

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Greidinger, Eric L.	POSITION TITLE		
eRA COMMONS USER NAME	Associate Professor of Medicine		
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
Princeton University, Princeton, NJ	A.B.	1987	Mathematics
University of Michigan, Ann Arbor, MI	M.D.	1991	Medicine

PROFESSIONAL POSITIONS:

House Officer, University of Michigan Medical Center, Ann Arbor, MI	1991-1994
Postdoctoral Fellow, Johns Hopkins University School of Medicine, Baltimore, MD	1995-1997
Instructor, Johns Hopkins University School of Medicine, Baltimore, MD	1997-1999
Assistant Professor, University of Missouri, Dept. of Int. Med. and Pathology, Columbia, MO	1999-2003
Assistant Professor, University of Miami School of Medicine, Dept of Int. Med., Miami, FL	2004-2008
Associate Professor with Tenure, University of Miami Miller School of Medicine, Dept of Med, Miami, FL	2008-

AWARDS AND OTHER PROFESSIONAL ACTIVITIES:

Telluride Association Summer Program: Artificial Intelligence and Human Thought	1982
National Merit Scholar	1983
Commendation for Academic Achievement, Rockefeller College, Princeton University	1985
Medical School Summer Research Scholarship: Signal Transduction in T Cells Mediated by the CD60 Cell Surface Antigen	1988
Board Certified in Internal Medicine	1994, 2004
Board Certified in Rheumatology	1996, 2004
Lupus Foundation of America Chapter Award	2000-2
Federation of Clinical Immunology Societies FOCIS Travel Award	2003
Wolstenholm Memorial Fellow, Arthritis National Research Foundation	2003-4
Stanley J. Glaser Research Award	2005-6
American College of Physicians	1991-present
American College of Rheumatology	1996-present
American Association of Immunologists	2001-present
Clinical Immunology Society	2002-present
American Federation for Medical Research	2004-present

PUBLICATIONS:

- Greidinger EL, Hellman DB: What to emphasize on the Rheumatologic exam. Consultant Magazine. 1809-1817. November 1995.
- Greidinger EL, Lemes V, Hellmann DB: Cardiac valve disease in Wegener's Granulomatosis. J Rheumatol 23:1485-1487, 1996.
- Greidinger EL, Miller DK, Yamin TT, Casciola-Rosen L, Rosen A: Sequential activation of three distinct ICE-like activities in Fas-ligated Jurkat cells. FEBS Lett. 390:299-303, 1996.
- Greidinger EL, Flaherty KT, White B, Rosen A, Wigley FM, Wise RA: African-American race antibodies to topoisomerase I are associated with increased severity of scleroderma lung disease. Chest 114:801-807, 1998.
- Greidinger EL, Casciola-Rosen L, Morris SM, Hoffman RW, Rosen A: Autoantibody recognition of distinctly modified forms of the UI-70-kd antigen is associated with different clinical disease manifestations. Arthritis Rheum 43:881-888, 2000.
- Hoffman RW, Greidinger EL: Mixed connective tissue disease. Curr Opin Rheumatol 12: 386-390, 2000.
- Greidinger EL, Gainie SP, Wise RA, Boling C, Houston-Harris T, Wigley FM: Primary pulmonary hypertension is not associated with scleroderma-like changes in nailfold capillaries. Chest 120:796-800, 2001.

PUBLICATIONS (cont.):

