

BIOGRAPHICAL SKETCH

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NAME Maureen D. Mayes, M.D., MPH	POSITION TITLE Professor of Medicine		
eRA COMMONS USER NAME			
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
College of Notre Dame of Maryland, Baltimore	BA	1967	Chemistry
University of Virginia-Charlottesville		1971-1973	Biochemistry
Eastern Virginia Medical School, Norfolk	MD	1976	Medicine
University of Michigan School of Public Health	MPH	1994	Epidemiology

Please refer to the application instructions in order to complete sections A, B, and C of the Biographical Sketch.

A. Positions and Honors:

- | | |
|--------------|---|
| 1977-1979 | Internship and Residency, Internal Medicine Program, Cleveland Clinic Foundation, Cleveland, Ohio. |
| 1979-1981 | Fellow, Department of Rheumatic and Immunologic Disease, Cleveland Clinic Foundation, Cleveland, Ohio. |
| 1981-3/85 | Assistant Professor of Medicine, Department of Internal Medicine, Rheumatology Division, West Virginia University. |
| 4/85-8/90 | Assistant Professor of Medicine, Department of Internal Medicine, Rheumatology Division, Wayne State University. |
| 9/90-8/97 | Associate Professor of Medicine, Department of Internal Medicine, Rheumatology Division, Wayne State University. |
| 9/97-1/02 | Professor of Medicine, Department of Internal Medicine, Rheumatology Division, Wayne State University. |
| 1/02-present | Professor of Medicine, Department of Internal Medicine, Rheumatology, University of Texas-Houston Health Science Center |
| 2005-2006 | Member, Special Emphasis Panel, NIH/NIDCR (National Institute Dental and Craniofacial Res) |
| 2005 | Member, P30 RDCC Special Review Panel, NIH/NIAMS |
| 2005-present | Member, Study Section, Scleroderma Foundation Grants Review |
| 2006 | Chair, Special Emphasis Panel, NIH/NIAMS |

B. Selected Peer-Reviewed Publications (Total Articles = 81, Chapters & Books = 7, Reviews = 16)

1. Seibold JR, Wigley FM, **Mayes MD**, Medsger TA, Kujala G, Porter J, Jimenez S, Kaufman L, Wise C, Weiner S, Clements PJ, Ellman M. The multi-center placebo controlled study of intravenous Iloprost infusion in patients with Raynaud's phenomenon secondary to systemic sclerosis (scleroderma). *Annals Int Med* 1994; 120:199-206.
2. Freedman RR, **Mayes MD**. Familial aggregation of primary Raynaud's disease. *Arthritis Rheum* 1996;39:1189-91.
3. Burns CJ, Laing TJ, Gillespie VW, Heeringa SG, Alcser KH, **Mayes MD**, Wasko MCM, Cooper BC, Garabrant DH, Schottenfeld D. The epidemiology of scleroderma among women: Assessment of risk from exposure to silicone and silica. *J Rheum* 1996;23:1904-1911.
4. Laing TJ, Gillespie BW, Toth MB, **Mayes MD**, Gallavan R, Jr., Burns CJ, Johanns JR, Cooper BC, Keroack BJ, Wasko MCM, Schottenfeld D. Racial differences in scleroderma among Michigan women. *Arthritis Rheum* 1997;40:734-742.
5. Kirk TZ and Mayes MD. IL-1 rescues scleroderma myofibroblast from serum-starvation induced cell

