BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Jill A. Macoska	Alton J. Brann Distinguished University Professor of Science and Mathematics
eRA COMMONS USER NAME (credential, e.g., agency login) jcoska	

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

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Kent State University, Kent, OH	B.A.	1978	Phys. Anthropology
City University of New York, New York, NY	M. Phil.	1986	Biochemistry
City University of New York, New York, NY	Ph.D.	1988	Biochemistry
Harvard University, Cambridge, MA	Postdoctoral	1988-1989	Molecular Genetics
Michigan Cancer Foundation, Detroit, MI	Postdoctoral	1989-1991	Molecular Genetics

A. Personal Statement

I am currently the Alton J. Brann Endowed Chair and Professor of Biological Sciences at the University of Massachusetts Boston. I have led peer-reviewed and funded research for the past 20 years focused on elucidating the molecular genetic alterations and dysfunctional inter- and intra-cellular signaling mechanisms that promote prostate pathobiology. Research in the Macoska laboratory is currently focused on: 1) Defining the mechanisms through which dysfunctional paracrine interactions between diverse cell types – epithelial, fibroblastic, endothelial, leukocytic – develop consequent to the aging process, and how these dysfunctional interactions contribute to the development of benign and malignant proliferative disease in the prostate; 2) Elucidating the intracellular mechanisms through which growth factors, particularly CXC-type chemokines, secreted by aging stromal fibroblasts and inflammatory cells stimulate cellular proliferation and myofibroblast phenoconversion in the lower urinary tract, and the association of these pathobiologies, particularly tissue fibrosis, with urinary voiding dysfunction and malignancy, and 3) Translating laboratory-based knowledge to the development of RNA- and protein-based biomarkers useful for tumor subtyping and predicting early response the chemotherapeutic treatment, and the development of clinically efficacious therapeutics to slow or arrest the initiation or progression of benign and malignant disease in the prostate.

B. Positions and Honors

Professional Experience

1991-1992	Research Associate, Wayne State University School of Medicine, Department of Urology
1992-1994	Assistant Professor, Wayne State University School of Medicine, Department of Urology
1993-1995	Department of Veterans Affairs Health Science Specialist
1994-1995	Lecturer, The University of Michigan, Department of Surgery, Section of Urology
1995-2001	Assistant Professor, The University of Michigan, Department of Surgery, Section of Urology
1996-2001	Associate Editor, Basic Science Section, *Urology*
2000-2010	Director, University of Michigan Comprehensive Cancer Center Affymetrix and cDNA Microarray Facility
2000-2002	Member, Executive Committee, Society for Basic Urologic Research
2000-2002	Member, NIH Small Business Innovation Research (SBIR) in Genetic Sciences Study Section
2001-2012	Faculty Member, Program in Bioinformatics (now the Center for Computational Medicine and Bioinformatics).
2001-2010	Associate Professor w/tenure, The University of Michigan, Department of Urology
2002-2004	American Cancer Society Study Section, Molecular Genetics and Oncogenes
2002-2006	Associate Director, Prostate/Urologic Oncology Program, University of Michigan Comprehensive Cancer Center

2003-2008	Associate Chair for Laboratory Research, Department of Urology, University of Michigan
2004-2008	Charter Member, NIH Cancer Genetics Study Section
2004-2012	Faculty Member, Cell and Molecular Biology Graduate Program, The University of Michigan
2004-Present	Reviewer, Prostate Cancer Team, American Urological Association National Meeting
2005-Present	Panel Member, American Cancer Society, Canary Fellowships
2005, 2010	Ad Hoc Reviewer, NIH/NCI, Cancer Center Support Grants
2007	Participant, NIDDK Prostate Basic and Clinical Research Strategic Planning Meeting
2007-2010	Director, Urology Research Training Program
2008-2010	Chief, Division of Laboratory Research, Department of Urology, University of Michigan
2010-2012	Charter Faculty Member, Cancer Biology Graduate Program, The University of Michigan
2010-2012	Professor w/tenure, The University of Michigan, Department of Urology
2010-2013	Secretary, the Society for Basic Urologic Research
2011-Present	Advisory Board, Scandinavian Journal of Urology
2012-Present	Associate Editor, *The Prostate*
2013-Present	Associate Editor, *Andrology*
2013-Present	Alton J. Brann Distinguished Professor of Science and Mathematics, University of Massachusetts Boston
2013-Present	Director, Center for Personalized Cancer Therapy, University of Massachusetts Boston
2013-Present	Presidential Scholar, the Dana-Farber/Harvard Cancer Center
2013-2014	Vice-President and President-Elect, the Society for Basic Urologic Research

