
BIOGRAPHICAL SKETCH

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NAME: **Sylvia Adams**

eRA COMMONS USER NAME (credential, e.g., agency login): **ADAMSS04**

POSITION TITLE: **Associate Professor of Medicine**

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Friedrich-Schiller University, Jena, Germany	MD	09/1995	Medical School
Nordwest Krankenhaus, Frankfurt, Germany	Internship	06/1997	Medicine/Oncology
Winthrop-University Hospital, Mineola, New York	Residency	06/2000	Internal Medicine
New York University School of Medicine, New York	Fellowship	06/2003	Hematology/Oncology
Rockefeller University, New York	Visiting Fellow	06/2003	Immunology
New York University School of Medicine, New York	MSc	05/2010	Clinical Investigation

A. Personal Statement

I am a Medical Oncologist with expertise in breast cancer and cancer immunology. My specific research interest lies in harnessing the immune response for the prevention and treatment of breast cancer and the development of toll-like receptor agonists and other immunotherapies for breast cancer. I lead several clinical trials, including a NIH R01-supported trial of topical TLR7 agonist, cyclophosphamide, and radiotherapy for patients with chest wall recurrences in breast cancer (NCT01421017) and am the global principal investigator (PI) for the Merck-sponsored Keynote-086 trial of anti-PD-1 therapy in metastatic triple negative breast cancer (TNBC) (NCT02447003).

B. Positions and Honors

Positions and Employment

2003-2005 Instructor of Medicine, New York University School of Medicine, New York
2005-2012 Assistant Professor of Medicine, New York University School of Medicine, New York
2009-present Vice Chair, Institutional Review Board, New York University School of Medicine
2011-2013 Associate Director, Bellevue Cancer Center, Clinical Research, New York University School of Medicine, New York
2012-2013 Temporary Practice at NYC Health and Hospitals Corporation (Woodhull Medical Center, Metropolitan Hospital) due to closure of Bellevue Hospital after Hurricane Sandy
2012-present Associate Professor of Medicine, New York University School of Medicine, New York
2013-present Member of Faculty Group Practice, NYU Medical Oncology Associates

Other Experience and Professional Memberships

1999-present Member, American Society of Clinical Oncology
2003-present Member, Institutional Review Board, NYU School of Medicine
2004-2008 Member, NYU Cancer Institute Melanoma Program
2004-present Member, NYU Cancer Institute Cancer Immunology Program
2005-2009 Member, GCRC Executive Advisory Committee, NYU School of Medicine
2007-2010 Member, Dean's Committee on Women, NYU School of Medicine
2008-present Member, NYU Cancer Institute Breast Cancer Research Program
2008-2015 Member, Global Steering Committee for Phase III MAGRIT
2009-2016 Vice Chair, Institutional Review Board, NYU School of Medicine

2009-present	Member, Society for the Immunotherapy of Cancer
2010-2013	Member, ASCO Cancer Communications Committee
2010-present	Editorial Board, Immunotherapy
2010	Scientific Reviewer, Breast Cancer Immunology, Department of Defense (CDMRP)
2011	Scientific Reviewer, Partnerships for Biodefense, NIH
2012	Scientific Reviewer, NCI's Provocative Questions, NCI
2012	Scientific Reviewer, Clinical Oncology Study Section, NCI
2013-present	Member, Breast Committee, Eastern Cooperative Oncology Group (ECOG)
2014	Scientific Reviewer, Breast Cancer Immunology, Department of Defense (CDMRP)
2014-2017	Member, ASCO Conquer Cancer Foundation Grant Review Committee
2014-2017	<u>Permanent Study Section Member, Clinical Oncology Study Section, NCI</u>
2015-present	Member, Global Steering Committee for Phase III ImPassion
2015-present	Global Principal Investigator, Keynote-086 Immunotherapy trial

