

**BIOGRAPHICAL SKETCH**

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NAME: MUKAMAL, KENNETH Jay

eRA COMMONS USER NAME (credential, e.g., agency login): KENNETHMUKAMAL

POSITION TITLE: Associate Professor of Medicine

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Washington University, Saint Louis, MO	BA	06/1985	Biology
University of California, Los Angeles, Los Angeles, CA	MA	06/1986	Cellular and Molecular Biology
University of California, San Francisco, San Francisco, CA	MD	06/1990	Medicine
Harvard School of Public Health, Boston, Massachusetts	MPH	06/1998	Clinical Effectiveness
Yale-New Haven Hospital, New Haven, CT	Resident	06/1993	Internal Medicine
Harvard Medical School General Medicine Fellowship Program, Boston, MA	NIH training grant	06/1998	

**B. Positions and Honors****Positions and Employment**

1993 - 1994	Medical Director, Medical Transition Area, Hospital of St. Raphael, New Haven, CT
1994 - 2001	Instructor in Medicine, Harvard Medical School, Boston, MA
1998 -	Associate Physician in Medicine, Beth Israel Deaconess Medical Center, Division of General Medicine & Primary Care, Boston, MA
2002 - 2005	Assistant Professor of Medicine, Harvard Medical School, Boston, MA
2004 -	Visiting Scientist, Harvard School of Public Health, Department of Nutrition, Boston, MA
2005 -	Associate Professor of Medicine, Harvard Medical School, Boston, MA
2012 - 2017	Associate Residency Program Director, Beth Israel Deaconess Medical Center, Department of Medicine, Boston, MA

**Other Experience and Professional Memberships**

1999 -	Member, American Heart Association
2010 -	Member, American Society for Clinical Investigation
2013 -	Fellow, American Heart Association

**Honors****C. Contribution to Science**

1. Much of my work has focused upon consequences and determinants of alcohol consumption at levels commonly consumed across the population. This work has spanned the gamut of plausible effects of alcohol, from falls and suicide to cardiovascular disease and cancer. We have also shown important, often complex relationships of intake with genetics, race, and comorbidity.

