Aurora establishes lectureship in honor of Dr. Masood Akhtar

Aurora Cardiovascular Services is honoring the pioneering work of former president Masood Akhtar, MD, with its newly formed Masood Akhtar Recognition Lecture.

Professor A. John Camm, MD, of St. George’s, University of London kicked off the inaugural lecture in the series, speaking on “Anticoagulation and Stroke Prevention in AF” before a packed house at the Discovery World Pilot House in Milwaukee on Dec. 3.

Dr. Camm is an internationally renowned expert in atrial fibrillation (AF). He holds the European Society of Cardiology Gold Medal (awarded 2005), given to exceptional cardiologists for their contribution to medicine, and the British Cardiovascular Society Mackenzie Medal (awarded 2008), given annually for outstanding service to British cardiology.

He is editor-in-chief of Clinical Cardiology and EP-Europace and an editor of European Heart Journal and “The ESC Textbook of Cardiovascular Medicine.”

Each year, internationally known physicians will be brought in to speak as part of this lecture series, organizer Jasbir Sra, MD, vice president of Aurora Cardiovascular Services, explained.

Dr. Akhtar started one of the first clinical electrophysiology programs in the country in Wisconsin. Among his many citations is the Pioneer in Electrophysiology award given to him by the Board of Trustees of the Heart Rhythm Society. He has authored or co-authored more than 600 publications and continues to publish.

Dr. Akhtar has trained more than 100 fellows who now practice all over the world.

DONOR SUPPORT BOOSTS CARDIAC RESEARCH PROGRAMS

Two new funds created in 2014 are dedicated to further advancing the cardiac clinical research program at Aurora Health Care by growing the cardiovascular disease research program at Aurora St. Luke’s Medical Center in Milwaukee.

In November 2014, cardiology physicians and researchers launched the Dr. Masood Akhtar Cardiac Research Fund in honor of Masood Akhtar, MD, the first president of Aurora Cardiovascular Services.

Dr. Akhtar created one of the first accredited electrophysiology fellowship programs in the country and played a key role in developing Aurora’s other cardiovascular fellowship programs.

“Dr. Akhtar is a pioneer in the field of electrophysiology and has mentored numerous physicians and health care providers in cardiovascular medicine,” said Dr. A. Jamil Tajik, ACS president. “We are excited to honor Dr. Akhtar by creating this fund in his name that mirrors his vision and passion to advance cardiac research while growing the next generation of cardiologists at Aurora Health Care.”

The Dr. Masood Akhtar Cardiac Research Fund will provide support to advance cardiovascular research activities, including speakers, educational/training programs and innovative research, explained Dr. Arshad Jahangir, director of the Sheikh Khalifa bin Hamad Al Thani Center for Integrative Research on Cardiovascular Aging.

(From left) Drs. Arshad Jahangir, Imran Niazi, Zalmen Blanck, Masood Akhtar, Indrajit Choudhuri, Jasbir Sra, Anwer Dhala and M. Eyman Mortada gather for a photo at the Masood Akhtar Recognition Lecture in December.

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DONOR SUPPORT BOOSTS CARDIAC RESEARCH PROGRAMS

Similarly, the Sullivan Cardiac Research Fund was established to help position Aurora's Cardiovascular Disease Fellowship programs among the nation's best. The fund, which was started by Tim and Vivian Sullivan of Milwaukee, supports research led by residents and fellows under the mentorship and guidance of Tanvir Bajwa, MD, interventional cardiologist with Aurora Health Care.

"The research conducted by our fellows is critical to our cardiac program," Dr. Bajwa said. "Our projects are investigator-initiated and focus on patient outcomes. We are uniquely positioned to do many of the studies because of the large volume of patients at Aurora St. Luke's and throughout Aurora Health Care."

The Sullivan Cardiac Research Fund helped establish two new positions to support cardiac fellowship research and provide additional resources. This gift has enabled Aurora Research Institute to launch a new award program to recognize cardiac fellows, named the Sullivan Cardiac Research Award for Residents and Fellows. The newly renamed Sullivan Visiting Professor Lecture Series provides access to advanced education and information on cutting-edge technologies and techniques.

"This fund will enable our team of specialists to continue to provide innovative heart care that has become synonymous with Aurora St. Luke's, while enhancing the care of countless patients," Dr. Bajwa said.

To learn more about how you can support cardiovascular research, awards and fellowship programming at Aurora Health Care, please call Rhonda Plotkin of the Aurora Health Care Foundation at 414-649-6793 or email Rhonda.Plotkin@aurora.org.

Clinical trial: Team investigates stroke risk in heart failure patients with VADs

Aurora St. Luke's Medical Center is the only site in Wisconsin where researchers are evaluating whether regular monitoring and management of blood pressure significantly reduces the incidence of stroke in patients with advanced heart failure receiving destination therapy with continuous-flow ventricular assist devices (VADs).