Honors

1974	Salutatorian, St. Joseph Academy High School
1978	Magna Cum Laude
1979	Phi Beta Kappa
1985	Beatrice Goldstein Konheim Graduate Scholarship in the Life Sciences, City University of New York
1991-1993	Ph.D. Scholar, American Foundation for Urologic Disease (AFUD)
1995-1996	New Investigator Research Award American Foundation for Urologic Disease/Searle
1996-1997	Society for Basic Urologic Research/Merck Young Investigator Award
2012	Society for Women In Urology/ Society for Basic Urologic Research Award for Excellence in Urologic Research

C. Selected Peer-Reviewed Publications (15 most recent)

1: Begley LA, Kasina S, MacDonald J, Macoska JA. The inflammatory microenvironment of the aging prostate facilitates cellular proliferation and hypertrophy. Cytokine. 2008 Aug;43(2):194-9. doi: 10.1016/j.cyto.2008.05.012. Epub 2008 Jun 24. PubMed PMID: 18572414; PubMed Central PMCID: PMC2538565.

2: Kasina S, Scherle PA, Hall CL, Macoska JA. ADAM-mediated amphiregulin shedding and EGFR transactivation. Cell Prolif. 2009 Dec;42(6):799-812. doi: 10.1111/j.1365-2184.2009.00645.x. Epub 2009 Sep 7. PubMed PMID: 19735466; PubMed Central PMCID: PMC3167473.

3: McDowell KL, Begley LA, Mor-Vaknin N, Markovitz DM, Macoska JA. Leukocytic promotion of prostate cellular proliferation. Prostate. 2010 Mar 1;70(4):377-89. doi: 10.1002/pros.21071. PubMed PMID: 19866464; PubMed Central PMCID: PMC3167472.

4: Sethi S, Macoska J, Chen W, Sarkar FH. Molecular signature of epithelial-mesenchymal transition (EMT) in human prostate cancer bone metastasis. Am J Transl Res. 2010 Oct 23;3(1):90-9. PubMed PMID: 21139809; PubMed Central PMCID: PMC2981429.

5: Macoska JA. Chemokines and BPH/LUTS. Differentiation. 2011 Nov-Dec;82(4-5):253-60. doi: 10.1016/j.diff.2011.04.003. Epub 2011 May 19. Review. PubMed PMID: 21600689; PubMed Central PMCID: PMC3161128.

6: Sottnik JL, Zhang J, Macoska JA, Keller ET. The PCa Tumor Microenvironment. Cancer Microenviron. 2011 Dec;4(3):283-97. doi: 10.1007/s12307-011-0073-8. Epub 2011 Jul 5. PubMed PMID: 21728070; PubMed Central PMCID: PMC3234329.
7: Ricke WA, Macoska JA, Cunha GR. Developmental, cellular and molecular biology of benign prostatic hyperplasia. Differentiation. 2011 Nov-Dec;82(4-5):165-7. doi: 10.1016/j.diff.2011.08.005. Epub 2011 Aug 30. PubMed PMID: 21880411; PubMed Central PMCID: PMC3415972.
8: Kasina S, Macoska JA. The CXCL12/CXCR4 axis promotes ligand-independent activation of the androgen receptor. Mol Cell Endocrinol. 2012 Apr 4;351(2):249-63. doi: 10.1016/j.mce.2011.12.015. Epub 2012 Jan 8. PubMed PMID:
9: Ma J, Gharaee-Kermani M, Kunju L, Hollingsworth JM, Adler J, Arruda EM, Macoska JA. Prostatic fibrosis is associated with lower urinary tract symptoms. J Urol. 2012 Oct;188(4):1375-81. doi: 10.1016/j.juro.2012.06.007. Epub 2012 Aug 17. PubMed PMID: 22906651; PubMed Central PMCID: PMC3485634.
10: Agarwal M, He C, Siddiqui J, Wei JT, Macoska JA. CCL11 (eotaxin-1): A new diagnostic serum marker for prostate cancer. Prostate. 2012 Oct 11. doi: 10.1002/pros.22597. [Epub ahead of print] PubMed PMID: 23059958; PubMed Central PMCID: PMC3594486.
11: Gharaee-Kermani M, Kasina S, Moore BB, Thomas D, Mehra R, Macoska JA. CXC-type chemokines promote myofibroblast phenoconversion and prostatic fibrosis. PLoS One. 2012;7(11):e49278. doi: 10.1371/journal.pone.0049278. Epub 2012 Nov 16. PubMed PMID: 23173053; PubMed Central PMCID: PMC3500280.
12: Chen W, Weng S, Zhang F, Allen S, Li X, Bao L, Lam RH, Macoska JA, Merajver SD, Fu J. Nanoroughened surfaces for efficient capture of circulating tumor cells without using capture antibodies. ACS Nano. 2013 Jan 22;7(1):566-75. doi: 10.1021/nn304719q. Epub 2012 Dec 5. PubMed PMID: 23194329.
13: Gharaee-Kermani M, Rodriguez-Nieves JA, Mehra R, Vezina CA, Sarma AV, Macoska JA. Obesity-induced diabetes and lower urinary tract fibrosis promote urinary voiding dysfunction in a mouse model. Prostate. 2013 Mar 26. doi:10.1002/pros.22662. [Epub ahead of print] PubMed PMID: 23532836.
14: Rodriguez-Nieves JA, Macoska JA. Prostatic fibrosis, lower urinary tract symptoms, and BPH. Nat Rev Urol. 2013 Sep;10(9):546-50. doi: 10.1038/nrurol.2013.149. Epub 2013 Jul 16. PubMed PMID: 23857178
15: Gharaee-Kermani M, Macoska JA. Promising Molecular Targets and Biomarkers for Male BPH and LUTS. Curr Urol Rep. 2013 Aug 3. [Epub ahead of print] PubMed PMID: 23913202.