8. Greidinger EL, Hoffman RW: The appearance of U1-RNP antibody specificities in sequential autoimmune human antisera follows a characteristic order that implicates the U1-70-kd and B/B proteins as predominant U1-RNP immunogens. *Arthritis Rheum* 44:368-375, 2001.
9. Greidinger EL: Apoptosis in lupus pathogenesis. *Front Biosci* 6D:1392-1402, 2001.
10. Setty YN, Pittman CB, Mahale AS, Greidinger EL, Hoffman RW: Sicca Symptoms and Anti-SSA/Ro Antibodies are Common in Mixed Connective Tissue Disease. *J Rheumatol* 29:487-489, 2002.
11. Greidinger EL, Foecking MF, Ranatunga S, Hoffman RW: Apoptotic U1-70kd is antigenically distinct from the intact form of the U1-70kd molecule. *Arthritis Rheum* 46: 1264-1269, 2002.
12. Marshall BC, McPherson RA, Greidinger E, Hoffman R, Adler SP: Lack of autoantibody production associated with cytomegalovirus (CMV) infection. *Arthritis Res*. In press.
13. Greidinger EL, Foecking MF, Schäfermeyer KR, Bailey CW, Primm SL, Lee DR, Hoffman RW: T cell immunity in connective tissue disease patients targets the RNA binding domain of the U1-70kD small nuclear ribonucleoprotein. *J Immunol* 169:3429-3437, 2002.
14. Ronkar C, Greidinger EL: Sicca Syndrome and Sjögren's Syndrome in Lupus. *Lupus News* 23:14-18,2003.
15. Hoffman RW, Greidinger EL. Epitope spreading in systemic lupus erythematosus: comment on the article by Monneaux and Muller. *Arthritis Rheum* 2003;48:582-3.
16. Greidinger EL, Foecking MF, Magee J, Wilson L, Ranatunga S, Ortmann RA, Hoffman RW: A Major B Cell Epitope Present on the Apoptotic but not the Intact Form of the U1-70kDa Ribonucleoprotein Autoantigen. *J Immunol* 172:709-16,2004.
17. Greidinger EL, Gazitt T, Jaimes KF, Hoffman RW: Human T cell clones specific for heterogeneous nuclear ribonucleoprotein A2 autoantigen from connective tissue disease patients assist in autoantibody production. *Arthritis Rheum*. 50:2216-22, 2004.
18. De Silva-Udawatta M, Kumar SR, Greidinger EL, Hoffman RW: Cloned Human TCR from Patients with Autoimmune Disease Can Respond to Two Structurally Distinct Autoantigens. *J Immunol* 172:3940-3947, 2004.
19. Hoffman RW, Gazitt T, Foecking MF, Ortmann RA, Misfeldt M, Jorgenson R, Young SL, Greidinger EL: U1-RNA Induces Innate Immunity Signaling. *Arthritis Rheum* 50:2981-2896, 2004.
20. Warner NZ and Greidinger EL: Patients with antibodies to both PmScl and dsDNA. *J Rheumatol* 31:2169-74, 2004.
21. Greidinger EL: Expert's Comments: Delayed development of pulmonary hypertension in mixed connective tissue disease. *J Postgrad Med* 51:108, 2005.
22. Greidinger EL, Zang Y, Jaimes K, Hogenmiller S, Nassiri M, Bejarano P, Barber GN, Hoffman RW: A Murine Model of Mixed Connective Tissue Disease (MCTD) Induced with U1-snRNP Autoantigen. *Arthritis Rheum* 54:661-9, 2006.
23. Keith MP, Moratz C, Egan R, Zacharia A, Greidinger EL, Hoffman RW, Tsokos GC: Anti-Ribonucleoprotein Antibodies Mediate Enhanced Lung Injury Following Mesenteric Ischemia/Reperfusion in Rag-1^{-/-} Mice. *Autoimmunity* 40:208-16, 2007.
24. Mahler M, Greidinger EL, Szmyrka M, Kromminga A, Fritzler MJ: Serological and Clinical Characterization of Anti-dsDNA and Anti-PM/Scl Double-Positive Patients. *Ann. N.Y. Acad. Sci.* 1109:311-321, 2007.
25. Greidinger EL, Zang Y, Martinez L, Jaimes K, Nassiri M, Bejarano P, Barber GN, Hoffman RW: Differential Tissue Targeting of Autoimmune Manifestations by Autoantigen-Associated Y RNAs. *Arthritis Rheum* 56:1589-97, 2007.
26. Maldonado M, Perez M, Pignac-Kobinger J, Triana E, Tozman E, Greidinger EL, Hoffman RW. Clinical and Immunologic Manifestations of Mixed Connective Tissue Disease (MCTD) in Miami Population Compared to Midwestern Caucasian MCTD Population. *J Rheumatol*. 35:429-37, 2008.
27. Cooper GS, Gilbert KM, Greidinger EL, James JA, Pfau JC, Reinlib L, Richardson BC, Rose NR. Recent Advances and Opportunities in Research on Lupus: Environmental Influences and Mechanisms of Disease. *Environmental Health Perspectives* 116:695-702, 2008.
28. Greidinger EL, Zang YJ, Jaimes K, Martinez L, Nassiri M, Hoffman RW. U1-70kD small nuclear ribonucleoprotein (70kDa) autoantigen-reactive CD4⁺ T cells target epitopes residing within the RNA binding domain of 70kDa and have restricted TCR diversity in a HLA-DR4 transgenic murine model of Mixed Connective Tissue Disease. *J Immunol* 180:8444-8454, 2008.

INVITED PAPERS:

1. Greidinger EL, Rosen A: Inflammatory Rheumatic Diseases. In: Pathophysiology, eds. SJ McPhee, VR Lingappa, WF Ganong, JD Lange. San Francisco: Lange, 2000. 576-583.
2. Hoffman RW, Greidinger EL: Sjögren's syndrome. In: Modern Therapeutics in Rheumatic Diseases, eds. GC Tsokos, LW Moreland, GM Kamen, JP Pelletier, J Martel-Pelletier, S. Gay. Totowa, NJ: Humana Press. 2001.
3. Hoffman RW, Greidinger EL: Mixed connective tissue disease. In: Modern Therapeutics in Rheumatic Diseases, eds. GC Tsokos, LW Moreland, GM Kamen, JP Pelletier, J Martel-Pelletier, S. Gay. Totowa, NJ: Humana Press. 2001.
4. Hoffman R, Greidinger, EL: Mixed connective tissue disease. *eMedicine Journal* 2001, vol 2. Available at: <http://www.emedicine.com/med/topic3417.htm>.

INVITED PAPERS (cont.):

5. Greidinger EL, Rosen A, Inflammatory Rheumatic Diseases, In: Pathophysiology of Disease: An Introduction to Clinical Medicine. 4th Edition, McPhee, S.J., Lingappa, V.R., Ganong, W.F. Eds., San Francisco: Lange Medical Books/McGraw-Hill, 665-677, 2003.
6. Greidinger, EL, Hoffman, RW: Antinuclear antibody testing: Methods, Indications, and Interpretation. Laboratory Medicine, 2003.
7. Greidinger EL, Hoffman RW: Autoantibodies in the Pathogenesis of Mixed Connective Tissue Disease. Rheum Dis Clin North Am 31:437-50, 2005.
8. Greidinger EL, Immune Effects of Autoantigen-Associated RNA, In: Current Topics in Innate Immunity. Series: Advances in Experimental Medicine and Biology, Vol. 598. Lambris JD Ed. New York: Springer Publishing Company, 2007. ISBN: 978-0-387-71765-4

ABSTRACTS:

1. Greidinger EL, Casciola-Rosen L, Rosen A: Multiple ICE-like proteases cleave autoantigens during apoptosis (Abstract). Arthritis Rheum 39:S145, 1996.
2. Greidinger EL, Wigley FW, Rosen A: Topoisomerase I antibodies and race: Independent associations with pulmonary function in patients with diffuse scleroderma (Abstract). Arthritis Rheum 40:S101, 1997.
3. Greidinger EL, Casciola-Rosen, Rosen A: Immune recognition of an oxidatively modified form of the U1-70kDa antigen is associated with Raynaud's Phenomenon (Abstract). Arthritis Rheum 41:S323, 1998.
4. Greidinger EL, Hoffman RW: The U1-70kDa protein is often the first snRNP to which humoral immunity develops in patients with U1-70kDa antibodies (Abstract). Arthritis Rheum 42:S111, 1999.
5. Greidinger EL, Wigley FM, Wise RA, Boling C, Houston-Harris T, Gaine SP: Primary pulmonary hypertension does not induce scleroderma-like changes in nailfold capillaries (Abstract). Arthritis Rheum 43:S317, 2000.
6. Greidinger EL, Hoffman RW: Apoptotic U1-70kD is antigenically distinct from the intact form of the U1-70kD molecule (Abstract). Arthritis Rheum 43:S328, 2000.
7. Ranatunga S, Foecking MF, Hoffman RW, Greidinger EL: Antibodies to apoptotically modified U1-70kD but not intact U1-70kD can be detected in a subset of human autoimmune antisera (Abstract). Arthritis Rheum 44:S305, 2001.
8. Badlissi F., Greidinger EL, Hewett JE, Smarr KL, Donovan Hansen K, Hewett JE, Parker JC: Mortality in depressed patients with rheumatoid arthritis (Abstract). Arthritis Rheum 44:S221, 2001.
9. Hoffman RW, Greidinger EL, Gazitt T, Foecking MF, Bailey CW, Schäfermeyer KR, Primm SL: Heterogeneous nuclear ribonucleoprotein (hnRNP) A2 is a target of T cell immunity in systemic lupus erythematosus (Abstract). Clin Immunol 103:S1, 2002.
10. Greidinger EL, Schafermeyer KR, Bailey CW, Primm SL, Foecking MF, Hoffman RW. RNA binding domain on U1-70kd small nuclear ribonucleoprotein is target of T cell immunity in connective tissue disease patients. Arthritis Rheum 46:S222, 2002.
11. Greidinger EL, Foecking MF, Ortmann RA: A major apoptosis-specific B cell epitope of the U1-70kd ribonucleoprotein autoantigen overlaps with the RNA binding domain of the protein. Arthritis Rheum 46:S601, 2002.
12. Gazitt T, Foecking MF, Misfeldt M, Jorgenson R, Young SL, Greidinger EL. The U1-RNA mediates innate immunity signaling in cells expressing Toll-Like Receptor-3 (TLR3) but not in TLR3 negative cells. Clin Immunol:S183, 2003.
13. Greidinger EL, Jaimes KF, Zang YJ, and Hoffman RW. Immunization with U1-70kD Provides a Direct Link between Autoimmunity and Interstitial Lung Disease. Arthritis Rheum 50:S219, 2004.
14. Hoffman RW, Greidinger EL, Jaimes KF. Analysis of autoantigen-specific human T cell receptor (TCR) Av/BV genes, derived from patients with systemic lupus erythematosus, express in a TCR-negative line reveals that recognition of lupus autoantigens is highly degenerate. Experimental Biology 2004, The FASEB Journal, Vol 15.
15. Greidinger EL, Zang YJ, Jaimes K, Mager E, Hoffman RW. U1-RNA Plus U1-70KD Ribonucleoprotein Autoantigen Induce Anti-RNP Autoimmunity and Interstitial Lung Disease Without the Need for Additional Adjuvant. Lupus 14: 6th European Lupus Meeting Supplement, 2005.
16. Greidinger EL, Zang YJ, Jaimes K, Mager E, and Hoffman RW. Innate Immune Pathways in Autoimmunity: Double-Stranded RNA Constructs Differentially Induce Human Toll-Like Receptors 3 and 8. Arthritis Rheum 52:S479, 2005.
17. Greidinger EL, Zang YJ, Jaimes K, Martinez L, Hoffman RW. Induced Autoimmune Interstitial Pneumonitis Dependent on Innate Immune Activation. Miami IPF Symposium, April 2006.
18. Greidinger EL, Martinez L, Jaimes K, Zang Y, Hoffman RW. Y RNA Species Differentially Induce Toll-Like Receptors - 3,-7, and -8. 4th International Symposium on Innate Immunity, June 2006.
19. Maldonado ME, Greidinger EL, Pignac-Kobinger J, Hoffman R. CD4+CD25bright FoxP3-expressing T Regulatory Cells are Decreased in Anti-Small Nuclear Ribonucleoprotein Autoantibody-Positive Connective Tissue Disease During Active Disease. Arthritis Rheum 54:S750, 2006.
20. Keith MP, Moratz C, Greidinger EL, Tsokos GC. Anti-Ribonucleoprotein (RNP) Antibodies Enhance Ischemia/Reperfusion-Mediated Tissue Injury. Arthritis Rheum 54:F89, 2006.
21. Carpintero MF, Jaimes K, Pignac-Kobinger J, Perez M, Hoffman RW, Greidinger EL. Interferon-Inducible Gene Expression in Peripheral Mononuclear Cells is the Same in Mixed Connective Tissue Disease Patients as in Lupus Patients. American College of Rheumatology National Meeting, 2007.

ABSTRACTS (cont.):

22. Greidinger EL, Zang Y, Fernandez I, Martinez L, Hoffman RW. Adoptive Transfer Reconstitutes Anti-RNP Autoimmunity with Selective Induction of Nephritis or Pneumonitis. American College of Rheumatology National Meeting, 2007.
23. Crespo S, Maldonado M, Triana E, Pignac-Kobinger J, Perez M, Slusher J, Greidinger EL, Hoffman RW. Expansion of Perforin/Granzyme-B+, CD8+ T Cells Expressing Activation Markers Correlates with Disease Activity in Systemic Lupus Erythematosus (SLE) and Mixed Connective Tissue Disease (MCTD). American College of Rheumatology National Meeting, 2007.
24. Marx, E.T., Maldonado, M.M., Perez, M., Pignac-Kobinger, J., Tozman, E.M., Greidinger, E.L., Hoffman, R.W.: Clinical and immunologic manifestations of mixed connective tissue disease (MCTD) in Miami Hispanic population compared to midwestern caucasian MCTD population (Abstract). Journal of Investigative Medicine 56:360-361, 2008.
25. Greidinger EL, Zang Y, Jaimes K, Martinez L, Nassiri M, Hoffman RW. CD4+ T Cells Target RNA Binding Domain of the U1-70KD Autoantigen. 7th European Lupus Meeting, 2008.
26. Carpintero M, Fernandez I, Martinez L, Hoffman RW, Greidinger EL. Toll-Like Receptor-Inducible Upregulation of Alternative IRF5 mRNA Isoforms Correlates with Differential Tissue Targeting in Human Anti-RNP Autoimmunity. American College of Rheumatology National Meeting, 2008.

RESEARCH PROJECTS ONGOING OR COMPLETED DURING THE LAST 3 YEARS:

“Innate Immune Response Patterns to Autoantigen-Associated RNA”

Principal Investigator: Eric L. Greidinger

Agency: Veterans Administration

Amount: \$650,000

Type: Merit Review Period: October 1, 2008-September 30, 2012

Overall goals: Identify differences in the innate immune responses to ribonucleoprotein-associated RNAs associated with MCTD versus lupus.

“Autoantigen-Independent Tissue Targeting in Lupus”

Principal Investigator: Eric L. Greidinger

Agency: Lupus Research Institute.

Amount: \$300,000

Type: Novel Research Grant Period: November 1, 2006-October 31, 2009

Overall Goals: Identify T cell and antigen presenting cell functions that either induce or prevent development of nephritis in anti-RNP autoimmunity.

“Immune Response to Small Nuclear Ribonucleoprotein Antigens”

Principal Investigator: Robert W. Hoffman

Agency: NIAMS

Amount: \$1,250,000

Type: R01 (AR43308) (years 11-15) Period: July 1, 2007-June 30, 2012

Overall goals: Investigates the T cell response to snRNP autoantigens in the pathogenesis of human autoimmune disease and an induced murine model of autoimmunity.

“Apoptosis and Innate Immunity in Autoimmunity”

Principal Investigator: Eric L. Greidinger

Agency: Veterans Administration

Amount: \$345,000

Type: Merit Review Period: October 1, 2005-September 30, 2008

Overall goals: Assess the ability of autoantigen-associated RNAs to activate TLR3 and induce autoimmunity.

“Immune Determinants of MCTD Interstitial Lung Disease”

Principal Investigator: Eric L. Greidinger

Agency: Stanley J. Glaser Foundation

Amount: \$25,000

Type: Research Grant Period: February 1, 2005-January 31, 2006

Overall goals: Determine the ability of anti-RNP antibodies and T cells to convey MCTD-like lung disease.