Principal investigator Frank Downey, MD, and his team are participating in HeartWare's ENDURANCE Supplemental Trial (clinicaltrials.gov identifier: NCT01966458), a clinical trial that will compare results of stroke incidence in a new cohort of subjects receiving optimal blood pressure management to a reference stroke incidence observed in the original IDE ENDURANCE clinical trial, which did not specify optimal blood pressure management.

In addition, researchers will evaluate non-inferiority of stroke-free success for the HeartWare Ventricular Assist Device System (HeartWare, Framingham, Massachusetts) compared to a control group receiving any FDA-approved left ventricular assist device (LVAD) for destination therapy.

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Clinical trial: Team investigates stroke risk in heart failure patients with VADs

The work is being conducted through Aurora St. Luke’s Mechanical Circulatory Support Program.

“Since 1986, when the hospital’s program started, Aurora St. Luke’s has been involved in every major mechanical circulatory support trial conducted in the United States. That record continues today. It speaks to the administrative commitment and quality of the many caregivers involved in the program here at Aurora St. Luke’s,” Dr. Downey said.

The goal of this prospective, randomized, controlled, unblinded, multicenter trial is to enroll about 465 subjects who have advanced heart failure and controlled blood pressure. Of these, a portion will be randomized to receive an FDA-approved LVAD and the remainder will receive the HeartWare VAD, an implantable centrifugal pump that was designed to provide flows up to 10 L/min in a small, lightweight device.

In the U.S., the HeartWare VAD System is an investigational device limited by federal law to investigational use. HeartWare has indicated that it intends to incorporate data from the supplemental trial into a pre-market approval application seeking approval for the HeartWare VAD System for the destination therapy indication.

Patients will be followed for 12 months after implantation.

Investigators will track the number of strokes experienced by subjects in the 12 months following the implantation of a VAD.

Clinicians treating subjects with advanced heart failure with optimally controlled blood pressure can obtain more information about this study by contacting Certified Clinical Research Coordinator Cheryl A. Zywicki, RN, CCRC, at 414-385-2474 or cheryl.zywicki@aurora.org.

Clinical trial: Researchers study new use of stem cells in heart failure patients

As part of an international clinical trial, researchers at Aurora St. Luke’s Medical Center are studying whether a regenerative medicine therapy using stem cells is effective in treating chronic heart failure.

Principal investigators Nasir Z. Sulemanjee, MD, and Suhail Q. Alqaqaband, MD, and their team are participating in an interventional trial to establish the efficacy and long-term safety of trans-endocardial delivery of allogeneic human bone marrow-derived mesenchymal precursor cells (MPCs) in subjects with chronic heart failure due to left ventricular systolic dysfunction (clinicaltrials.gov identifier: NCT02032004).

The goal of this randomized, double-blind clinical trial is to enroll 1,730 subjects with chronic heart failure throughout 24 countries.

Subjects will be randomly assigned to undergo a cardiac catheterization involving delivery of these specialized stem cells (CEP-41750) directly into the heart muscle using a sophisticated mapping and injection procedure, or to a sham arm.

Dr. Sulemanjee affirmed that “through numerous clinical and preclinical studies, we have come to realize the potential of stem cells to help patients suffering from cardiovascular disease, especially in the treatment of heart failure. This research study will help us to further investigate this technology and therapy.”

Aurora Cardiovascular Services Heart Failure Procedures

<table>
<thead>
<tr>
<th>Year</th>
<th>Bridge-to-Transplant and Destination Therapy Ventricular Assist Devices (VADs)</th>
<th>Heart Transplantations</th>
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</table>

“Through numerous clinical and preclinical studies, we have come to realize the potential of stem cells to help patients suffering from cardiovascular disease, especially in the treatment of heart failure.”

Nasir Z. Sulemanjee, MD

continued on pg. 5
As Arshad Jahangir, MD, and his staff of researchers continued to explore the mechanisms of aging-related cardiac dysfunction and reparative processes in 2014, they were joined by a group of enthusiastic students from across the nation.

The students, from the undergraduate to postgraduate level, participated for 10 weeks in ongoing projects and were mentored by the scientists and physicians at the Sheikh Khalifa bin Hamad Al Thani Center for Integrative Research on Cardiovascular Aging.

The 13 students, from institutions including the University of Wisconsin-Madison, Northwestern University, Johns Hopkins University, University of Minnesota, Marquette University and Mount Holyoke College, worked with Aurora Cardiovascular Services scientists as part of Aurora Research Institute’s mission to advance scientific knowledge. In addition, a science teacher from Marquette University High School in Milwaukee worked along with the students.

