Speaker Biography
OMB No. 0925-0001 and 0925-0002 (Rev. 11/16 Approved Through 10/31/2018)

Provide the following information for the Senior/key personnel and other significant contributors.

Follow this format for each person.
NAME: Kianoush Kashani, MD, MSc, FASN, FCCP

eRA COMMONS USER NAME (credential, e.g., agency login):
POSITION TITLE: Associate Professor of Medicine and Assistant Professor of Medical Education
EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Tehran University of Medical Sciences	MD	01/1993	Medicine
St. Luke's-Roosevelt Hospital, College of Physicians and Surgeons, Columbia University, New York, NY		06/2003	Internal Medicine
St. Luke's-Roosevelt Hospital, College of Physicians and Surgeons, Columbia University, New York, NY		12/2003	Stroke
Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine		06/2005	Critical care Medicine
University of Southern California		06/2007	Nephrology
Mayo Graduate School, Mayo Clinic College of Medicine, Rochester, Minnesota	MSc	06/2016	Masters in Clinical and Translational Science

A. Personal Statement
I am a clinician and scientist with joint appointment in the Divisions of Nephrology and Hypertension and Pulmonary and Critical Care Medicine at Mayo Clinic, Rochester, MN. A specific research interest of mine is acute kidney injury (AKI) where I have authored more than 100 manuscripts, several book chapters and given lectures on the national and international stages. In particular, I led the effort to discover and validate two novel biomarkers of acute kidney injury (TIMP2 and IGFBP7) in critically ill patients. I also used my expertise with informatics to create an electronic surveillance tool for early detection of AKI. I have collaborated in development and validation novel diagnostic tools for AKI prediction and detection including ultrasound elastography. Finally, I am involved in numerous multicenter, multinational trials, which seek to determine optimal methods to identify and treat AKI including the use of renal replacement therapy. My expertise with novel biomarkers for AKI as well as trial design and data analysis is relevant to the aims of UAB-UCSD O'Brien Center. I also

have a track record of productivity and longstanding collaboration with multiple investigative teams. My goals for the future clinical and research endeavors in the field include:

- Development and validation of real-time dynamic computer-based AKI prediction models.
- Development and validation of highly precise computer-based clinical support systems.
- Development of a cloud-based, real-time, and highly granular, big dataset of all ICU patients shared by participating academic institutions in order to generate new knowledge related to AKI and be used for quality improvement and safety.
- Development and validation of new diagnostic and therapeutic options for AKI management including but not limited to:
    - Ultrasound elastography
    - New body composition determination techniques including “sarcopenia index” and albumin tagged intravascular fluid measurements.
    - Using drag-reducing polymers in the management of sepsis-associated AKI.

B. Positions and Honors

Positions and Employment

Consultant - Division of Nephrology & Hypertension, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota (09/2010 – Present)
Consultant (Joint Appointment) - Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota (09/2010 – Present)
Program Director - Critical Care Fellowship, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, Minnesota (03/2012 – 06/2017)
Assistant Professor of Medical Education - Mayo Clinic College of Medicine and Science (03/2016 – Present)
Associate Professor of Medicine - Mayo Clinic College of Medicine and Science (02/2017 – Present)

Professional Memberships

Society of Tehran University Alumni, Member 01/1992 - Present
Medical Council of Iran, Member 01/1993 - Present
Iranian Society of Literary Men, Member 01/1996 - Present
American Medical Association, Member 01/2001 – Present
American College of Physicians, Member 01/2001 - 12/2003
Society of Critical Care Medicine, Member 01/2004 - Present
American College of Chest Physicians, Member 01/2004 - Present
American Society of Nephrology, Member 01/2005 – Present (Fellow 01/2013)
Minnesota Medical Association, Member 01/2008 - Present
Zumbro Valley Medical Society, Member 01/2008 - Present
International Meeting on Simulation in Healthcare (IMSH), Research Committee Co-Chair 01/2010, Scientific Committee Co-Chair 2011-2012
American Thoracic Society, Member 01/2014 - Present

Honors

TA of Anatomy - Awarding Organization 06/1987
Ranked 4th Among 512 Medical Students - Tehran University 01/1993
Appreciation Letter for Excellence in EM - Chancellor of Ilam University, Iran 09/1996
Chief Resident Award - St Luke's-Roosevelt Hospital 06/2002
Junior Resident Award for Excellence in Medicine - St Luke's-Roosevelt Hospital, 06/2002
Resident Award Outstanding Excellence in Primary Care Medicine – St Luke's-Roosevelt Hospital, 12/2002

