

CURRICULUM VITAE

Date of Revision: 1/22/18

Name: Mary M. Tomayko, M.D., Ph.D.

Title: Associate Professor

Department: Department of Dermatology and Pathology

School: Yale University School of Medicine

Education:

B.S. University of Maryland, College Park (Zoology) 1990

Ph.D. University of Pennsylvania (Immunology) 1999

M.D. University of Pennsylvania School of Medicine 2000

Career/Academic Appointments:

7/2000-6/01 Intern, Internal Medicine, Hospital of the University of Pennsylvania, Phila, PA

7/2001-6/04 Resident, Dermatology, Yale-New Haven Hospital, New Haven, CT

7/2004-6/05 Postdoctoral Fellow in Dermatology, Yale University, New Haven, CT

7/2005-6/06 Instructor, Dept. of Dermatology, Yale University School of Medicine, New Haven, CT

7/2006-6/16 Assistant Prof., Dept. of Dermatology, Yale Univ. School of Medicine, New Haven, CT

7/2016-present Associate Prof., Dept. of Dermatology, Yale Univ. School of Medicine, New Haven, CT

7/2016-present Member, Yale Human Translational Immunology Faculty

7/2016-present Member, Yale Cancer Center

7/2017-present Associate Prof., Dept. of Pathology, Yale Univ. School of Medicine, New Haven, CT

Administrative Positions:

7/2009-present Director, YSM 4th Year Dermatology Consult Elective, Yale University School of Medicine, New Haven, CT

7/2009-6/2015 Co-Director, YSM 2nd Year Dermatology Module, Yale University School of Medicine, New Haven, CT

7/2009-6/2012 Director, YSM 3rd Year Dermatology Elective, Yale University School of Medicine, New Haven, CT

7/2010-6/2017 Director, Yale Primary Care Center Dermatology, Resident Clinic, Yale-New Haven Hospital, New Haven, CT

7/2015-present Director, YSM Attacks and Defenses Module, Dermatology Content Director, Yale University School of Medicine, New Haven, CT

7/2015-present MD/PhD Faculty Committee

Board Certification:

American Board of Dermatology, 2005, Recertification 2015

Professional Honors & Recognition:

International/National/Regional

2008: Lupus Autoimmunity Biosymposia Award

2005: Dermatology Foundation Career Development Award
2005: Arthritis Foundation Fellowship
2004: Dermatology Foundation Investigator Research Fellowship
2004: Women's Dermatology Society Preceptor Fellowship
2000: Roy G. Williams Award ("meritorious research in basic medical sciences")
1990: Medical Scientist Training Program

Grant/Clinical Trials History:

Agency: NIH/NIAID
I.D. # R01 AI122448-01A1
Title: "B cell memory regulation by bone morphogenetic protein receptor 1a"
P.I.: Mary M. Tomayko, M.D., Ph.D.
Percent effort: 40%
Total costs for project period: \$ 2,289,376
Project period: 07/01/2015 – 06/30/2020

Past Grants

Agency: NIH/CEP
I.D. # Melanoma SPORE CEP
Title: "PD-1 regulation of B cell immunity in advanced melanoma"
P.I.: Mary M. Tomayko, M.D., Ph.D.
Percent effort: 2%
Total costs for project period: \$ 50,000
Project period: 09/15/2016 – 08/31/2017

Agency: Biogen
I.D.#
Title: "Biomarkers for scleroderma"
P.I.: Erica Hertzog, M.D., Ph.D.
Percent effort: 10%
Total costs for project period: \$ 338,000
Project period: 01/01/2017 – 06/31/2017

Agency: Biogen
I.D.#
Title: "Biomarkers for scleroderma"
P.I.: Erica Hertzog, M.D., Ph.D.
Percent effort: 10%
Total costs for project period: \$ 338,000
Project period: 04/01/2014 – 03/31/2016

Agency: NIH/NIAID
I.D.# K08 AI078533
Title: "Elucidating functional properties of memory B cells"
P.I.: Mary M. Tomayko, M.D., Ph.D.
Percent effort: 75%
Total costs for project period: \$617,810

Project period: 09/01/2008 – 08/31/2013

Agency: NIH/NIAID

I.D.# K08 AI078533 ARRA Admin. Supplement

Title: “Elucidating functional properties of memory B cells”

P.I.: Mary M. Tomayko, M.D., Ph.D.

Percent effort: 75%

Total costs for project period: \$100,000

Project period: 09/01/2009 – 08/31/2011

Agency: Dermatology Foundation

I.D.# Physician Scientist Career Development Award

Title: “Phenotypic and functional characterization of memory B cells”

P.I.: Mary M. Tomayko, M.D., Ph.D.

