is safer than the current DOACs we use for stroke prevention AFib,” said Christian Ruff, MD, MPH, director of general cardiology at Brigham and Women’s Hospital in Boston and senior investigator of the TIMI Study Group, the study’s principal investigator.

“It’s incredibly encouraging for the field, but because AZALEA-TIMI 71 wasn’t powered for efficacy, we are waiting for the results of definitive phase 3 trials that will hopefully demonstrate the efficacy of factor XI inhibition for stroke reduction.” •

AI

continued from page 3

be overlooked. However, she cautioned that it must be used in the right way.

“It’s going to be very difficult to uncover biases with AI if we aren’t looking for them, if we aren’t anticipating that the data we are using may be biased in some way,” Dr. Foraker said.

One example of this is using a machine learning algorithm to evaluate data on 30-day readmission rates for heart failure during the height of the COVID-19 pandemic. Dr. Foraker said it is important to make sure the algorithm understands underlying factors that were happening during that time.

“We may not see the high of readmissions for heart failure (during that time) that we might anticipate because the population mix changed during COVID,” she said. “We started seeing and prioritizing COVID patients over other types of diagnoses and symptoms.”

“If we’re not thinking about those potential biases and the potential selection bias of patients, then artificial intelligence wouldn’t tell us about the bias. We have to be on the lookout for it, and we have to build it into our model training and retraining.”

While AI may be useful in many areas, Dr. Foraker said it is far from perfect — it is only as good as the data being fed into it.

“One potential pitfall of AI is to assume that AI is the magic bullet for evaluating data, and in particular evaluating the often-imperfect data we have at our disposal,” she said. “So no matter how fancy or advanced it is, it’s not going to fix the problems in the underlying data source.”

Dr. Mega agreed, adding that it is crucial to understand the source of the data being used to create the AI models and to assess whether it is representative of the population being treated.

“Using incomplete data and/or data that includes biases based on particular values could lead to inaccurate assessments,” Dr. Mega said. “The application of AI in health care requires broad testing and engagement of many people, with open feedback loops and a focus on quality.” •

Established lecture to present new research developments

Atrial fibrillation experts examine critical needs and potential therapeutic possibilities for the prevalent condition

Each year at Scientific Sessions, the Henning Lecture features a topic with exciting progress on the horizon as well as accompanying experts.

Robert J. Henning, MD, FAHA, director of the Center for Cardiovascular Research in Tampa, Florida, created and supported the endowed lectureship.

The 2023 meeting will feature atrial fibrillation, which is the most common sustained cardiac arrhythmia. Based on epidemiological research completed worldwide, the prevalence of AFib

is increasing, at least in part due to an aging population. For patients who have AFib, the primary cause of death is often related to complications or comorbidities of the condition and not the direct effects of the arrhythmia or a stroke.

Co-moderators Jane E. Freedman, MD, FAHA, and Ann Marie Schmidt, MD, said although anticoagulation therapy continues to reduce stroke in atrial fibrillation, there remains a critical need to identify predisposing risk factors and new therapeutic opportunities in the near future.

Dr. Freedman is director of the Division of Cardiovascular Medicine and physician-in-chief at Vanderbilt Heart and Vascular Institute in Nashville, Tennessee.

Dr. Schmidt is the Dr. Iven Young professor of endocrinology in the Department of Medicine and professor in the Department



Freedman



Schmidt



Shoemaker



Donahue

of Biochemistry and Molecular Pharmacology and Department of Pathology at NYU Grossman School of Medicine in New York City.

The majority of Monday's lecture will be two focused presentations.

First, M. Benjamin Shoemaker, MD, MSCI, will review his approach for genetic evaluation of atrial fibrillation. Dr. Shoemaker is associate professor in the Division of Cardiovascular Medicine/Cardiac Electrophysiology at Vanderbilt Center for Arrhythmia Research and Therapeutics (VanCART) in Nashville.

"Genetic testing for younger patients with atrial fibrillation (currently termed early-onset atrial fibrillation) is being considered to identify the subset having pathogenic variants in cardiomyopathy and arrhythmia genes that put them at risk for developing heart failure, conduction disease and ventricular arrhythmias," Dr. Shoemaker said. "This would be a change in current clinical practice because atrial fibrillation is a common disease that has previously not prompted genetic evaluation. However, the recognition that some patients, predominantly those with inherited cardiomyopathy syndromes, may present initially with atrial fibrillation is compelling."

This is largely a new investigative area that has potential for exciting discoveries to help prevent and manage atrial fibrillation, he said.

"More consideration will need to be given to the diagnostic evaluation of younger patients with atrial fibrillation rather than just focusing on symptomatic management," Dr. Shoemaker said. "When a younger patient presents with atrial fibrillation, we'll need to ask 'why?'"