Senior Resident Award for Excellence in Medicine - St Luke's-Roosevelt Hospital, 06/2003
Award for the Teacher of the Academic Year - Mayo Clinic 01/2004 - 01/2005
Chief Fellow - Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Mayo Clinic, 01/2004 - 01/2005
Teacher of the Year Award - Critical Care Fellowship Program, Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Mayo Clinic, 01/2008 - 01/2009
Best Educator for Resident Education Award - Department of Internal Medicine, Mayo Clinic, 01/2009
Teacher of the Year, Critical Care Fellowship - Department of Internal Medicine, Mayo Clinic, 01/2009
Best Educator for Resident Education Award - Department of Internal Medicine, Mayo Clinic, 01/2010
Clinician of the Year - Critical Care Fellowship Program, Critical Care Service, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2010
Teacher of the Year, Critical Care Fellowship - Critical Care Fellowship Program, Critical Care Service, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2010
Teacher of the Year, Nephrology Fellowship Program - Nephrology Fellowship, Division of Nephrology & Internal Medicine, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2010
2012 Department of Medicine Innovation Award. - Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2011
Career Development Award - Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2011
Excellence in Education - Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2011
Innovation Award for Hospital Practice - Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, 2011
FCCP Award - CHEST 10/2013
Critical Care Education Hall of Fame - Critical Care Fellowship, Mayo School of Graduate Medical Education, Mayo Clinic College of Medicine, 06/2015
Star Research Achievement Award - Society of Critical Care Medicine, Honolulu, Hawaii, 01/2017; For the abstract titled "Right Ventricular Dysfunction in Sepsis and Septic Shock: An Eight-Year Analysis."
Star Research Achievement Award - Society of Critical Care Medicine, Honolulu, Hawaii, 01/2017; For the abstract titled "Cardiorenal Syndrome in Sepsis and Septic Shock: The Mayo Clinic Experience."

C. Contributions to Science

1. Clinical prediction models and electronic decision support for AKI identification

It is difficult to manage patients with a deteriorating renal function, and early awareness and care modifications are necessary to improve outcomes. Prediction of AKI by using informatics and clinical decision support can assist in early patient identification and intervention.

a. **Kashani K**, Herasevich V. Sniffing out acute kidney injury in the ICU: do we have the tools? Curr Opin Crit Care 2013; 19(6):53106.
b. Leedahl DD, Frazee EN, Schramm GE, Dierkhising RA, Bergstralh EJ, Chawla LS, **Kashani KB**. Derivation of urine output thresholds that identify a very high risk of AKI in patients with septic shock. Clin J Am Soc Nephrol 2014;9(7):1168-74.

c. Ahmed A, Variavan S, Akhoundi A, Wilson G, Chiofolo C, Chbat N, Cartin-Ceba R, Li G, **Kashani K**. Development and validation of electronic surveillance tool for acute kidney injury: a retrospective analysis. J Crit Care 2015; 30(5):988-93.
d. 15 ADQI Consensus Group, Hoste EA, **Kashani K**, Gibney N, Wilson FP, Ronco C, Goldstein SL, Kellum JA, Bagshaw SM. Impact of electronic-alerting of acute kidney injury: workgroup statements from the 15th ADQI Consensus Conference. Can J Kidney Health Dis 2016; 3:10 (Epub ahead of print)

2. Use of renal biomarkers to augment AKI detection

Many of the existing approaches to identification of AKI are reactive rather than proactive. Use of earlier markers of AKI increases the opportunity to intervene to minimize ongoing damage.

a. **Kashani K**, Al-Khafaji A, Ardiles T, Artigas A, Bagshaw SM, Bell M, Bihorac A, Birkhahn R, Cely CM, Chawla LS, Davison DL, Feldkamp T, Forni LG, Gong MN, Gunnerson KJ, Haase M, Hackett J, Honore PM, Hoste EA, Joannes-Boyau O, Joannidis M, Kim P, Koyner JL, Laskowitz DT, Lissauer ME, Marx G, McCullough PA, Mullaney S, Ostermann M, Rimmele T, Shapiro NI, Shaw AD, Shi J, Sprague AM, Vincent JL, Vinsonneau C, Wagner L, Walker MG, Wilkerson RG, Zacharowski K, Kellum JA. Discovery and validation of cell cycle arrest biomarkers in human acute kidney injury. Crit Care. 2013 Feb 06; 17(1): R25. PMID:23388612 DOI:10.1186/cc12503
b. Schinstock CA, Semret MH, Wagner SJ, Borland TM, Bryant SC, **Kashani KB**, Larson TS, Lieske JC. Urinalysis is more specific, and urinary neutrophil gelatinase-associated lipocalin is more sensitive for early detection of acute kidney injury. Nephrol Dial Transplant 2013 May; 28 (5):1175-85 Epub 2012 Apr 23 PMID:22529161 DOI:10.1093/ndt/gfs127
c. Lieske JC, Chawla L, **Kashani K**, Kellum JA, Koyner JL, Mehta RL. Biomarkers for acute kidney injury: where are we today? Where should we go? Clin Chem. 2014 Feb; 60(2): 294-300. Epub 2013 Aug 19 PMID:23958848 DOI:10.1373/clinchem.2012.201988
d. Sapphire Investigators, Hoste EA, McCullough PA, **Kashani K**, Chawla LS, Jannidis M, Shaw AD, Feldkamp T, Uettwiller-Geiger DL, McCarthy P, Shi J, Walker MG, Kellum JA. Derivation and validation of cutoffs for clinical use of cell cycle arrest biomarkers. Nephrol Dial Transplant 2014;29(11):2054-61.

3. Optimization of renal replacement therapy use

One of the primary interventions for AKI is the use of renal replacement therapy. We have identified methods to more safely and effectively use dialysis in critically ill patients and address related supportive care needs.

a. Frazee EN, Kuper PJ, Schramm GE, Larson SL, **Kashani KB**, Osmon DR, Leung N. Effect of continuous venovenous hemofiltration dose on achievement of adequate vancomycin trough concentrations. Antimicrob Agents Chemother 2012 Dec; 56 (12):6181-5 Epub 2012 Sept 17 PMID:22985887 PMCID:3497205 DOI:10.1128/AAC.00459-12
b. Thongprayoon C, Cheungpasitporn W, Shah IK, Kashyap R, Park SJ, Kashani K, Dillon JJ. Long-term outcomes and prognostic factors for patients requiring renal replacement therapy after cardiac surgery. Mayo Clinic Proc 2015; 90(7):857-64.
c. **Kashani K**, Mehta RL. We restrict CRRT to only the most hemodynamically unstable patients. Semin Dial 2016; 29(4): 268-71.

D. Additional Information: Research Support and/or Scholastic Performance

Current grants

Principal Investigator 11/2016-11/2018

STandard versus Accelerated initiation of Renal Replacement Therapy in Acute: ACT 2 STandard versus Accelerated initiation of Renal Replacement Therapy in Acute (STARRT-AKI). Funded by Canadian Institutes of Health Research

Principal Investigator 07/2016 - 06/2017

AKI Studies (silent test & clinical study). Funded by Philips Research North America. (NCT01621152)

Co-Investigator 10/2015 - 10/2017

Identifying risk factors for acute kidney injury in hospitalized patients. Funded by Mayo Clinic SGP - Small Grants Program

Completed grants

Principal Investigator 01/2011 – 01/2014

Evaluating the Use of Polymyxin B Hemoperfusion in a Randomized Controlled Trial of Adults Treated for Endotoxemia and Septic Shock. Funded by Spectral Diagnostics (US), Inc.. (Protocol SDI-PMX-NA00)

Principal Investigator 07/2015 – 07/2016

A Phase 3, Placebo-Controlled, Randomized, Double-Blind, Multicenter Study of LJPC-501: A Phase 3, Placebo-Controlled, Randomized, Double-Blind, Multicenter Study of LJPC-501 in Patients with Catecholamine-Resistant Hypotension (CRH). Funded by La Jolla Pharmaceutical Company

Principal Investigator 09/2012 – 09/2016

A Randomized, Multicenter, Double-Blind, Placebo-Controlled Study of AC607 for the Treatment of Acute Kidney Injury in Cardiac Surgery Subjects. : A Randomized, Multicenter, Double-Blind, Placebo-Controlled Study of AC607 for the Treatment of Acute Kidney Injury in Cardiac Surgery Subjects. Funded by AlloCure, INC. (Protocol AC 6071103)

Principal Investigator 09/2009 – 11/2011

Noninvasive measurement of central venous pressure in hemodialysis patients. Funded by Mayo Clinic SGP - Small Grants Program

Principal Investigator 01/2012 – 12/2012

Department of Medicine Innovation Award Program. Funded by Mayo Clinic Department of Internal Medicine Outreach

Principal Investigator 08/2013 – 08/2015

Ultrasound elastography (USE) validation in the measurement of kidney intracapsular pressure (KIP) in a swine model. Funded by Mayo Clinic SGP - Small Grants Program