Percent effort: 90%

Total costs for project period: \$165,000

Project period: 07/01/2005 – 06/30/2008

Agency: Arthritis Foundation

I.D.# Post-Doctoral Fellowship

Title: “Phenotypic and functional characterization of memory B cells”

P.I.: Mary M. Tomayko, M.D., Ph.D.

Percent effort: 90%

Total costs for project period: \$150,000

Project period: 07/01/2005 – 06/30/2008

Agency: Dermatology Foundation

I.D.# Dermatology Investigator Fellowship Award

Title: “Phenotypic and functional characterization of memory B cells”

P.I.: Mary M. Tomayko, M.D., Ph.D.

Percent effort: 90%

Total costs for project period: \$30,000

Project period: 07/01/2004 – 06/30/2005

Invited Speaking Engagements, Presentations, Symposia & Workshops Not Affiliated With Yale:

International/National

- 2017 Univ. Pennsylvania, Dermatology Research Seminar, Phila, PA, “Long lived immunity and bone morphogenetic protein signaling”
- 2016 Society of Investigative Dermatology, Workshop leader, “Autoimmunity”, Scottsdale, AZ
- 2016 American Academy of Dermatology, Hot topics in immunology: “Regulatory B cells. Washington, DC.
- 2015 Germinal Center Dynamics and HIV Vaccines, “Memory B cell subsets differ in functional abilities”, NIAID, NIH, Bethesda MD
- 2014 Univ. California Irvine, Irvine, CA, Dermatology Grand Rounds Speaker “B cell depletion therapy for pemphigus: where on the therapeutic ladder does it belong?”
- 2014 FASEB Science Research Conference, Biology of the Immune System, Plenary speaker, Snowmass, CO, “Molecular pathways in B cell memory generation and function”

- 2014 American Academy of Dermatology, Annual Meeting, Denver, CO, Immunology Course, “B Cells for Dermatologists: A Primer and Update”
- 2013 American Academy of Dermatology, Summer Meeting, New York, NY, Controversies in Dermatologic Drug Therapy Symposium, “Rituximab – Drug of Choice for Pemphigus Vulgaris?”
- 2012 Keystone Symposia – Mutations, Malignancy and Memory, Boston, MA, Plenary speaker, “Molecular Pathways in B Cell Memory Generation and Maintenance”
- 2010 International Pemphigus and Pemphigoid Foundation, Washington, D.C., “Rituximab-mediated B cell depletion modulates T cell autoimmunity”
- 2010: Univ. of Chicago Gwen Knapp Center for Lupus and Immunol. Res. and Section of Rheum., Lecturer Seminars in Autoimmunity Scientific Lecturer “Functional properties of memory B cells”
- 2009: Univ. Pennsylvania, Dept. Dermatology, Philadelphia, PA, Scientific Lecturer “Functional properties of memory B cells”
- 2009: Emory Univ. Dept. Dermatology, Atlanta GA, Grand Rounds Lecturer “B cells: New players in cutaneous disease?”
- 2009: Emory Univ. Vaccine Center, Atlanta GA, Seminar Speaker “Functional properties of memory B cells: Implications for new treatments of B cell-mediated autoimmune disease?”
- 2009: Univ. California, Davis, Davis CA, Dermatology Grand Rounds Speaker “Functional properties of memory B cells: Implications for new treatments of B cell-mediated autoimmune disease?”
- 2009: Keystone B Cells in Context, Taos, NM, Co-Chair “Memory Workshop”
- 2008: Lupus Autoimmunity Biosymposium, Plenary Speaker, La Jolla, CA “Intrinsic Properties of Memory B Cells”

Yale Affiliated and Regional

- 2017 Dermatology-Rheumatology combined management conference, “Recurrent painful annular plaques and arthritis”.
- 2017 5th Annual Medical Education Day, Yale School of Medicine, New Haven, CT, “A dermatology course for an integrated medical school curriculum” (poster) (Tomayko, MM)
- 2015 Yale University School of Medicine, Robert E. Tigelaar Celebratory Symposium, “How does immunity survive and thrive for a lifetime?”
- 2013 Yale University School of Medicine, Rheumatology Case Conference, “Intractable Blisters and Ulcers”

Peer-Reviewed Presentations & Symposia Given at Meetings Not Affiliated With Yale:

International/National

- 2017 Keystone Symposia: B cells and T Follicular Helper Cells – Controlling Long-Lived Immunity, “B cell memory formation requires bone morphogenetic protein receptor 1a”, Whistler, B.C, Canada.
- 2015 Society of Investigative Dermatology, Atlanta, GA. Lilly E, Choate K, & Tomayko M., “Epidermolysis bullosa acquisita (EBA) mimicking dystrophic epidermolysis bullosa (EB): importance of interrogation of potential splice variant”.
- 2014 American Academy of Dermatology Annual Meeting, Denver, CO. Gross and Microscopic Dermatology Symposium, Lilly E, Lazova R, Tomayko M, & Golden M., “Genital Ulceration in a Patient with Well-Controlled HIV”.