D. Research Support Ongoing and/or Completed in Last Three Years

Ongoing

NIH/NIDDK 1R21DK098304 (Macoska, PI) 09/30/13 – 09/29/15
Fibrosis-Associated Urinary Gene Transcripts for LUTS Detection and Treatment

The goal of this Project is to test whether peri-urethral prostatic fibrosis contributing to LUTS as assessed by moderate-severe AUASI scores may be detected by the presence of urinary biomarkers comprising specific gene transcripts encoding proteins that mediate and promote tissue fibrosis.

NIH/NIDDK 1 U01DK099932-01 (Clemens, PI) 07/01/13 – 06/30/18
University of Michigan LURN Research Site (Years 02-03)

The aims of this proposal are to successfully recruit patients into the LURN network and to conduct innovative phenotyping studies in subgroups of LUTD patients.

Completed

NIH/NIDDK 1 P20DK090870-03 (Macoska, PI) 09/30/2010 – 07/31/2013
NIH/NIDDK
Planning Centers for Interdisciplinary Research in Benign Urology

Role of Prostatic Fibrosis in BPH/LUTs Development and Symptomology (Macoska, PI)
The goal of this project is to explore a new paradigm that incorporates fibrosis as a contributing factor to urinary dysfunction and lower urinary tract symptoms (LUTS) development and progression.

*Administrative Core/Educational Enrichment Program (*Macoska, Director)
The objective of the Administrative Core is to allocate and oversee the Center resources, and to establish and maintain internal and external collaborations, and the Educational Enrichment Program.

NIH/NIDDK R13DK097916 (Macoska, PI) 09/01/2012 – 07/31/2013
Society for Basic Urologic Research Fall Symposium
NIH Support for Conferences and Scientific Meetings

NIH/NCRR UL1 RR024986 (Shanley, PI) (Macoska) 06/27/2012 - 05/31/2017
Michigan Institute for Clinical and Health Research (MICHR)
The objectives of this project are to transform how clinical and translational research is conducted, ultimately enabling researchers to provide new treatments more efficiently and quickly to patients
Role: Co-Investigator

NIH/NCI P50 CA069568 (Pienta, PI) (Macoska) 08/21/2008 – 05/31/2013
SPORE in Prostate Cancer
Career Development Program
The objective of this program is to facilitate the career path of new or established investigators who wish to pursue translational research in the area of prostate cancer.

NIH/NIDDK R01 DK081841-04 (Macoska, PI) 08/01/2008 – 11/30/2012
PTEN- and EGFR-Dependence of CXCL12-Mediated Proliferation in the Aging Prostate
The major goals of this study are to test whether the CXCL12/CXCR4 axis can ‘switch’ between activating the Raf/MEK/ERK and PI3K/PTEN/Akt pathways to promote cellular proliferation, and whether this pathway ‘choice’ depends on PTEN status.

NIH/UTHSCSA U01 CA086402 (Macoska, PI) 10/01/2009 – 09/30/2012
Chemokine Prostate Cancer Biomarkers (EDRN/NCI)
The objectives of this study are to assess the robustness of serum, plasma, or urine measures of CXCL5 and CXCL12, and to determine whether they provide sufficient predictive value for prostate cancer among men with low total serum PSA.

NIH/NCRR UL1 RR024986 07/01/2010 – 06/30/2011
Michigan Institute for Clinical and Health Research (MICHR)
Life Sciences Institute
Identification of inhibitors that block CXCL12/CXCR4-mediated SRC-1:AR functional activation
The goals of these studies is to identify kinase inhibitors that prevent CXCL12/CXCR4-mediated SRC-1:AR functional association and may effectively block AR activation in hormone refractory prostate tumors.