- death. *Biochemical and Biophysical Research Communications (BBRC)* 1999;255:129-132.
6. Clements P, Wong W-K, Hurwitz E, Furst D, **Mayes M**, White B, Wigley F, Weisman M, Barr W, Moreland L, Medsger Jr. T, Steen V, Martin R, Collier D, Weinstein A, Lally E, Varga J, Weiner S, Andrews B, Abeles M, Seibold J. Correlates of the disability index of the health assessment questionnaire, a measure of functional impairment in systemic sclerosis (SSc). *Arthritis Rheum* 1999;42:2372-80.
 7. Freedman RR, Girgis RE, **Mayes MD**. Acute effect of nitric oxide on Raynaud's phenomenon in scleroderma. *Lancet* 1999;354-739, Research Letter.
 8. Siebold JR, Korn JH, Simms R, Clements PJ, Moreland LW, **Mayes MD**, Furst DE, Rothfield N, Steen V, Weisman M, Collier D, Wigley FM, Merkel PA, Csuka ME, Hsu V, Rocco S, Erikson M, Hannigan J, Harkonen WS, Sanders ME. Recombinant Human Relaxin in the treatment of scleroderma: A randomized double-blind, placebo-controlled multicenter trial. *Ann Intern Med* 2000;132:871-879.
 9. Clements PJ, Hurwitz EL, Wong W-K, Seibold J, **Mayes M**, White B, Wigley F, Weisman M, Barr W, Moreland L, Medsger Jr. T, Steen V, Martin R, Collier D, Weinstein A, Lally E, Varga J, Weiner S, Andrews B, Abeles M, Furst DE. Skin score as a predictor and correlate of outcome: high-dose vs low-dose Penicillamine trial. *Arthritis Rheum* 2000;43:2445-54.
 10. Arnett FC, Cho M, Chatterjee S, Aguilar MB, Reveille JD, **Mayes MD**. Familial occurrence frequencies and relative risks for systemic sclerosis (scleroderma) in three U.S. cohorts. *Arthritis Rheum* 2001;44:1359-62.
 11. Girgis RE, Gugnani MK, Abrams J, **Mayes MD**. Partitioning of alveolar and conducting airway nitric oxide in scleroderma lung disease. *Am J Resp Crit Care Med.*2002;165:1587-91.
 12. McSweeney PA, Nash RA, Sullivan KM, Storek J, Croffort LJ, Dansey R, **Mayes MD**, McDonagh KT, Gooley TA, Holmberg LA, Chen CS, Wener MH, Ryan K, Sunderhaus J, Russell K, Rambharose J, Storb R, Furst DE. High-dose immunosuppressive therapy for severe systemic sclerosis – initial outcomes. *Blood.* 2002;100:1602-10.
 13. DeMarco PJ, Weisman MD, Seibold JR, Furst DE, Wong WK, Hurwitz EL, **Mayes M**, White B, Wigley F, Barr W, Moreland L, Medsger TA Jr, Steen V, Martin RW, Collier D, Weinstein A, Lally E, Varga J, Weiner SR, Andrews B, Abeles M, Clements PJ. Predictors and outcomes of scleroderma renal crisis: the high-dose versus low-dose D-Penicillamine in early diffuse systemic sclerosis trial. *Arthritis Rheum* 2002; 46:2983-9.
 14. **Mayes MD**, Lacey JV Jr, Beebe-Dimmer J, Gillespie BW, Cooper B, Laing TJ, Schottenfeld D. Systemic sclerosis: Prevalence, incidence, survival, and disease characteristics in a large U.S. population. *Arthritis Rheum* 2003;48:2246-55.
 15. Nash RA, Dansey R, Storek J, Sullivan KM, Georges GE, Bowen JD, Holmberg LA, Kraft GH, **Mayes MD**, McDonagh KT, Chen CS, DiPersio J, LeMaistre CF, Pavletic S, Sullivan KM, Sunderhaus J, Furst DE, McSweeney PA. Epstein-Barr virus-associated post-transplant lymphoproliferative disorder after high-dose immunosuppressive therapy and autologous CD34-selected hematopoietic stem cell transplantation for severe autoimmune diseases. *BBMT* 2003; 9:583-91.
 16. **Mayes MD**, O'Donnell D, Rothfield NF, Csuka ME. Minocycline is not effective in systemic sclerosis (SSc): Results of an open-label multicenter trial. *Arthritis Rheum* 2004;50:553-7.
 17. Chatterjee S, Mark MI, Wooley PH, Lawrence WD, **Mayes MD**. Increased dermal elastic fibers in the tight skin mouse. *Clin Exp Rheumatol* 2004; 22:617-620.
 18. Clements PJ, Seibold JR, Furst DE, Wong WK, **Mayes M**, White B, Wigley F, Weisman MH, Barr W, Moreland L, Medsger TA, Jr, Steen V, Martin RW, Collier D, Weinstein A, Lally E, Varga J, Weiner SR, Andrews B, Abeles M, Wong WK. High-dose versus low-dose penicillamine in early diffuse systemic sclerosis trial: Lessons Learned. *Seminars in Arthritis & Rheumatism* 2004; 33:249-263.
 19. Korn JH, **Mayes M**, Matucci Cerinic M, Rainisio M, Pope J, Hachula E, Rich E, Carpentier P, Molitor J, Seibold JR, Hsu V, Guillevin S, Chatterjee S, Peters H, Coppock J, Herrick A, Merkel P, Simms R, Furst D, Bodin F, Black C, for the RAPIDS-1 Study Group. Digital ulcers in systemic sclerosis – prevention by treatment with bosentan, an oral endothelin receptor antagonist. *Arthritis Rheum* 2004; 50:3985-93.
 20. Khanna D, Clements PJ, Furst DE, Chon Y, Elashoff R, Roth MD, Sterz M, Chung J, FitzGerald JD, Seibold JR, Varga J, Theodore A, Wigley FM, Silver RM, Steen VD, **Mayes MD**, Connolly MK, Fessler BJ, Rothfield NF, Mubarak K, Molitor J, Tashkin DP; Scleroderma Lung Study Group. Correlation of the degree of dyspnea score with health-related quality of life, functional abilities and diffusing capacity for carbon monoxide in patients with systemic sclerosis and active alveolitis: results from the scleroderma lung study. *Arthritis Rheum*, 2005; 52:592-600.