Awards and Honors

1992	Dr. Carl Duisberg Foundation Fellow
1994-1995	German Academic Exchange Fellow
1996	<i>Magna cum laude</i> Distinction (Friedrich Schiller University)
2000	Dr. J. F. Aloia Award for Teaching and Academic Excellence
2001	Excellence in Teaching Award (New York University)
2003-2004	ASCO Young Investigator Award
2004-2007	ASCO Career Development Award
2006	NYU Cancer Institute Translational Research Program Award
2007-2012	NCI Clinical Investigator Award (K23)
2009	NYU Cancer Institute Translational Research Program Award
2010	Master of Science in Clinical Investigation (New York University)

C. Contribution to Science

1. Working for 10 years at NYU's affiliate public Bellevue Hospital, my interest centered on breast cancer in minorities, in particular the presentation and treatment of locally advanced breast cancer, chest wall recurrences, and the prevention of BRCA-related malignancies. In my roles as a Medical Oncologist for minority patients as well as a spokesperson for the American Society of Clinical Oncology, I also highlighted the importance of and challenges for the inclusion of underserved patients in clinical trials.

- Adams S, Chakravarthy AB, Donach M, Spicer D, Lymberis S, Singh B, Bauer JA, Hochman T, Goldberg JD, Muggia F, Schneider RJ, Pietenpol JA, Formenti SC. Preoperative concurrent paclitaxel-radiation in locally advanced breast cancer: pathologic response correlates with five-year overall survival. **Breast Cancer Res Treat**. 2010 Dec;124(3):723-32. doi: 10.1007/s10549-010-1181-8. Epub 2010 Sep 29. PMID: 20878462.
- Adams S, Greeder L, Reich E, Shao Y, Fosina D, Hanson N, Tassello J, Singh B, Spagnoli GC, Demaria S, Jungbluth AA. Expression of cancer testis antigens in human BRCA-associated breast cancers: potential targets for immunoprevention? **Cancer Immunol Immunother**. 2011 Jul;60(7):999-1007. doi: 10.1007/s00262-011-1005-7. Epub 2011 Apr 5. PMID: 21465317.
- Adams S* (corresponding author), Kozhaya L, Martiniuk F, Meng TC, Chiriboga L, Liebes L, Hochman T, Shuman N, Axelrod D, Speyer J, Novik Y, Tiersten A, Goldberg JD, Formenti SC, Bhardwaj N, Unutmaz D, Demaria S. Topical TLR7 agonist imiquimod can induce immune-mediated rejection of skin metastases in patients with breast cancer. **Clin Cancer Res**. 2012 Dec 15;18(24):6748-57. doi: 10.1158/1078-0432.CCR-12-1149. Epub 2012 Jul 5. PMID: 22767669.
- Patel JD, Krilov L, Adams S, Aghajanian C, Basch E, Brose MS, Carroll WL, de Lima M, Gilbert MR, Kris MG, Marshall JL, Masters GA, O'Day SJ, Polite B, Schwartz GK, Sharma S, Thompson I, Vogelzang NJ, Roth BJ. Clinical Cancer Advances 2013: Annual Report on Progress Against Cancer from the American Society of Clinical Oncology. **J Clin Oncol**. 2014 Jan 10;32(2):129-60. doi: 10.1200/JCO.2013.53.7076. Epub 2013 Dec 10. PMID: 24327669.

2. A focus of my work has been the development of toll-like receptor (TLR) agonists as immunotherapy for cancer. This work includes studies of TLR agonists as vaccine adjuvants as well as the role of microbiota in cancer development and anti-tumor immunity. I lead an ongoing NIH R01-supported trial of a topical TLR7 agonist, cyclophosphamide, and radiotherapy to induce an anti-tumor immune response in metastatic breast cancer (NCT01421017), based on our preclinical synergistic results of this combination in murine breast cancer.

