

Title: Immune Checkpoint Blockade in Cancer Therapy: New Insights & Opportunities



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Chairman, Department of Immunology, MD Anderson
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USA

Speaker



Makoto Ogawa, MD

Emeritus President, Aichi Cancer Center, Japan

Chairman

James P. Allison, PhD

EDUCATION:

- 1969 BS, Microbiology, the University of Texas, Austin, Texas
- 1973 PhD, Biological Sciences, the University of Texas, Austin, Texas
- 1974 -1977 Post doctoral training, Molecular Immunology, Scripps Clinic and Research Foundation

POSTDOCTORAL TRAINING:

- 1974-1977 Postdoctoral Fellow, Department of Molecular Immunology, Scripps Clinic and Research Foundation, La Jolla, California

Positions and Honors.

Positions

1974-1977	Postdoctoral Fellow, Department of Molecular Immunology, Scripps Clinic and Research Foundation, La Jolla, CA
1977-1983	Assistant Biochemist and Assistant Professor Biochemistry, The University of Texas System Cancer Center, Science Park - Research Division, Smithville, TX
1979-1984	Adjunct Assistant Professor of Zoology, The University of Texas at Austin, Austin, TX
1980-1984	Special Associate Member of the Graduate Faculty, The University of Texas at Austin, Austin, TX
1983-1984	Associate Biochemist and Associate Professor of Biochemistry, The University of Texas System Cancer Center, Science Park - Research Division, Smithville, TX
1983-1984	Visiting Scholar, Department of Pathology, Stanford University School of Medicine, Stanford, CA
1985-2004	Professor, Division of Immunology, Department of Molecular and Cell Biology, University of California, Berkeley, CA
1985-2004	Director, Cancer Research Laboratory, University of California, Berkeley, CA
1987-1989	Interim Head, Division of Immunology, Department of Molecular and Cell Biology, University of California, Berkeley, CA
1989-1997	Head, Division of Immunology, Department of Molecular and Cell Biology, University of California, Berkeley, CA
1995	Merit Award, National Institutes of Health
1997	Member, National Academy of Sciences
1997	Fellow, American Academy of Microbiology
1997	Investigator, Howard Hughes Medical Institute
1997-2012	Investigator, Howard Hughes Medical Institute
1997-2004	Adjunct Professor, Division of Rheumatology, Department of Medicine, School of Medicine, UCSF
1998-2000	Co-Chair, Department of Molecular and Cell Biology, University of California, Berkeley, CA
2004-2012	Chairman, Immunology Program, Memorial Sloan-Kettering Cancer Center, New York, NY
2004-2012	David H. Koch Chair in Immunologic Studies, Memorial Sloan-Kettering Cancer Center, New York, NY
2004-2012	Attending Immunologist, Department of Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY
2004-2012	Co-Chair, Graduate Program in Immunology and Microbial Pathogenesis, Weill Graduate School of Medical Sciences of Cornell University, New York, NY
2004-2012	Professor, Weill Medical College of Cornell University, New York, NY
2006-2012	Director, Ludwig Center for Cancer Immunotherapy, New York, NY
2012-present	Chairman, Department of Immunology, MD Anderson Cancer Center, Houston, TX
2012-present	Director, Immunotherapy Platform, MD Anderson Cancer Center, Houston, TX
2012-present	Deputy Director, David H. Koch Center for Applied Research of Genitourinary Cancers, MD Anderson Cancer Center, Houston, TX

Honors

1986	Merit Award, National Institutes of Health
1997	Member, National Academy of Sciences
1997	Fellow, American Academy of Microbiology
1997	Investigator, Howard Hughes Medical Institute
2001	Centeon Award for Innovative Breakthroughs in Immunology

2002	Outstanding Alumnus Award, The University of Texas at Austin Graduate School
2005	William B. Coley Award for Distinguished Research in Basic and Tumor Immunology, Cancer Research Institute
2007	Fellow, American Association for the Advancement of Science
2007	Elected Member, Institute of Medicine
2008	C. Chester Stock Award, Memorial Sloan-Kettering Cancer Center
2008	Dana Foundation Award in Human Immunology Research, American Association of Immunologists
2010	Richard V. Smalley, MD, Memorial Lectureship Award, International Society for Biological Therapy of Cancer
2011	Lifetime Achievement Award, American Association of Immunologists
2011	Roche Award for Cancer Immunology and Immunotherapy
2011	Breakthrough Achievement in Translational Cancer Research, American Skin Association
2011	Jacob Heskel Gabbay Award in Biotechnology and Medicine, Brandeis University
2011	Advancement of Cancer Research Award, Gilda's Club

Selected peer-reviewed publications (in chronological order).