In the second presentation, J. Kevin Donahue, MD, will share his research on the role of gene therapy in animal models with atrial fibrillation and examine the evidence supporting AFib mechanisms based on this data. He will also discuss a new gene therapy clinical trial, funded by the National Institutes of Health (NIH), to prevent post-operative atrial fibrillation.

"Gene therapy has become an established way to explore disease mechanism with the added benefit of developing novel therapies," said Dr. Donahue, the David T. and Barbara J. Milliken professor of cardiology, a professor of medicine and director of electrophysiology research at UMass Chan Medical School in Worcester, Massachusetts.

Finally, a panel discussion with leaders in atrial fibrillation research, particularly those leading the American Heart Association's Strategically Focused Research Network on atrial fibrillation, will discuss other recent advancements and therapeutic opportunities for patients affected by atrial fibrillation. •

UPCOMING SESSION

Henning Lecture: Atrial Fibrillation: Novel Mechanisms Unveil Future Therapeutic Approaches
Monday, Nov. 13
9:45-11 a.m. | Nutter Theater

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HYPERTENSION

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primary care doctor or midwife checkup five to 10 days after hospital discharge, and again six to eight weeks later.

The primary endpoint, 24-hour mean diastolic blood pressure, measured at around nine months postpartum, was 5.8 mmHg lower in those who received the intervention compared with the usual care ($P<0.001$). Similarly, 24-hour systolic blood pressure was 6.5 mmHg lower in the intervention group ($p<0.001$).



Kitt

“Optimizing blood pressure with self-monitoring and physician-guided titration of antihypertensive medication for the first few weeks after pregnancy resulted in a persistent reduction in blood pressure for at least nine months,” said Jamie Kitt, DPhil, British Heart Foundation Fellow at the University of Oxford in the United Kingdom.

“This long-term reduction in blood pressure was seen even though most study participants stopped blood pressure medication after a few weeks.”

Dr. Kitt said women with pregnancy hypertension are at a significantly greater risk of cardiac problems in later life; one third will develop hypertension again within 10 years of pregnancy and their risk of early heart attack and stroke doubles.

“Although we can advise women who have just had pregnancy hypertension of their future risk, many don’t receive follow-up care after hospital discharge,” said Paul Leeson, MD, professor of cardiovascular medicine at the University of Oxford and the study’s principal investigator.

“This trial suggests, however, that focusing health care on improving blood pressure control for just a few weeks after pregnancy can significantly reduce the chances of needing to return to the hospital with blood pressure problems during the immediate postpartum period. Intervention may also



reset postpartum blood pressure at a lower level, which could have long-term benefits for women’s cardiovascular health.”

Following the presentation, the study’s primary results will be published in the *Journal of the American Medical Association*.

Zilebesiran safely reduced systolic blood pressure

Zilebesiran, an investigational RNA interference therapeutic agent that blocks hepatic angiotensinogen expression, leading to decreased production of angiotensinogen protein and suppressed synthesis of angiotensin I and angiotensin II, demonstrated a clinically significant reduction in blood pressure.

That gives it the potential to become a foundational therapy, according to Sustained Blood Pressure Reduction With the RNA Interference Therapeutic Zilebesiran: Primary Results From KARDIA-1.

The phase 2 KARDIA-1 study enrolled 394 patients with untreated hypertension or were on stable therapy. After antihypertensive washout, patients were randomized to one of five treatment arms during a 12-month double-blind period and double-blind extension period: 150 mg or 300 mg subcutaneous Zilebesiran once every six months; 300 mg subcutaneous Zilebesiran once every three months; 600 mg subcutaneous Zilebesiran once every six months; or placebo subcutaneously once every three months for the first six months.

After three months of treatment, Zilebesiran achieved a placebo-subtracted reduction >15 mmHg with both 300 mg and 600 doses ($p<0.0001$) in 24-hour mean systolic blood pressure measured by ambulatory blood pressure monitoring, meeting its primary endpoint, with sustained blood pressure reductions at month six

for all doses.

Zilebesiran also demonstrated a favorable safety profile over six months. No drug-related adverse events were classified as serious or severe.



Bakris

“Up to 80% of patients with hypertension remain uncontrolled, which carries a substantial risk of morbidity and mortality, resulting in lowered quality of life and substantial significant health care and societal costs,” said George Bakris, MD, director of the AHA Comprehensive Hypertension Center at the University of Chicago Medicine and the study’s principal investigator.

“These KARDIA-1 results give confidence in the potential for Zilebesiran to address the significant unmet needs of these patients who are at high risk of future cardiovascular events.”

Zilebesiran will be further evaluated in two additional phase 2 studies, KARDIA-2 and KARDIA-3, and a phase 3 cardiovascular outcomes trial.