- Adams S, O'Neill DW, Nonaka D, Hardin E, Chiriboga L, Siu K, Cruz CM, Angiulli A, Ritter E, Holman RM, Shapiro RL, Berman RS, Berner N, Shao Y, Manchez O, Pan L, Venhaus RR, Hoffman EW, Gnjatic S, Old L, Pavlick AC, Bhardwaj N. (2008). Immunization of malignant melanoma patients with full-length NY-ESO-1 protein using TLR7 agonist imiquimod as vaccine adjuvant. **J Immunol**, 181(1), 776-784. PMID: PMC2583094.
- Adams S. (2009). Toll-like receptor agonists in cancer therapy. **Immunotherapy** 1(6) 949-964. PMID: 171784.
- Dewan Z, Kawashima N, DiNapoli S, Meng TC, Babb JS, Formenti SC, Adams S* (co-senior author), Demaria S. Topical TLR-7 agonist imiquimod inhibits tumor growth and synergizes with conventional cancer treatments in a mouse model of breast cancer. **Clin Ca Res**, Dec 15, 2012. PMID: PMC3525760.
- Sabado RL, Pavlick A, Gnjatic S, Cruz CM, Vengco I, Hasan F, Spadaccia M, Darvishian F, Chiriboga L, Holman RM, Escalon J, Muren C, Escano C, Yepes E, Sharpe D, Vasilakos JP, Rolnitzsky L, Goldberg JD, Mandeli J, Adams S, Jungbluth A, Pan L, Venhaus R, Ott PA, Bhardwaj N. Resiquimod as an immunologic adjuvant for NY-ESO-1 protein vaccination in patients with high-risk melanoma. **Cancer Immunol Res**. 2015 Mar;3(3):278-87. doi: 10.1158/2326-6066.CIR-14-0202. Epub 2015, Jan 29. PMID: 25633712.
- Kwa M, Plottel CS, Blaser MJ, Adams S. The Intestinal Microbiome and Estrogen Receptor-Positive Female Breast Cancer. **J Natl Cancer Inst**. 2016 Apr 22;108(8). pii: djw029. doi: 10.1093/jnci/djw029. PMID: 27107051

3. My recent work has led to level I evidence of the prognostic role of an endogenous anti-tumor response in the subset of triple negative breast cancer (TNBC). In collaboration with Eastern Cooperative Oncology Group (ECOG), I demonstrated that the degree of tumor-infiltrating lymphocytes (TILs) at diagnosis independently and robustly predicted survival after standard chemotherapy in two Phase III adjuvant trials. This contribution is critically important as breast cancer had not traditionally been regarded as immunogenic but now provides the rationale to incorporate novel immune therapeutics in this difficult to treat cancer subtype. To facilitate this work, we have established and published guidelines for the assessment of TILs specifically for breast cancer via an international working group. Furthermore, I am lead FDA-registration trials evaluating T cell check point blockade in metastatic TNBC: as global steering committee member for the Genentech-sponsored anti-PD-L1 trial (IMpassion-130; NCT02425891) and as global PI for the Merck-sponsored anti-PD-1 trial (Keynote-086; NCT02447003).

- Demaria S, Pilonis K, Adams S. (2011) Cross-talk of breast cancer cells with the immune system. Chapter in: **Breast Cancer: Carcinogenesis, Cell Growth and Signalling Pathways. Publisher: InTech**. ISBN 978-953-307-714-7.
- Adams S* (corresponding author), Gray RJ, Demaria S, Goldstein L, Perez EA, Shulman LN, Martino S, Wang M, Jones VE, Saphner TJ, Wolff AC, Wood WC, Davidson NE, Sledge GW, Sparano JA, Badve SS. Prognostic Value of Tumor-Infiltrating Lymphocytes in Triple-Negative Breast Cancers From Two Phase III Randomized Adjuvant Breast Cancer Trials: ECOG 2197 and ECOG 1199. **J Clin Oncol**. 2014 Jul 28. PMID: PMC4162494.
 - Featured in *Lancet Oncology*, Aug 8, 2014, epub ahead of print.
- Salgado R*, Denkert C*, Demaria S*, Sirtaine N, Klauschen F, Pruneri G, Wienert S, Van den Eynden G, Baehner FL, Penault-Llorca F, Perez EA, Thompson EA, Symmans WF, Richardson AL, Brock J, Criscitiello C, Bailey H, Ignatiadis M, Floris G, Sparano J, Kos Z, Nielsen T, Rimm DL,