- a. Breslow RA, Chen CM, Graubard BI, Mukamal KJ. Prospective study of alcohol consumption quantity and frequency and cancer-specific mortality in the US population. *Am J Epidemiol*. 2011 Nov 1;174(9):1044-53. PubMed PMID: [21965184](#); PubMed Central PMCID: [PMC3243934](#).
  - b. Mukamal KJ, Chen CM, Rao SR, Breslow RA. Alcohol consumption and cardiovascular mortality among U.S. adults, 1987 to 2002. *J Am Coll Cardiol*. 2010 Mar 30;55(13):1328-35. PubMed PMID: [20338493](#); PubMed Central PMCID: [PMC3865979](#).
  - c. Mukamal KJ, Kuller LH, Fitzpatrick AL, Longstreth WT Jr, Mittleman MA, Siscovick DS. Prospective study of alcohol consumption and risk of dementia in older adults. *JAMA*. 2003 Mar 19;289(11):1405-13. PubMed PMID: [12636463](#).
  - d. Mukamal KJ, Conigrave KM, Mittleman MA, Camargo CA Jr, Stampfer MJ, Willett WC, Rimm EB. Roles of drinking pattern and type of alcohol consumed in coronary heart disease in men. *N Engl J Med*. 2003 Jan 9;348(2):109-18. PubMed PMID: [12519921](#).
2. We have applied rigorous tools of classic epidemiology to the clinical context, examining determinants of prognosis among patients with clinical conditions and especially cardiovascular disease. Across a range of cardiovascular conditions and contexts, we have identified potentially modifiable determinants of prognosis.
- a. Welles CC, Whooley MA, Karumanchi SA, Hod T, Thadhani R, Berg AH, Ix JH, Mukamal KJ. Vitamin D deficiency and cardiovascular events in patients with coronary heart disease: data from the Heart and Soul Study. *Am J Epidemiol*. 2014 Jun 1;179(11):1279-87. PubMed PMID: [24699783](#); PubMed Central PMCID: [PMC4036212](#).
  - b. Wee CC, Girotra S, Weinstein AR, Mittleman MA, Mukamal KJ. The relationship between obesity and atherosclerotic progression and prognosis among patients with coronary artery bypass grafts the effect of aggressive statin therapy. *J Am Coll Cardiol*. 2008 Aug 19;52(8):620-5. PubMed PMID: [18702964](#).
  - c. Mukamal KJ, Maclure M, Muller JE, Mittleman MA. Binge drinking and mortality after acute myocardial infarction. *Circulation*. 2005 Dec 20;112(25):3839-45. PubMed PMID: [16365208](#).
  - d. Mukamal KJ, Maclure M, Muller JE, Sherwood JB, Mittleman MA. Tea consumption and mortality after acute myocardial infarction. *Circulation*. 2002 May 28;105(21):2476-81. PubMed PMID: [12034652](#).
3. In conjunction with a consortium of investigators nationwide, we have rigorously tested key molecular markers in the adipocyte-hepatocyte and glycation-fibrosis pathways that lead to diabetes and cardiovascular disease in older adults. We have examined a broad range of such molecules and demonstrated their effects on glycemic, cardiovascular, and other endpoints in large population-based cohorts of older adults.
- a. Agarwal I, Glazer NL, Barasch E, Biggs ML, Djousse L, Fitzpatrick AL, Gottdiener JS, Ix JH, Kizer JR, Rimm EB, Siscovick DS, Tracy RP, Mukamal KJ. Fibrosis-related biomarkers and incident cardiovascular disease in older adults: the cardiovascular health study. *Circ Arrhythm Electrophysiol*. 2014 Aug;7(4):583-9. PubMed PMID: [24963008](#); PubMed Central PMCID: [PMC4140969](#).
  - b. Jensen MK, Bartz TM, Djoussé L, Kizer JR, Zieman SJ, Rimm EB, Siscovick DS, Psaty BM, Ix JH, Mukamal KJ. Genetically elevated fetuin-A levels, fasting glucose levels, and risk of type 2 diabetes: the cardiovascular health study. *Diabetes Care*. 2013 Oct;36(10):3121-7. PubMed PMID: [23801724](#); PubMed Central PMCID: [PMC3781539](#).
  - c. Djoussé L, Khawaja O, Bartz TM, Biggs ML, Ix JH, Zieman SJ, Kizer JR, Tracy RP, Siscovick DS, Mukamal KJ. Plasma fatty acid-binding protein 4, nonesterified fatty acids, and incident diabetes in older adults. *Diabetes Care*. 2012 Aug;35(8):1701-7. PubMed PMID: [22584136](#); PubMed Central PMCID: [PMC3402261](#).
  - d. Biggs ML, Mukamal KJ, Luchsinger JA, Ix JH, Carnethon MR, Newman AB, de Boer IH, Strotmeyer ES, Mozaffarian D, Siscovick DS. Association between adiposity in midlife and older age and risk of diabetes in older adults. *JAMA*. 2010 Jun 23;303(24):2504-12. PubMed PMID: [20571017](#); PubMed Central PMCID: [PMC3047456](#).