“It is always exciting to work with young minds who are inquisitive and eager to learn,” said Dr. Jahangir, the center’s director. “They not only learned the basic biology of cardiovascular aging and technical skills such as confocal microscopy, Western blot, PCR, patch-clamp electrophysiology, and cell and mitochondrial isolation from heart tissue, but also how to use scientific methodology to ask and answer a question and present their results to their colleagues.”

Each Friday, the student researchers met with faculty to review their work thus far.

“I think the Friday meetings were a great way to learn about the need to defend one’s work and be confident in their data, but also to be open and willing to hear suggestions from others,” said student researcher Tess Battiola of the University of Wisconsin-Madison.

The students assisted with research projects that examined the role of mitochondria in cardiac dysfunction, ion channel dysfunction and cardiac fibrosis and helped develop a model of alcoholic cardiomyopathy.

“This experience allowed me to become much more involved in laboratory protocols than I imagined I could at this age,” said Kingshuk Mazumdar, a student researcher from Union College.

In addition to the summer fellowship program, Aurora Cardiovascular Services with Aurora Research Institute also offered a summer student intern program through which UW-Madison statistics major Lydia Garlie worked with Vinay Thohan, MD, and Scarlet Shi, PhD. Garlie reviewed records for appropriate shocks in patients who received an implantable cardioverter-defibrillator and determined the possible association of echocardiographic measures of cardiac function to ICD shock.

“One in seven patients with a defibrillator will receive a life-saving shock for arrhythmia,” Dr. Thohan said. “This research allows us to better understand who those people are with currently available technologies. In the future, we may be able to target this high-risk population for therapies to prevent dangerous arrhythmias.”

Tess Battiola of the University of Wisconsin-Madison gains research experience at Aurora’s Sheikh Khalifa bin Hamad Al Thani Center for Integrative Research on Cardiovascular Aging.
Hybrid aortic work continues at Aurora St. Luke’s

Patient, 49, doing well after arch replacement

The term hybrid refers to combining traditional open surgery with percutaneous technologies to treat a patient’s condition in a novel and often less invasive way.

There is perhaps no better application for hybrid procedures than in the treatment of complex aortic arch aneurysms. Eric Weiss, MD, a new cardiac surgeon with Aurora Cardiovascular Services who specializes in surgery of the thoracic aorta, recently applied this technique in aortic surgery at Aurora St. Luke’s Medical Center.

Dr. Weiss employed this strategy for a 49-year-old woman with a large dissecting aneurysm of her aortic arch (Figure 1). The location of her aneurysm made traditional open surgical approaches extremely high risk; consequently, she had been denied care by several other centers.

“She was young and otherwise healthy, and we had to get creative to identify a solution to this problem,” Dr. Weiss said.

“A hybrid arch replacement was the best strategy for her long-term health.”

Dr. Weiss and his team replaced the first part of the aortic arch and deployed a thoracic endovascular stent directly into the aorta to seal the aneurysm (Figure 2). Her recovery was excellent, and she was discharged from the hospital free from long-term sequelae relating to her aneurysm, Weiss said.

The use of hybrid technologies represents a substantial advance in the treatment of aortic disease. With the recent opening of two state-of-the-art hybrid suites and the heart team’s focus on minimally invasive approaches, Aurora St. Luke’s Medical Center is poised to be a leader in aortic surgery for years to come.

The addition of Dr. Weiss to the St. Luke’s team continues the medical center’s tradition of providing the latest techniques to treat aortic aneurysms and novel approaches for patients deemed previously inoperable.

Clinical Trial: Heart Failure continued from pg. 3

Clinical trial: Researchers study new use of stem cells in heart failure patients

The clinical trial is sponsored by Teva Pharmaceutical Industries (Petah Tikva, Israel). In the U.S., MPC treatment is an investigational therapy limited by federal law to investigational use.

Over a five-year period, Drs. Sulemanjee and Allaqaband and their team will carefully monitor all enrolled patients for benefit and improvement in their heart failure, as well as learn of any major adverse cardiac events in study subjects. Some of the parameters to be serially monitored include two-dimensional echocardiography and exercise capacity with a 6-minute walk test.

Clinicians seeking information about alternative options for their patients diagnosed with chronic heart failure, who they feel may be interested or wanting to participate in this research study, should contact Certified Clinical Research Coordinator Don Lobacz, RN, CCRC, at 414-649-3438 or donald.lobacz@aurora.org.
Aurora Research Institute recently awarded more than $200,000 to Aurora Health Care investigators for new cardiovascular-related research studies. Awards were allocated in three categories.

**The Cardiovascular Surgery Research Award** provides up to $50,000 per award for patient-centered cardiovascular surgery research. Recipients and the work being funded:

- **Ulugbek Negmadjanov, MD;** examining how disease causes heart repair cells to produce excessive scar tissue, which leads to complications after heart surgery.
- **Vinay Thohan, MD;** identifying clinical factors that may predict the development of gastrointestinal bleeding in patients with left ventricular assist devices (LVADs).
- **Nasir Z. Sulemanjee, MD;** studying clinical outcomes in patients with an LVAD and kidney disease.