1. Leach DR, Krummel MF, Allison JP. Enhancement of antitumor immunity by CTLA-4 blockade. *Science* 271:1734-1736, 1996. PMID 8596936.
2. Hurwitz AA, Yu TF-Y, Leach DR, Allison JP. CTLA-4 blockade synergizes with tumor-derived GM-CSF for treatment of an experimental mammary carcinoma. *Proc Natl Acad Sci USA* 95:10067-10071, 1998.
3. van Elsas A, Hurwitz AA, Allison JP. Combination immunotherapy of B16 melanoma using anti-cytotoxic T lymphocyte-associated antigen 4 (CTLA-4) and granulocyte/macrophage colony-stimulating factor (GM-CSF)-producing vaccines induces rejection of subcutaneous and metastatic tumors accompanied by autoimmune depigmentation. *J Exp Med* 190:355-366, 1999. PMCID: PMC2195583.
4. Hurwitz AA, Foster BA, Kwon ED, Truong T, Choi EM, Greenberg NM, Burg MB, Allison JP. Combination immunotherapy of primary prostate cancer in a transgenic mouse model using CTLA-4 blockade. *Cancer Res* 60:2444-2448, 2000. PMID: 10811122.
5. van Elsas A, Suttmuller RPM, Hurwitz AA, Ziskin J, Villasenor J, Medema J-P, Overwijk WW, Restifo NP, Melief CJM, Offringa R, Allison JP. Elucidating the autoimmune and anti-tumor effector mechanisms of a treatment based on cytotoxic T lymphocyte antigen-4 (CTLA-4) blockade in combination with a B16 melanoma vaccine: Comparison of prophylaxis and therapy. *J Exp Med* 194:481-489, 2001. PMCID: PMC2193490.
6. Suttmuller RPM, van Duivenvoorde LM, van Elsas A, Schumacher TNM, Wildenberg ME, Allison JP, Toes REM, Offringa R, Melief CJM. Synergism of CTLA-4 blockade and depletion of CD25+ regulatory T cells in anti-tumor therapy reveals alternative pathways for suppression of auto-reactive CTL responses. *J Exp Med* 194:823-832, 2001. PMCID: PMC 2195955.
7. Quezada SA, Peggs KS, Curran MA, Allison JP. CTLA-4-blockade and GM-CSF combination immunotherapy increases effector frequencies altering the intra-tumor balance of effector and regulatory T cells. *J Clin Invest* 7:1935-1945, 2006. PMCID: PMC1479425.
8. Small EJ, Tchekmedyan NS, Rini BI, Fong L, Lowy I, Allison JP. A pilot trial of CTLA-4 blockade with human anti-CTLA-4 in patients with hormone-refractory prostate cancer. *Clin Cancer Res* 13:1810-1815, 2007. PMID 17363537.
9. Fasso M, Waitz R, Hou Y, Rim T, Greenberg NM, Shastri N, Fong L, Allison JP. SPAS – (stimulator of prostatic adenocarcinoma-specific T cells)/SH3GLB2: A prostate tumor antigen identified by CTLA-4 Blockade. *Proc Natl Acad Sci USA* 105(9):3509-3514, 2008. PMCID: PMC2265147.
10. Segal NH, Parsons DW, Peggs KS, Velculescu V, Kinzler KW, Vogelstein B, Allison JP. Epitope landscape in breast and colorectal cancer. *Cancer Res* 68:889-892, 2008. PMID: 18245491.
11. Quezada SA, Peggs KS, Simpson TR, Shen Y, Littman DR, Allison JP. Limited tumor infiltration by activated T effector cells restricts the therapeutic activity of regulatory T cell depletion against established melanoma. *J Exp Med* 205(9):2125-2138, 2008. PMCID: PMC2526206.
12. Quezada SA, Simpson TR, Peggs KS, Merghoub T, Vider J, Fan X, Blasberg R, Yagita H, Muranski P, Antony PA, Restifo NP, Allison JP. Tumor-reactive CD4+ T cells develop cytotoxic activity and eradicate large established melanoma after transfer into lymphopenic hosts. *J Exp Med* 207(3):637-

650, 2010. PMID: PMC2839156.

13. Curran M, Montalvo W, Yagita H, Allison JP. PD-1 and CTLA-4 combination blockade expands infiltrating T-cells and reduces regulatory T and myeloid cells within B16 melanoma tumors. *Proc Natl Acad Sci USA* 107(9):4275-4280, 2010. PMID: PMC2840093.
14. Curran MA, Kim M, Montalvo W, Al-Shamkhani A, Allison JP. Combination CTLA-4 blockade and 4-1BB activation enhances tumor rejection by increasing T-cell infiltration, proliferation, and cytokine production. *PLoS One* 6(4):e19499, 2011. PMID: PMC3085474.
15. Waitz R, Solomon SB, Petre EN, Trumble AE, Fasso M, Norton L, Allison JP. Induction of tumor immunity through cryoablation and cytotoxic T lymphocyte-associated antigen 4 blockade combination therapy. *Cancer Res* 72(2):430-439, 2012. PMID: 22108823.

IAAO2013 Title of the Talk:

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ABSTRACT: