

BIOGRAPHICAL SKETCH

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NAME Susan M. MacDonald, M.D.		POSITION TITLE Professor of Medicine	
eRA COMMONS USER NAME smacdona1			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Regis College, Weston, MA	B.A.	1972	Chemistry
University of Massachusetts Medical School	M.D.	1980	Medicine

A. Positions and Honors.

Positions

1976 - 1980 M.D. Degree, University of Massachusetts Medical School, Worcester, MA
1980 - 1981 Internship, Medicine, The Johns Hopkins Hospital, Baltimore, MD
1981 - 1982 Assistant Resident, Medicine, The Johns Hopkins Hospital, Baltimore, MD
1982 - 1983 Senior Resident, Medicine, The Johns Hopkins Hospital, Baltimore, MD
1983 - 1984 Fellow, Rheumatology, The Johns Hopkins University School of Medicine, Baltimore, MD
1984 - 1985 Instructor/Assistant Chief-of-Service, Medicine, The Johns Hopkins Hospital, Baltimore, MD
1985 - 1986 Fellow, Rheumatology, The Johns Hopkins University School of Medicine, Baltimore, MD
1985 - 1987 Fellow, Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD
1987 - 1987 Instructor in Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD
1987 - 1995 Assistant Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD
1995 - 2004 Associate Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD
2004 - Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD
1996 - 2002 Deputy Director for Faculty and Career Development, Johns Hopkins Department of Medicine
2001 - The Johns Hopkins School of Medicine Office for Faculty Development
2002 - Associate Chair, Department of Medicine
2003 - Interurban Clinical Club

Awards and Other Professional Activities

1983 Baker Award for Clinical Excellence in Medicine
1986 Pfizer Postdoctoral Fellowship
1988 RJR/Nabisco Scholar Award in Pulmonary
1997-2000 Study Section, Immunology, Veterans Administration, 1997-2000

1998 Ad Hoc NIH Study Section, NHLBI, 1998
2000 Ad Hoc NIH Study Section, NIAID-IMS, 2000
2001 Women Physicians Allergy Award, American Academy of Allergy Asthma and Immunology, (AAAAI)
2002 Women in Leadership Award, Johns Hopkins University

Research Projects Ongoing or Completed During Last Three Years

ACTIVE

Principal Investigator: Susan M. MacDonald, M.D. National Institutes of Allergy and Infectious Diseases

2 R01 AI32651-11 4/01/2003-3/31/07 \$250,000 Molecular Approach to Human Allergy
The primary goal of this grant is to examine the biologic properties of HrHRF enumerating the behavioral characteristics of this novel cytokine and to study the interaction of HrHRF with the cell surface and subsequent signal transduction events.

Principal Investigator: Lawrence M. Lichtenstein, M.D., Ph.D. National Institutes of Health
5 R01 AI07290-36 07/01/00-06/30/05 \$255,781 In Vitro Studies of Human Anaphylaxis
The primary goal of this grant is laboratory studies of human allergic disease processes.

Susan M. MacDonald, M.D. Co-Principal Investigator 10% effort

Principal Investigator: Susan M. MacDonald, M.D. National Institutes of Health
R01 AI32651-11 (Minority Supplement) \$29,841 Molecular Approach to Human Allergy

B. PUBLICATIONS (SELECTED)

1. MacDonald, S.M., Lichtenstein, L.M., Proud, D., Plaut, M., Naclerio, R.M., and Kagey-Sobotka, A.: Studies of IgE-dependent histamine releasing factors: Heterogeneity of IgE. *J. Immunol.* 139:506-512, 1987.
2. MacDonald, S. M., Schleimer, R. P., Kagey-Sobotka, A., Gillis, S., and Lichtenstein, L.M.: Recombinant IL-3 induces histamine release from human basophils. *J. Immunol.* 142:3527-3532, 1989.
3. MacDonald, S.M., White, J.M., Kagey-Sobotka, A., MacGlashan, D.W., Jr., and Lichtenstein, L.M.: The heterogeneity of human IgE exemplified by the passive transfer of D2O sensitivity. *Clin. Exp. Allergy* 21:133-138, 1991.
4. MacDonald, S.M. and Lichtenstein, L.M.: Histamine releasing factors and heterogeneity of IgE. *Springer Semin. Immunopathol.* 12:415-428, 1990.
5. Langdon, J. and MacDonald, S.M.: The IgE-dependent histamine releasing factor: A unique cytokine. *Int. Arch. Allergy Immunol.* 99:316-318, 1992.
6. MacDonald, S.M.: Histamine releasing factors and IgE heterogeneity. In: E. Middleton, C.E. Reed, E.F. Ellis, N.F. Adkinson, J.W. Yunginger, W.W. Busse, eds., *Allergy: Principles and Practice*, 4th Edition, 1993, pp. 1-11.
7. Kleine-Tebbe, J., Hamilton, R.G., Roebber, M., Lichtenstein, L.M. and MacDonald, S.M.: Purification of immunoglobulin E (IgE) antibodies from sera with high IgE titers. *J. Immunol. Meth.* 179:153-164, 1995.
8. MacDonald, S.M., Rafnar, T., Langdon, J., Lichtenstein, L.M. Molecular identification of an IgE-dependent histamine releasing factor. *Science* 269:688-690, 1995.
9. Schroeder, J.T., Lichtenstein, L.M., MacDonald, S.M. An immunoglobulin E-dependent recombinant histamine releasing factor induces IL-4 secretion from human basophils. *J. Exp. Med.* 183:1-6, 1996.

10. Kleine-Tebbe, J., Kagey-Sobotka, A., MacGlashan Jr., D.W., Lichtenstein, L.M., MacDonald, S.M. Lectins do not distinguish between heterogeneous IgE molecules as defined by differential activity of an IgE-dependent histamine releasing factor. *J. Allergy Clin. Immunol.* 98:181-188, 1996.
11. MacDonald, S.M. The IgE-dependent histamine releasing factor. *ACI Int.* 8/1:34-37, 1996.
12. Dvorak, A.M., Schroeder, J.T., MacGlashan, D.W., Bryan, K.P., Morgan, E.S., Lichtenstein, L.M. and MacDonald, S.M. Comparative ultrastructural morphology of human basophils stimulated to release histamine by anti-IgE, recombinant IgE-dependent histamine-releasing factor, or monocyte chemotactic protein-1. *J. Allergy Clin. Immunol.* 98:355-370, 1996.
13. Fried, L.P., Francomano, C.A., MacDonald, S.M., Wagner, E.M., Stokes, E.J., Carbone, K.M., Bias, W.B., Newman, M.M. and Stobo, J.D. Career development for women in academic medicine. Multiple interventions in a Department of Medicine. *JAMA* 276:898-905, 1996.
14. MacDonald, S.M. Histamine releasing factors. *Curr. Opin. Immunol.* 8:778-783, 1996.
15. MacDonald, S.M. Human recombinant histamine releasing factor (HrHRF). *Int. Arch. Allergy Appl. Immunol.* 113:187-190, 1997.
16. Schroeder, J.T., Lichtenstein, L.M., MacDonald, S.M. Recombinant histamine-releasing factor enhances IgE-dependent IL-4 and IL-13 secretion by human basophils. *J. Immunol.* 159:447-452, 1997.
17. Schroeder, J.T., MacGlashan, Jr., D.W., MacDonald, S.M., Kagey-Sobotka, A. and Lichtenstein, L.M. Regulation of IgE-dependent IL-4 generation by human basophils treated with glucocorticoids. *J. Immunol.* 158:5448-5454, 1997.
18. Langdon, J.M. and MacDonald, S.M.: Biological properties of the IgE-dependent histamine-releasing factor. In: G. Marone, K.F. Austen, S.T. Holgate, A.B. Kay, and L.M. Lichtenstein, eds., *Asthma and Allergic Diseases*, Academic Press, Ltd., London, UK, 1998, pp. 107-116.
19. Bheekha-Escura, R., Schroeder, J.T., MacDonald, S.M. The human recombinant IgE-dependent histamine-releasing (HrHRF): Function and regulation. *Drug, News & Perspectives*, Prous Science, Spain. 11:223-229, 1998.
20. MacDonald, S.M. Histamine releasing factors and IgE heterogeneity. In: E. Middleton, C.E. Reed, E.F. Ellis, N.F. Adkinson, J.W. Yunginger, W.W. Busse, eds., *Allergy: Principles and Practice*, 5th Edition, 1998, pp. 137-145.
21. Bheekha-Escura, R., Chance, S.R., Langdon, J.M., MacGlashan, Jr., D.W., MacDonald, S.M. Pharmacologic regulation of histamine release by the human recombinant IgE-dependent histamine-releasing factor (HrHRF). *J. Allergy Clin. Immunol.* 103:937-943, 1999.
22. MacDonald, S.M., Chakravarti, A., Paznekas, W., Wang-Jabs, E. Chromosomal localization of tumor protein, translationally-controlled 1 (TPT1) encoding the human histamine releasing factor (HRF) to 13q12-14. *Cytogenetics and Cell Genetics* 84:128-129, 1999.
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24. MacDonald, S.M. Histamine Releasing Factors. In: *Signal Transduction in Mast Cells and Basophils*. (Eds. E. Razin and J. Rivera). Springer-Verlag, New York, 1999, pp. 390-401.
25. Bheekha-Escura, R., MacGlashan, Jr., D.W., Langdon, J.M., and MacDonald, S.M. The human recombinant histamine releasing factor (HrHRF) activates human eosinophils and the eosinophilic-like cell line, AML 14-3D10. *Blood* 96:2191-2198, 2000.
26. Beyer, K., Marsh, D.G., Freidhoff, L., Nickel, R., Björkstén, B., Huang, S.-K., Barnes, K.C., MacDonald, S., Forster, J., Zepp, F., Wahn, V., Beaty, T.H., and Wahn, U. Evidence for association and linkage disequilibrium of atopic dermatitis with chromosome 5q31-33 and 13q12-14 markers. *J. Invest. Dermatol.* 115:906-908, 2000.