Blood pressure reduction linked to decreased dementia risk

Lowering blood pressure can effectively reduce the risk of dementia in patients with hypertension, according to Effectiveness of Blood Pressure-Lowering Intervention on Risk of Total Dementia Among Patients With Hypertension: A Cluster-Randomized Effectiveness Trial (CRHCP).

Dementia is a leading cause of death and disability worldwide, according to the World Health Organization. It is estimated that the global number of individuals living with dementia would increase from 57.4 million in 2019 to 152.8 million in 2050. No proven interventions prevent or delay the development — until now.

The 48-month study randomized 33,995 people \geq age 40 in 326 rural villages in China with untreated blood pressure $\geq 140/90$ mmHg or with blood pressure $\geq 130/80$ mmHg taking antihypertensive therapy or at high risk for CVD, which included history of myocardial infarction, stroke or heart failure.

Of the villages, 163 were randomized to usual care and 163 to an intervention in which trained nonphysician community health care professionals with supervision from primary care physicians and hypertension specialists initiated and titrated antihypertensive medications according to a simple stepwise protocol to achieve a systolic and diastolic blood pressure control of $<130/80$ mmHg.

At 48 months, mean systolic and diastolic blood pressure was 127.6/72.6 mmHg, respectively, in the intervention group and 147.7/81.0 mmHg in the usual care group. The primary outcome for this study, dementia adjudicated independently by two neurologists blinded to intervention assignments according to standard protocol, was significantly lower in the intervention group compared to the usual-care group, 1.12% versus 1.31% per year, ($p=0.0035$).



He

“This was the first study to show hypertension control can significantly reduce the risk of dementia,” said Jiang He, MD, PhD, FAHA, director of Tulane University Translational Science Institute and the study’s principal investigator. “This proven-effective intervention should be widely scaled up to reduce the global burden of dementia.”

Further research is needed among the U.S. population, Dr. He said. •

TEAMWORK

continued from page 1

“I believe shared resources are important for science and medicine to advance,” he said. “That is, the more we help one another, the more we help ourselves, our current patients and our future generations.”

His favorite piece of advice, he said, encapsulates everything he’s learned from working as a teen at his dad’s pear and apple farm, from his mentors and from his life experiences: Work hard. Work smart. And most importantly, work together.

“We are all better off when we are part of a team, especially when we all work together to do the right thing for the right reasons,” he said. “Because cardiovascular disease does not care about any differences that may divide us. Only by uniting our efforts will we make the biggest advances in preventing, and treating, heart diseases for the next decade and for the next century.”

“The more we help one another, the more we help ourselves, our current patients and our future generations.”

– Joseph C. Wu, MD, PhD, FAHA

PRESIDENTIAL SESSION

continued from page 1

step of the process ... from idea to research to ultimately daily practice.”

This vision statement also complements the AHA’s mission statement: “To be a relentless force for a world of longer, healthier lives.”

The AHA has been rooted in science since its founding in 1924. Science, of course, is rooted in researchers and clinicians, Brown said.

“No matter where you fit in the creation and implementation of science, the AHA is here for you,” she said. “Together, we are delivering health and hope.”

One message of health and hope grabbed the national spotlight last January during a Monday Night Football game when Buffalo Bills safety Damar Hamlin went into cardiac arrest on the playing field. What could have been a tragedy wasn’t because of the textbook response by the team’s trainers and on-site medical personnel.

“That moment also proved to be profound for our organization,” Brown said. “Damar’s remarkable ‘save’ occurred in the midst of our national campaign promoting CPR and AED training. It also happened to be just before our annual Heart Month, which was already planned to focus on CPR and AEDs. The heightened public interest generated by his story became a springboard.”

Hamlin inspired the birth of the AHA’s Nation of Lifesavers campaign, which has been amplified by the extensive reach of the NFL and its teams.



The campaign is already saving lives, Brown said. Wyatt, a 3-year-old boy, is alive today thanks, in part, to the swift response of the defensive coordinator of the Los Angeles Rams only 12 days after the coach attended AHA CPR and AED training classes at team headquarters.

“On the screen, you see little Wyatt Stanley and Raheem Morris, the coach who helped save his life. Look at those smiles. That’s what ‘health and hope’ is all about,” she said.