- 2013 American Society of Dermatopathology Annual Meeting, Washington, D.C., Lilly E, Pettersen J, Tomayko M, & Lazova R., “A possible role for occlusion and/or moisture in popular acantholytic dyskeratosis of the vulva”.
- 2013 American Academy Dermatology Annual Meeting, Miami, FL, Gross & Microscopic Dermatology Symposium, Lilly E, Mason A, Galan A, & Tomayko M., “Association of cutis gyrata and digital clubbing: pachydermoperiostosis in an 18-year-old man”.
- 2009 Society of Investigative Dermatology, Atlanta, GA, “Intrinsic properties of memory B cells”.

Professional Service

Peer Review Groups/Grant Study Sections:

- 2017 Member, Special Emphasis Review Panel, ZRG1 IMM-U(90), NIH
- 2013 Ad hoc Member, Oral, Dental, and Craniofacial Sciences, NIH/ODCS
- 2009 Ad hoc Member, Arthritis Research Council

Other

- 2015-present Faculty, MD/PhD Program Committee, Yale University School of Medicine, New Haven, CT
- 2015 Consultant, Germinal Center Dynamics and HIV Vaccines, NIAID, NIH, Bethesda MD
- 2015 Chair, Thesis committee, Rajarata University, Anuradhapura, Sri Lanka

Journal Service:

Editor/Associate Editor

- 2010-present Scientific Editor, *Dermatology Focus*

Reviewer

- 2002-present Reviewer for *Journal of Investigative Dermatology*, *Journal of Leukocyte Biology*

Bibliography:

Peer-Reviewed Original Research

1. Reynolds, C. P., **M.M. Tomayko**, L. Donner, L. Helson, R. C. Seeger, T. J. Triche, and G. M. Brodeur. Biological classification of cell lines derived from human extra-cranial neural tumors. *Progress Clinical Biological Research* 1988, 271:291-306.
2. **Tomayko, M.M.**, T. J. Triche, R. W. Newburgh, and C. P. Reynolds. Induction of catecholamine fluorescence in human neuroblastoma cell lines transplanted into nude mice. *Progress Clinical Biological Research* 1988, 271:307-316.
3. Wada, R. K., R. C. Seeger, G. M. Brodeur, D. J. Slamon, S. A. Rayner, **M. Tomayko**, and C. P. Reynolds. Characterization of human neuroblastoma cell lines that lack N-myc gene amplification. *Progress Clinical Biological Research* 1988, 271:57-69.
4. **Tomayko, M.M.**, and C. P. Reynolds. Determination of subcutaneous tumor size in athymic (nude) mice. *Cancer Chemotherapy Pharmacology*, 1989 24:148-154.
5. Wada, R. K., R. C. Seeger, G. M. Brodeur, P. A. Einhorn, S. A. Rayner, **M.M. Tomayko**, and C. P. Reynolds. Human neuroblastoma cell lines that express N-myc without gene amplification. *Cancer* 1993, 72:3346-3354.