4. We have examined a wide array of determinants of peripheral artery disease, an understudied yet highly morbid form of cardiovascular disease. These span novel genetic, biochemical, and behavioral determinants of risk.
  - a. Bertoia ML, Pai JK, Cooke JP, Joosten MM, Mittleman MA, Rimm EB, Mukamal KJ. Plasma homocysteine, dietary B vitamins, betaine, and choline and risk of peripheral artery disease. *Atherosclerosis*. 2014 Jul;235(1):94-101. PubMed PMID: [24819748](#); PubMed Central PMCID: [PMC4102310](#).
  - b. Garg PK, Biggs ML, Carnethon M, Ix JH, Criqui MH, Britton KA, Djoussé L, Sutton-Tyrrell K, Newman AB, Cushman M, Mukamal KJ. Metabolic syndrome and risk of incident peripheral artery disease: the cardiovascular health study. *Hypertension*. 2014 Feb;63(2):413-9. PubMed PMID: [24191289](#); PubMed Central PMCID: [PMC3947275](#).
  - c. Bertoia ML, Pai JK, Lee JH, Taleb A, Joosten MM, Mittleman MA, Yang X, Witztum JL, Rimm EB, Tsimikas S, Mukamal KJ. Oxidation-specific biomarkers and risk of peripheral artery disease. *J Am Coll Cardiol*. 2013 May 28;61(21):2169-79. PubMed PMID: [23541965](#); PubMed Central PMCID: [PMC3756816](#).
  - d. Joosten MM, Pai JK, Bertoia ML, Rimm EB, Spiegelman D, Mittleman MA, Mukamal KJ. Associations between conventional cardiovascular risk factors and risk of peripheral artery disease in men. *JAMA*. 2012 Oct 24;308(16):1660-7. PubMed PMID: [23093164](#); PubMed Central PMCID: [PMC3733106](#).
5. As a clinician-investigator and educator, I have applied standard and novel research tools to the quality improvement of local systems of care and teaching. This has led to publication and dissemination of innovative methods in the practice and promulgation of medicine with a wide variety of local collaborators.
  - a. Hale AJ, Nall RW, Mukamal KJ, Libman H, Smith CC, Sternberg SB, Kim HS, Kriegel G. The Effects of Resident Peer- and Self-Chart Review on Outpatient Laboratory Result Follow-up. *Acad Med*. 2016 May;91(5):717-22. PubMed PMID: [26535864](#).
  - b. Delling FN, Hassan ZK, Piatkowski G, Tsao CW, Rajabali A, Markson LJ, Zimetbaum PJ, Manning WJ, Chang JD, Mukamal KJ. Tricuspid Regurgitation and Mortality in Patients With Transvenous Permanent Pacemaker Leads. *Am J Cardiol*. 2016 Mar 15;117(6):988-92. PubMed PMID: [26833208](#); PubMed Central PMCID: [PMC4775321](#).
  - c. Doctoroff L, Nijhawan A, McNally D, Vanka A, Yu R, Mukamal KJ. The characteristics and impact of a hospitalist-staffed post-discharge clinic. *Am J Med*. 2013 Nov;126(11):1016.e9-15. PubMed PMID: [23993261](#).
  - d. Olveczky D, Mattison ML, Mukamal KJ. Use of a Geriatric Quality Initiative to Educate Internal Medicine Residents about Delirium and Its Risk Factors. *J Grad Med Educ*. 2013 Jun;5(2):309-14. PubMed PMID: [24404279](#); PubMed Central PMCID: [PMC3693700](#).

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

### **Ongoing Research Support**

U10 AA025286-01

MUKAMAL, KENNETH Jay (PI)

09/30/16-07/31/21

The Moderate Alcohol and Cardiovascular Health Trial

Role: PI

R01 AG053325-01

MUKAMAL, KENNETH Jay (PI)

09/15/16-04/30/20

Non-esterified Fatty Acids and Cardiometabolic Disease in Older Adults

Role: PI

U01 HL126495-03

MUKAMAL, KENNETH Jay (PI)

08/01/14-04/30/19

Racial and Ethnic Diversity in Human Extracellular RNA

Role: PI

R01 NS089638, National Institute of Neurological Disorders and Stroke (NINDS)

JENSEN, MAJKEN KAROLINE (PI)

08/15/15-05/31/19

NOVEL LIPOPROTEIN PARTICLES, BRAIN ABNORMALITIES, AND RISK OF DEMENTIA AND STROKE

This project evaluates novel HDL subspecies defined on the basis of apolipoproteins and their associations with risk of dementia and stroke.

Role: Co-Investigator

### **Completed Research Support**

U34 AA023258-01

MUKAMAL, KENNETH Jay (PI)

03/20/14-02/29/16

Planning Grant for a Multi Center RCT of Moderate Alcohol Use on Chronic Disease

Role: PI

U13 AA023452-01

MUKAMAL, KENNETH Jay (PI)

02/15/14-01/31/16

Interventional and Feeding Studies of Alcohol

Role: PI

R01 HL035464, National Heart, Lung and Blood Institute (NHLBI)

RIMM, ERIC Bruce (PI)

06/30/10-04/30/16

Dietary Etiologies of Heart Disease and Cancer

This project evaluates dietary etiologies and pathways that influence risk of coronary heart disease.

Role: Co-Investigator