BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Kathryn Jane Moore, Ph.D.	Assistant Professor Harvard Medical School
eRA COMMONS USER NAME Kjmoore	

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
McGill University, Montreal, Canada	B.Sc.	1989	Microbiology
McGill University, Montreal, Canada	Ph.D.	1994	Parasitology/Immunol.
Brigham & Women's Hosp, Harvard Med School	Post-doc	1994-1996	Renal Division
Massachusetts Gen Hosp, Harvard Med School	Post-doc	1996-2000	Lipid Metabolism Unit

Positions

2000-2002 Instructor, Harvard Medical School, Boston, MA
Research Fellow, Lipid Metabolism Unit, Massachusetts General Hospital

2002-present Assistant Professor, Harvard Medical School, Boston MA
Assistant in Biology, Lipid Metabolism Unit, Massachusetts General Hospital

2005-2007 Acting Director, Lipid Metabolism Unit, Massachusetts General Hospital

Honors

2006 Claflin Distinguished Scholar Award
2004-2008 Leadership Committee, American Heart Assoc, Arterioscler, Thromb, Vasc Biol Council
- 2004-2006 Early Career Representative
- 2006-2008 Membership & Communications Chair

2003 Ellison Medical Foundation New Scholar in Aging Award
2002 Harvard University Nominee, Pew Scholars in Biomedical Sciences
1997-1999 American Heart Association Postdoctoral Fellowship
1996-1997 Medical Research Council of Canada Postdoctoral Fellowship
1994-1996 Natural Sciences & Engineering Research Council of Canada Fellowship
1994 T.W. Cameron Award for Excellence in Parasitology

Advisory committees

2004-present ATVB Leadership Council, American Heart Association
2003-present ECOR Subcommittee on Review of Research Proposals, Massachusetts Gen. Hosp.

Selected peer-reviewed publications (in chronological order).

1. **Moore KJ**, Labrecque S, Matlashewski G. Alteration of *Leishmania donovani* infection levels by selective impairment of macrophage signal transduction. J Immunol 1993; 150:4457-65
2. **Moore KJ**, Turco SJ, Matlashewski G. *Leishmania donovani* infection enhances macrophage viability in the absence of exogenous growth factor. J Leuk Biol. 1994; 51: 91-8
3. **Moore KJ**, Matlashewski G. Intracellular infection by *Leishmania donovani* inhibits macrophage apoptosis. J Immunol. 1994; 152:2930-7
4. Naito T, Yokohama H, **Moore KJ**, Dranoff G, Mulligan RC, Kelley VR. Macrophage growth factors introduced into the kidney initiate renal injury. Mol Med. 1996; 2:297-312

5. **Moore KJ**, Naito T, Martin C, Kelley VR. Enhanced response of macrophages to CSF-1 in autoimmune mice: a gene transfer strategy. J Immunol. 1996; 157:433-40

6. **Moore KJ**, Yeh K, Naito T, Kelley VR. TNF-alpha enhances colony stimulating factor-1-induced macrophage accumulation in autoimmune renal disease. J Immunol. 1996; 157:427-32

7. Naito T, Yokohama H, **Moore KJ**, Dranoff G, Mulligan RC, Kelley VR. A gene transfer system establishes interleukin-6 neither promotes nor suppresses renal injury. Am J Phys. 1996; 271: F603-9

8. Kelley VR, **Moore KJ**. Application of a gene transfer strategy to identify molecules that incite autoimmune kidney injury. Exp Nephrol. 1997; 5:144-51

9. **Moore KJ**, Wada T, Barbee SD, Kelley VR. Gene transfer of RANTES elicits autoimmune renal injury in MRL-Fas(1pr) mice. Kidney Int. 1998; 53(6): 1631-41

10. Schwarting A, **Moore K**, Wada T, Tesch G, Yoon HJ, Kelley VR. IFN-g limits macrophage expansion in MRL-*Fas*(lpr) autoimmune interstitial nephritis: A negative regulatory pathway. J Immunol. 1998; 160:4074

11. **Moore KJ**, Fabunmi RP, Andersson LP, Freeman MW. In vitro-differentiated embryonic stem cell macrophages: a model system for studying atherosclerosis-associated macrophage functions. Arterioscler Thromb Vasc Biol. 1998; 18(10):1647-54

12. **Moore KJ,** Freeman MW. Embryonal stem (ES) cell derived macrophages: a cellular system that facilitates the genetic dissection of macrophage function. In: Baker AH, editor. Methods in Molecular Medicine, Vascular Disease: Molecular Biology and Gene Therapy Protocols.1999; p. 343-55

13. Rosen ED, Sarraf P, Troy AE, Bradwin G, **Moore K**, Milstone DS, Spiegelman BM, Mortensen RM. PPAR gamma is required for the differentiation of adipose tissue in vivo and in vitro. Mol Cell. 1999; 4: 611-17

14. Fabunmi RP, **Moore KJ**, Libby P, Freeman MW. Stromelysin-1 (MMP-3) expression driven by a macrophage-specific promoter results in reduced viability in transgenic mice. Atheroscl. 2000; 148: 375-86

15. Fitzgerald ML, **Moore KJ**, Freeman MW, Reed GL. Lipopolysaccharide induces scavenger receptor A expression in mouse macrophages: A divergent response relative to human THP-1 monocyte/macrophages. J Immunol. 2000; 164:2692-700

16. **Moore KJ,** Andersson LP, Ingalls RR, Monks BG, Li R, Arnaout MA, Golenbock DT, Freeman MW. Divergent response to LPS and bacteria in CD14-deficient murine macrophages. J Immunol. 2000; 165:4272-80

17. **Moore KJ,** Rosen ED, Fitzgerald ML, Randow F, Andersson LP, Altshuler D, Milstone DS, Mortensen RM, Spiegelman BM, Freeman MW. The role of PPAR-gamma in macrophage differentiation and cholesterol uptake. Nat Med. 2001; 7:41-7 **accompanied by News and Views, Nat Med 7:23-4*

18. **Moore KJ,** Fitzgerald ML, Freeman MW. Peroxisome proliferator-activated receptors in macrophage biology: friend or foe? Curr Opin Lipidol. 2001; 12:519-27

19. Fitzgerald ML, Mendez AJ, **Moore KJ**, Andersson LP, Panjeton HA, Freeman MW. ATP-binding cassette transporter AI contains an NH2-terminal signal anchor sequence that translocates the protein's first hydrophilic domain to the exoplasmic space. J Biol Chem. 2001; 276:15137-45

20. Fitzgerald ML, **Moore KJ,** Freeman MW. Nuclear hormone receptors and cholesterol trafficking: the orphans find a new home. J. Mol. Med. 2002; 80(5): 271-81

21. **Moore KJ,** El Khoury J, Medeiros LA, Terada K, Geula C, Luster AD, Freeman MW. A CD36-initiated signaling cascade mediates inflammatory effects of beta-amyloid. J Biol Chem. 2002; 277(49):47373-9

22. Kunjathoor VV, Febbraio M, Podrez EA, **Moore KJ**, Andersson L, Koehn S, Rhee JS, Silverstein R, Hoff HF, Freeman MW. Scavenger receptors class A-I/II and CD36 are the principal receptors responsible for the uptake of modified low density lipoprotein leading to lipid loading in macrophages. J Biol Chem. 2002; 277(51): 49982-88

23. Freeman MW, **Moore KJ**. eLiXiRs for restraining inflammation. Nat Med. 2003. 9(2):169

24. El Khoury JB, **Moore KJ**, Means TK, Leung J, Terada K, Toft M, Freeman MW, Luster AD. CD36 mediates the innate host response to beta-amyloid. J. Exp. Med. 2003; 197(12):1657-66

25. Medeiros LA, Khan T, El Khoury JB, Pham CL, Hatters DM, Howlett GJ, Lopez R, O'Brien KD, **Moore KJ**. Fibrillar amyloid protein present in atheroma activates CD36 signal transduction. J Biol Chem. 2004; 279:10643-8

26. Björkbacka H, Kunjathoor VV, **Moore KJ**, Koehn S, Ordija CM, Lee MA, Means T, Halmen K, Luster AD, Golenbock DT, Freeman MW. Reduced atherosclerosis in MyD88-null mice links elevated serum cholesterol levels to activation of innate immunity signaling pathways. Nat Med. 2004; 10(4):416-21
**selected by Faculty of 1000 as a "Must Read" (http://www.f1000biology.com/article/15034566/evaluation)*

27. Ricci R, Sumara G, Sumara I, Rozenberg I, Kurrer M, Akhmedov A, Hersberger M, Eriksson U, Eberli FR, Becher B, Boren J, Chen M, Cybulsky MI, **Moore KJ**, Freeman MW, Wagner EF, Matter CM, Luscher TF. Requirement of JNK2 for scavenger receptor A-mediated foam cell formation in atherogenesis. Science. 2004; 306:1558-61

28. Kunjathoor VV, Tseng AA, Medeiros LA, Khan T, **Moore KJ**. Beta-amyloid promotes accumulation of lipid peroxides by inhibiting CD36-mediated clearance of oxidized lipoproteins. J Neuroinflammation. 2004; 1:23

29. Kim WS, Fitzgerald ML, Kang K, Okuhira K, Bell SA, Manning JJ, Koehn SL, Lu N, **Moore KJ,** Freeman MW. Abca7 null mice retain normal macrophage phosphatidylcholine and cholesterol efflux activity despite alterations in adipose mass and serum cholesterol levels. J Biol Chem. 2005; 280:3989-95

30. Laberge MA, **Moore KJ**, Freeman MW. Atherosclerosis and innate immune signaling. Ann Med. 2005; 37(2):130-40

31. Heller EA, Liu E, Tager AM, Sinha S, Roberts JD, Koehn SL, Libby P, Aikawa ER, Chen JQ, Huang P, Freeman MW, **Moore KJ**, Luster AD, Gerszten RE. Inhibition of atherogenesis in BLT1-deficient mice reveals a role for LTB4 and BLT1 in smooth muscle cell recruitment. Circulation. 2005; 112:578-86

32. Stewart CR, Tseng AA, Mok YF, Staples MK, Schiesser CH, Lawrence LJ, Varghese JN, **Moore KJ**, Howlett GJ**.** Oxidation of low-density lipoproteins induces amyloid-like structures that are recognized by macrophages. Biochemistry. 2005; 44:9108-16

33. Ly NP, Komatsuzaki K, Fraser IP, Tseng AA, Prodhan P, **Moore KJ**, Kinane TB. Netrin-1 inhibits leukocyte migration in vitro and in vivo*.* Proc Natl Acad Sci U S A. 2005; 102:14729-34

34. **Moore KJ**, Kunjathoor VV, Koehn SL, Manning JJ, Tseng AA, Silver JM, McKee M, Freeman MW. Loss of scavenger receptor-mediated lipid uptake by scavenger receptor A or CD36 pathways does not ameliorate atherosclerosis in hyperlipidemic mice. J Clin Invest. 2005; 115: 2192-201
accompanied by commentary, J Clin Invest.* **115:2072-5

35. Stuart LM, Deng J, Silver JM, Takahashi K, Tseng AA, Hennessy EJ, Ezekowitz RA, **Moore KJ**. Response to *Staphylococcus aureus* requires CD36-mediated phagocytosis triggered by the COOH-terminal cytoplasmic domain. J Cell Biol. 2005; 170:477-85
**selected by Faculty of 1000 as a "Must Read" (http://www.f1000biology.com/article/16061696/evaluation)*

36. Heller EA, Liu E, Tager A, Koehn SL, Freeman MW, **Moore** KJ, Luster AD, Gerszten RE. The chemokine CXCL10 promotes atherogenesis by modulating the local balance of effector and regulatory T cells. Circulation. 2006; 113: 2301-12

37. **Moore KJ,** Freeman MW. Scavenger receptors in atherosclerosis: Beyond lipid uptake. Arteriosclerosis, Thrombosis and Vascular Biology. 2006; 26:1702-11

38. Lacy-Hulbert A, **Moore KJ**. Designer macrophages: Oxidative metabolism fuels inflammation repair. Cell Metab. 2006; 4:7-8

39. Howlett GJ, **Moore KJ**. Untangling the role of amyloid in atherosclerosis. Curr Opin Lipidol. 2006; 17:541-7

40. Brundert M, Heeren J, Bahar-Bayansar M, Ewert A, **Moore KJ**, Rinninger F. Selective uptake of HDL Cholesteryl esters and cholesterol efflux from mouse peritoneal macrophages independent of SR-BI. J. Lipid Res. 2006; 47:2408-21

41. Seimon TA, A Obstfeld, **KJ Moore**, DT Golenbock, I Tabas. Combinatorial pattern recognition receptor signaling alters the balance of life and death in macrophages. PNAS USA. 2006; 103:19794-99

42. Stewart, CR, A Haw III, R Lopez, TO McDonald, JM Callaghan, MJ McConville, **KJ Moore**, GJ Howlett and KD O'Brien. Serum amyloid P component co-localizes with apolipoproteins in human atheroma: functional implications. J Lipid Res. 2007; 48:2162-71

43. Stuart LM, SA Bell, CR Stewart, JM Silver, J Richard, AA Tseng, A Zhang, JB El Khoury, **KJ Moore**. CD36 signals to the actin cytoskeleton and regulates microglial migration via a p130Cas complex. J. Biol. Chem. 2007; 282:27392-401

44. Webb NR, **KJ Moore.** Macrophage-derived foam cells in atherosclerosis: Lessons from murine models and implications for therapy. In: Getz G, editor. Current Drug Targets. 2007; Dec;8(12):1249-63

45. Ip, WKE, K Takahashi, **KJ Moore**, LM Stuart and RAB Ezekowitz. Mannose-binding lectin enhances Toll-like receptors 2 and 6 signaling from the phagosome. J. Exp. Med. 2008; 205:169-181

C. Research Support. List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and responsibilities of principal investigator identified above.

Ongoing research support:

NIH/NIA R01 AG HL20255 Moore (PI) 9/30/01 – 8/31/12
Mechanism of CD36 signal transduction
The major goals of this grant are to investigate the mechanism of CD36-signaling by identifying downstream kinases activation, performing structure/function studies of this receptor and identifying downstream gene activation.
Role: PI

Claflin Distinguished Scholar Award Moore (PI) 7/01/06 – 6/30/08
Regulation of netrin1 by hypercholesterolemia,
The aims are to investigate how hypercholesterolemia regulates netrin-1 expression in atherosclerosis.
Role: PI

American Heart Association 0655840T Moore (PI) 7/01/06 – 6/30/09
American Heart Association, Grant-in-Aid
Role of netrin-1 in atherosclerosis,
The aims of this grant are to test the effect of the axonal guidance molecule netrin-1 on macrophage function and foam cell formation in atherosclerosis.
Role: PI

American Health Assistance Foundation Moore (PI) 7/01/06 – 6/30/09
Innate immune signaling in Alzheimer's Disease
The aims of this grant are to define the role of Toll-like receptor signaling in microglial inflammatory responses to Aß and the development of AD pathology *in vivo*.
Role: PI

Completed research support:
AG-NS-0225-03 Moore (PI) 7/01/03 – 6/30/07
Ellison Medical Foundation, New Scholar Award
Genetic & functional analysis of CD36-signaling in age-related chronic inflammatory diseases
The aims of this grant are to investigate the role of CD36-signaling in age-related chronic inflammatory diseases, including Alzheimer disease and atherosclerosis.

Role: PI

R24 RR014466-05 Moore 2/15/01 – 1/31/06
NIH/NCRR
Development & characterization of CD14-deficient mice
The aims of this grant were to develop, characterize and distribute mice with a targeted mutation in CD14.
Role: PI 6/02/05 - 01/31/06.