6. **Tomayko, M.M.**, T. J. Triche, and C. P. Reynolds. Human neuroblastoma cell lines regain catecholamine fluorescence when xenografted into athymic (nude) mice. *International Journal Developemental Neuroscience* 1996, 14:771-777.
7. **Tomayko, M.M.**, and M. P. Cancro. Long-lived B cells are distinguished by elevated expression of A1. *Journal Immunology* 1998, 160:107-111.
8. **Tomayko, M.M.**, J. A. Punt, J. M. Bolcavage, S. L. Levy, D. M. Allman, and M. P. Cancro. Expression of the Bcl-2 family member A1 is developmentally regulated in T cells. *International Immunology* 1999, 11:1753-1761.
9. Cowan, D. A., D. Gay, B. M. Bieler, H. Zhao, A. Yoshino, J. G. Davis, **M.M. Tomayko**, R. Murali, M. I. Greene, and M. S. Marks. Characterization of mouse tGolgin-1 (golgin-245/trans-golgi p230/256 kD golgin) and its upregulation during oligodendrocyte development. *DNA Cell Biology* 2002, 21:505-517.
10. Anderson, S. M., **M.M. Tomayko**, A. Ahuja, A. M. Haberman, and M. J. Shlomchik. New markers for murine memory B cells that define mutated and unmutated subsets. *Journal Experimental Medicine* 2007, 204:2103-2114.
11. Scholz, J. L., J. E. Crowley, **M.M. Tomayko**, N. Steinle, P. J. O'Neill, W. J. Quinn, 3rd, R. Goenka, J. P. Miller, Y. H. Cho, V. Long, C. Ward, T. S. Migone, M. J. Shlomchik, and M. P. Cancro. BLYS inhibition eliminates primary B cells but leaves natural and acquired humoral immunity intact. *Proceedings National Academy Sciences U S A* 2008, 105:15517-15522.
12. **Tomayko, M.M.**, S. M. Anderson, C. E. Brayton, S. Sadanand, N. C. Steinle, T. W. Behrens, and M. J. Shlomchik. Systematic comparison of gene expression between murine memory and naive B cells demonstrates that memory B cells have unique signaling capabilities. *Journal Immunology* 2008, 181:27-38.
13. Good-Jacobson, K.L., C.G. Szumilas, L. Chen, A.H. Sharpe, **M.M. Tomayko**, M.J. Shlomchik. PD-1 regulates germinal center B cell survival and the formation and affinity of long-lived plasma cells. *Nature Immunology*, 2010, 535-542.
14. **Tomayko, M.M.**, N. C. Steinle, S. M. Anderson, and M. J. Shlomchik. Cutting Edge: Hierarchy of Maturity of Murine Memory B Cell Subsets. *Journal Immunology* 2010, 185: 7146-7150.
15. Duke, J.L., M. Liu, G. Yaari, **M.M. Tomayko**, A. Khail, M. J. Shlomchik, and S.H. Kleinstein. Multiple transcription factor binding sites predict AID targeting in non-immunoglobulin. *Journal Immunology* 2013, 190: 3878-3888.
16. Conter, L.C., E. Song, M. J. Shlomchik, and **M.M. Tomayko**. CD73 Expression is Dynamically Regulated in the Germinal Center and Bone Marrow Plasma Cells are Diminished in its Absence. *PLOS One* 2014, 9(3):92009.
17. Zuccarino-Catania, G.V., S. Sadanand, F.J. Weisel, F.J., K.L. Good-Jacobson, **M.M. Tomayko**, and M.J. Shlomchik. The distinct function of memory B cells in a secondary response is dependent upon expression of CD80 or PD-L2 and independent of isotype. *Nature Immunology*

2014, 15:631-7.

18. Waldman A, Ezaldein H, **Tomayko M**, Galan A. Nodular plaque in a cardiac transplant patient. *J Am Acad Dermatol*. 2015 May;72(5):e111-2.
19. Damsky, W, Kole, L and **Tomayko, MM**. Development of bullous pemphigoid during nivolumab therapy. *JAAD Case Reports*. 2016, 2(6):442-4.
20. Leventhal, JS, Haberland, CM, Cowper SE, **Tomayko MM**. Juvenile autoimmune pemphigus presenting with diffuse gingival hypertrophy and antibodies against desmocollin-3. *Br. J. Dermatology*. *In press*.
21. Li, AW, Weed, JG, Stamey, CR, Subtil, A, **Tomayko, MM**, Antaya, RJ. Bullous systemic lupus erythematosus in a 6-year old boy. *Pediatric Dermatology*. 2017.
22. Nylander AN, Ponath GD, Axisa PP, Mubarak M, **Tomayko M**, Kuchroo VK, Pitt D, Hafler DA. Podoplanin is a negative regulator of TH17 inflammation. *JCI Insight*. 2(17). 2017.

Chapters, Books, and Reviews

20. Cancro, M. P., D. M. Allman, C. E. Hayes, V. M. Lentz, R. G. Fields, A. P. Sah, and **M. Tomayko**. B cell maturation and selection at the marrow-periphery interface. *Immunology Research* 1998, 17:3-11.
21. Anderson, S. M., **M.M. Tomayko**, and M. J. Shlomchik. Intrinsic properties of human and murine memory B cells. *Immunology Reviews* 2006, 211:280-294.
22. Sadanand, S. and **M.M. Tomayko**. B cell biology. In *Clinical and Basic Immunodermatology* in press. Eds A. Gaspari, S. Tying, and D. Kaplan. 2017.