Brown also highlighted the numerous other ways the AHA makes a difference, thanks to the generous support from partners and donors. She announced a:

- \$16 million grant from the Helmsley Charitable Trust to create the AHA’s Center for Telehealth
- \$9 million grant from the J.B. and M.K. Pritzker Foundation for the Voices for Healthy Kids program

AHA Chair Marsha Jones presented the Chairman’s Award by AHA as well as the following awards:

Chairman’s Award
Lee H. Schwamm, MD, FAHA

Basic Research Prize
Yibin Wang, PhD, FAHA

Clinical Research Award
Mary McGrae McDermott, MD, FAHA

Population Research Award
Olugbenga (Gbenga) Ogedegbe, MD, MPH, FAHA

Eugene Braunwald Academic Mentorship Award
Marc A. Pfeffer, MD, PhD, FAHA

Research Achievement Award
Marlene Rabinovitch, MD, FAHA



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Monday, Nov. 13



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TIME	LOCATION	SUPPORTER	TITLE
9:30-10:15 a.m.	Learning Studio I	Janssen Pharmaceuticals, Inc.	Clinical Insights in NVAf: Reducing the Risk of Stroke and Systemic Embolism
	Learning Studio II	Edwards Lifesciences, LLC	Aortic Stenosis Today: A Multidisciplinary Discussion on Patient-Centered Care Opportunities
9:30-11 a.m.	Case Theater	National Heart, Lung, and Blood Institute (NHLBI) & National Institutes of Health (NIH)	NHLBI Innovation Showcase
11:15 a.m.-Noon	Learning Studio I	Intellia Therapeutics, Inc	Precision Cardiology: Preparing for a New Era of Medicine Using CRISPR-Based Technology
	Learning Studio II	HCA Healthcare	Getting to the Heart of Stroke™: Deepening the Collaboration Between Neurology and Cardiology
12:30-1:15 p.m.	Learning Studio I	Pfizer Inc.	Imaging Pearls in the Spectrum of Transthyretin Cardiac Amyloidosis: An Echo Masterclass

AGE*continued from page 1*

and inclusion and the Magerstadt professor of medicine, professor of medical social sciences and chief of the Division of Cardiology at Northwestern University Feinberg School of Medicine in Chicago. He is also associate director of the Bluhm Cardiovascular Institute at Northwestern Memorial Hospital.

Although chronological age is an inflexible figure, Dr. Yancy said components or variables can influence a person's biological time clock, such as genetics, lifestyle, environment and social determinants of health.

"Moreover, there is a biology of aging, and the subsequent burden of chronic age-related diseases may well be suitable for both lifestyle and pharmacological interventions," Dr. Yancy said. "In short, we can't slow the clock itself, but we may be able to slow the effects of the clock at an individual level."

According to Dr. Yancy, existing data demonstrate that people "age" according to three phenotypes: normal agers whose physiology is appropriate for their age; accelerated agers who have an earlier onset of age-related maladies; and super agers who have the physiology of someone decades younger.

"Clearly, aging is a process with a distinction between chronology and biology," he said. "We should no longer assess age just as chronology; rather, we should determine aging as the sum total of the biological processes contributing to our health journey."

Common cardiovascular conditions, such as hypertension, atherosclerosis and heart failure, as well as dementia and cancer, often are associated with damaged cellular function caused by increased age, Dr. Yancy said. Being able to identify the variables of how people age at the anatomical and molecular levels would assist in assessing cardiovascular health.

This phenomenon prompts a wealth of exploration to search for answers or treatments that can alter the course of humans' health and life.

Reinier Boon, PhD, has dedicated his recent research to searching for remedies and solutions that could possibly help. Dr. Boon is professor for RNA therapeutics at Goethe University in Frankfurt, Germany, and professor for molecular cardiovascular aging at Amsterdam UMC in Amsterdam, the Netherlands.

"On a therapeutic level, there are some promising strategies,

namely the use of senolytics, which interfere with pathways known to be overactive in aging via small molecules or interfering with, for example, so-called non-coding RNAs," Dr. Boon said.

**Boon**

The primary purpose of studying senolytics or non-coding RNAs, Dr. Boon said, is to validate and translate treatments that directly impact age-related disorders by preventing, delaying, improving or curing them.

"The natural experiment is

to study those with evidence of healthy aging and understand what characteristics are candidate hypotheses that support healthy aging," Dr. Yancy said.

Anybody looking to improve one's health and prolong life can implement the necessary lifestyle factors: diet, exercise, sleep, weight management, no smoking and control of blood pressure, cholesterol and blood sugar — otherwise known as the American Heart Association's Life's Essential 8. In addition to these traditional strategies, Dr. Yancy said mental health, social activity and caloric restriction also impact our well-being and longevity.

"The benefits of increased anti-inflammatory and antioxidant nutrients in a healthy diet offer tantalizing opportunities to further modify aging," he said.

Drs. Boon and Yancy will moderate this extraordinary, eye-opening session on aging, which also includes focused speaker presentations and a panel discussion.

"This is among the most exciting fields of research with important public health implications," Dr. Yancy said. (We're) bringing together behavioral science, clinical science and basic science in the hope of discovering not the fountain of youth, but the recipe for long-term health." •

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