21. Wigley F, Lima JAC, **Mayes M**, McLain D, Chapin L, Ward-Able C. The Prevalence of Undiagnosed Pulmonary Arterial Hypertension in Subjects with Connective Tissue Disease at the Secondary Healthcare Level of Community-Based Rheumatologists (UNCOVER Study). *Arthritis Rheum* 2005; 52:2125-32.
22. Chatterjee S, Dombi, G, Severson RK, Weiss LK, **Mayes MD**. Risk of Malignancy in Scleroderma. *Arthritis Rheum*, 2005; 52:2415-24.
23. Assassi S, **Mayes MD**, McNearney T, Fischback M, Reveille JD, Arnett FC, Tan FK. Polymorphisms of endothelial nitric oxide synthase and angiotensin-converting enzyme in systemic sclerosis. *Am J Med* 2005;118:907-11.
24. Tan FK, Zhou X, Marcum C, Gourh P, **Mayes MD**, Jin L, Arnett FC. Signatures of dysregulated interferon gene expression and vasculotrophism in the peripheral blood cells of systemic sclerosis patients. *Rheumatol* 2006; 45:694-702.
25. Gardner HAR, Trojanowska M, Smith E, Pannu J, Shearstone J, Bandaru R, Tan FK, **Mayes MD**. Intact scleroderma biopsies have a strong transcript profile fingerprint which is incompletely reflected by explant fibroblast cultures. *Arthritis Rheum* 2006; 54:1961-73.
26. Khanna D, Furst DE, Hays RD, Park GS, Wong WK, Seibold JR, **Mayes MD**, White B, Wigley FF, Weisman M, Barr W, Moreland L, Medsger Jr TA, Steen VD, Martin RW, Collier D, Weinstein A, Lally EE, Varga J, Weiner SR, Andrews B, Abeles M, Clements PJ. Minimally important differences in diffuse systemic sclerosis- Results from the D-Penicillamine study. *Ann Rheum Dis* 2006;65:1325-9.
27. Tashkin DP, Elashoff R, Clements PJ, Goldin J, Roth MD, Furst DE, Arriola E, Richard Silver R, Strange C, Bolster M, Seibold JR, Riley DJ, Hsu VM, Varga J, Schraufnagel D, Theodore A, Simms R, Wise R, Wigley F, White B, Steen V, Read C, **Mayes M**, Parsley E, Mubarak K, Connolly MK, Golden J, Olman M, Fessle B, Rothfield N, Metersky M, for the Scleroderma Lung Study Research Group. Cyclophosphamide versus Placebo in Scleroderma Lung Disease. *NEJM* 2006;354:2655-66.
28. Wu S-P, Leng L, Feng A, Liu N, McDonald C, Annette L, Arnett F, Gregersen PK, **Mayes M**, Bucala R. *MIF* promoter polymorphisms influence the clinical expression of scleroderma. *Arthritis Rheum*, 2006;54:3661-9.
29. Alkassab F, Gourh P, Tan FK, McNearney T, Fischbach M, Arnett FC, **Mayes MD**. Allograft inflammatory factor 1 (*AIF1*) single nucleotide polymorphism (SNP) is associated with anticentromere antibody seropositive systemic sclerosis. *Rheum Oxford*, 2007; 46:1248-51.
30. Gourh P, Tan FK, Assassi S, McNearney TA, Fischbach M, Arnett FC, **Mayes, MD**. Association of the *PTPN22* R620W Polymorphism with Topoisomerase-I and Centromere Autoantibody Positive Systemic Sclerosis. *Arthritis Rheum*, 2006 Dec;54(12):3945-53
31. Denton C, Merkel P, Furst D, Khanna D, Emery P, Hsu V, Silliman N, Streisand J, Powell J, Akesson A, Coppock J, van den Hoogen, F, Herrick A, **Mayes M**, Veale D, Haas J, Ledgeter S, Korn J, Black, CM, Seibold JR. Recombinant human anti-TGFβ1 antibody therapy in systemic sclerosis: a multicenter, randomized, placebo-controlled Phase I/II trial of CAT-192. *Arthritis Rheum* 2007;56:323-33.
32. Khanna D, Yan X, Tashkin DP, Furst DE, Elashoff R, Roth MD, Silver R, Strange C, Bolster M, Seibold JR, Riley DJ, Hsu VM, Varga J, Schraufnagel D, Theodore A, Sims R, Wise R, Wigley F, White B, Steen V, Read C, **Mayes M**, Parsley E, Mubarak K, Connolly MD, Golden J, Olman M, Fessler B, Rothfield N, Metersky M, Clements PJ. Impact of Oral Cyclophosphamide on Health-Related Quality of Life in Patients with Scleroderma Lung Disease with Active Alveolitis – Results from the Scleroderma Lung Study. *Arthritis Rheum* 2007;56:1676-84.
33. Assassi S, Arnett FC, Reveille JD, Gourh P, **Mayes MD**. Clinical, immunological, and genetic features of familial systemic sclerosis. *Arthritis Rheum* 2007; 56:2031-7.
34. Khanna D, Lovell DJ, Giannini E, Clements PJ, Merkel P, Seibold JR, Matucci-Cerinic M, Denton C, **Mayes MD**, Steen V, Varga J, Furst DE, for the other coauthors of the Scleroderma Clinical Trial Consortium. Development of a provisional core set of response measures for clinical trials of systemic sclerosis. *In Press 2007 Ann Rheum Dis*.

C. RESEARCH SUPPORT ONGOING:

1) Scleroderma Family Registry and DNA Repository

MD Mayes Principal Investigator NIH/NIAMS NO 1-AR-0-2251

Period of Award: September 30, 2000 – September 29, 2007.

Award for project: \$250,000 current year

The overall goal is to identify the genetic influences in scleroderma and to establish a repository of DNA and serum to support and encourage research in this disease. Dr. Mayes has the responsibility of overseeing the project, subject recruitment, verification of diagnoses and all other matters pertaining to this project. In this last year of funding we will verify/validate (or not) several candidate genes that were identified in an initial cohort as associated with scleroderma.

2) NIH/NIAMS P50 CORT (Center of Research Translation) Grant

PI of Project 2: **Gene Expression as Predictors of Outcome in the GENISOS (Genes versus Environment in Scleroderma Outcome Study) Cohort**

Program Project Director: FC Arnett Role of Dr. Mayes: PI of Project 2

Award for Project 2 (direct): \$800,000

Proposed Period of Award: September 2006 through August 2011

This is an extension and further development of the GENISOS cohort established in 1998. In addition, gene expression studies (microarray experiments) of skin biopsies and peripheral blood cells will be done.

3) Subcontract from Duke University Medical Center. "A randomized, open-label, phase II/III Multicenter study of High-dose immunosuppressive therapy using total body irradiation, cyclophosphamide, ATGAM, and autologous transplantation with auto-CD34+HPC versus intravenous pulse cyclophosphamide for the treatment of severe systemic sclerosis."

MD Mayes site Principal Investigator NIH/NIAID NO1-A105419

Period of Award: April 1, 2005 – September 21, 2012

Award for project: \$828,158

This is a Multicenter Clinical Trial of cyclophosphamide versus high dose chemotherapy and stem cell transplant in severe scleroderma. Dr. Mayes was on the planning committee that designed the study and she serves on the steering committee to implement the study. In addition, she has the responsibility of recruiting and following subjects and all other matters pertaining to this project at the U Texas site.

4) NIH/NIAID R34 Planning Grant for one year

Title: **Allogeneic Transplantation for Severe Systemic Scleroderma**

Proposed Period of Award: June 2006 through May 2007.

Role: Co-Investigator

Principal Investigator: Richard Nash, Fred Hutchinson Cancer Center, Seattle

Co-Investigator: MD Mayes (Principal Investigator at UT-Houston site)

Award for Project: \$25,825

The goal of this study is to develop a protocol for allogeneic stem cell transplantation for severe systemic scleroderma.

5) Department of Defense: PR064251

Title: **Candidate Gene Polymorphisms in Scleroderma**

MD Mayes, Principal Investigator U.Texas-Houston

Defining susceptibility factors

Period of Award: January 2007 – September 2010.

Award for project: \$625,000