The **Sullivan Cardiac Research Award for Residents and Fellows** provides up to $30,000 per award to residents and fellows under mentorship guidance for patient-centered research of cardiovascular diseases. The recipient is:

- **Daniel Ortiz, MD;** His project focuses on implementing a new tool that would assess the possibility for bleeding in patients who undergo treatment for blockages in leg arteries.

The **Cardiac Research Award** provides up to $40,000 per award to basic and clinical investigators and fellows under mentorship guidance for patient-centered research of cardiovascular diseases. Recipients and their work:

- **Vinay Thohan, MD;** studying whether Doppler imaging of heart function can predict outcomes in patients with heart failure who will undergo noncardiovascular surgeries.
- **Steven Port, MD, and Lily Honoris, MD;** determining whether computed tomography angiography can visualize and provide details about plaque in the coronary arteries in patients with end-stage kidney disease.

A scientific review committee comprising researchers and clinicians evaluates proposals based on overall impact of the proposed study; its significance, innovation and approach; and the investigators involved in the research.

To learn more about Aurora Research Institute’s intramural cardiology awards, contact Vani Nilakantan, PhD, at 414-219-7846 or vani.nilakantan@aurora.org.

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**JPCRR Call for Papers**

*Journal of Patient-Centered Research and Reviews (JPCRR)* is currently seeking manuscript submissions from all fields of medicine, including cardiology.

In addition to this general call for papers, an upcoming theme issue of *JPCRR* will focus on the specialty of **Vascular Medicine**. Submissions on this topic are strongly encouraged at this time. The deadline for papers to be considered for this theme issue is **April 15, 2015**.

A rigorously peer-reviewed quarterly journal founded by Aurora Health Care, *JPCRR* features scientific articles from a broad spectrum of disciplines. Past issues include original research manuscripts, state-of-the-art reviews and editorials on controversial topics. Double-blind peer review ensures fair decisions for all submissions regardless of authors’ institutional affiliation.

The current issue features original research on the association of body surface area and percutaneous coronary intervention outcomes as well as the effect of unused cardiac device leads on future complications.

For a complete list of article types and author instructions, please visit the journal’s open-access website: [www.aurora.org/jpcrr](http://www.aurora.org/jpcrr).

For questions, contact JPCRR Editor-in-Chief Dennis J. Baumgardner, MD, at dennis.baumgardner@aurora.org.
Aurora Cardiovascular Services

Medical education events

To request information or to register, please contact Laurel Landis at 414-219-7684 or laurel.landis@aurora.org.

April 11, 2015 | Pewaukee, WI
New Developments in Cardiology: A Comprehensive Review of Cardiology and Vascular Medicine Issues
Course Directors: Tanvir Bajwa, MD; Suhail Allaqaband, MD; Jayant Khitha, MD

May 2-3, 2015 | Milwaukee, WI
Echo Milwaukee
Course Directors: A. Jamil Tajik, MD; Bijoy Khandheria, MD; Chris Kramer, RDCS; Matt Umland, RDCS

May 28, 2015 | Milwaukee, WI
Patient Education Day (Non-CME Event)
A day of information and fellowship for patients with implantable cardioverter defibrillators
Hosts: Masood Akhtar, MD; Kathi Axtell, RN

May 30, 2015 | Milwaukee, WI
The Milwaukee Heart Failure Symposium 2015
Course Director: Nasir Sulemanjee, MD

July 20, Oct. 26 | Milwaukee, WI
Greater Milwaukee Heart Failure Society Series
Course Director: Nasir Sulemanjee, MD

Dec. 3-5, 2015 | Chicago, IL
AF/VT/VF Summit
Course Directors: Jasbir Sra, MD; Masood Akhtar, MD

Electrophysiologist

Jule Wetherbee, MD
Dr. Wetherbee joined Aurora Cardiovascular Services as an electrophysiologist in August. She completed a residency in internal medicine and a fellowship in cardiology and cardiac electrophysiology at Medical College of Wisconsin. Dr. Wetherbee is board certified in cardiovascular disease, clinical cardiac electrophysiology and internal medicine. She is interested in all areas of cardiac electrophysiology, from providing diagnoses for heart rhythm disorders to management and treatment.

Aurora Cardiovascular Services

Transcatheter Aortic Valve Replacement (TAVR) and MitraClip procedures

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Total patients evaluated: 1,076
CONTACT US

Referrals and consultations
888-859-4433 | 414-649-3530 | cardiovascular@aurora.org
aurora.org/cardiac

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Associate Editor | Susan Nord

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