27. MacDonald, M.D., Bhisutthibhan, J., Shapiro, T.A., Rogerson, S.J., Taylor, T.E., Tembo, M., Langdon, J.M., and Meshnick, S.R. Immune mimicry in malaria: *Plasmodium falciparum* secretes a functional histamine-releasing factor homolog *in vitro* and *in vivo*. Proc. Natl. Acad. Sci. U.S.A. 98:10829-10832, 2001.
28. Vonakis, B.M., Sora, R., Langdon, J.M. and MacDonald, S.M. SH2-containing inositol 5' phosphatase (SHIP) regulates histamine release to the human recombinant histamine releasing factor (HrHRF) in human basophils. J. Allergy Clin. Immunol. 108:822-31, 2001.
29. Kleine-Budde, I., Lopuhaa, C.E., de Heer P.G., Langdon, J.M., MacDonald, S.M., van der Zee, J.S., and Aalberse, R.C. Lack of correlation between bronchial late allergic reaction and IgE-reactivity to histamine-releasing factor. Ann. Allergy Asthma Immunology 89:606-612, 2002.
30. Vonakis, B.M., Sora, R., Langdon, J.M., Casolaro, V. and MacDonald, S.M. Inhibition of cytokine gene transcription by human recombinant histamine releasing factor (HrHRF) in human T lymphocytes. J. Immunol. 171:3742-3750, 2003.
31. Langdon, J.M., Vonakis, B.M., MacDonald, S.M. Identification of the Interaction between the Human Recombinant Histamine Releasing Factor/Translationally Controlled Tumor Protein and Elongation Factor-1 delta (also known as eElongation Factor-1B beta). *Biochem. Biophys. Acta* 1688:232-236, 2004.