

Soo Young Yang, Ph.D.

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CERTIFICATE:

1994-present Laboratory Director (New York State) for Histocompatibility
1984-1994 Laboratory Director (New York City) for Histocompatibility

EDUCATION:

1976-1981 Biochemistry, PhD, New York University, New York, New York
1970-1972 Chemistry, MS, Minnesota State University, Winona, Minnesota
1969-1970 Psychology, Minnesota State University, Winona, Minnesota
1959-1963 Education, BA, Ewha Womans University, Seoul, Korea

POSTDOCTORAL TRAINING:

1982-1984 Instructor in Pathology, Division of Immunogenetics
Dana-Farber Cancer Institute and Harvard Medical School Boston, MA
1981-1982 Research Associate, Human Immunogenetics
Sloan-Kettering Cancer Center, New York, NY

POSITIONS AND APPOINTMENTS:

2001-present Founder and Chairman, Histogenetics LLC, Ossining, NY 10562

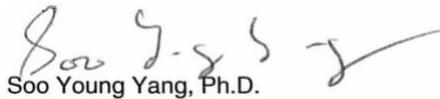
1999-2001 Professor, Dept. of Medicine, New York Medical College, Hawthorne, NY 10532

1996-1999 Member, Memorial Sloan-Kettering Cancer Center

Professor, Immunology Program, Cornell Graduate School of Medical Sciences, New York, NY

Attending Immunologist, Memorial Hospital for Cancer and Allied Disease, New York, NY

Head, Laboratory of Biochemical Immunogenetics, Sloan-Kettering Institute for Cancer Research, New York, NY



Soo Young Yang, Ph.D.

- 1996-1998 Director, Clinical Histocompatibility Laboratory, Memorial Hospital for Cancer and Allied Disease, New York, NY
- 1984-1996 Associate Director and Head, Clinical Histocompatibility Testing Laboratory, Memorial Hospital for Cancer and Allied Disease, New York, NY
- 1989-1996 Associate Member, Immunology Program, Sloan-Kettering Institute
Associate Professor in Immunology, Immunology Program
Cornell Graduate School of Medical Sciences, New York, NY
Associate Attending Immunologist, Memorial Hospital for Cancer and Allied Disease, New York, NY
Head, Laboratory of Biochemical Immunogenetics, Sloan-Kettering Institute for Cancer Research, New York, NY
- 1984-1989 Assistant Member, Immunology Program
Sloan-Kettering Institute, New York, NY 10021
- 1984-1984 Assistant Professor in Pathology, Division of Immunogenetics Dana-Farber Cancer Institute and Harvard Medical School Boston, MA

OTHER PROFESSIONAL AND MAJOR VISITING APPOINTMENT:

- 2001-2004 Member, Histocompatibility Committee, NMDP, Minneapolis Consultant,
- 1992-1995 American Red Cross, HLA Laboratory, Rockville, MD Investigator, Center for
- 1983-1984 Blood Research, Boston, MA
- 1983-1984 Consultant, Northeast Regional Red Cross Blood Services Boston, MA

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

- 1976-Present American Society for Histocompatibility and Immunogenetics
- 1987-Present The American Association for Immunologists
- 1988-Present American Association for the Advancement of Science
- 1991-Present European Foundation for Immunogenetics
- 1996-Present American Society of Hematology
- 1984-1987 Chairperson of the HLA Class I Biochemistry Component and Organizing Member for the 10th International Histocompatibility Workshop
- 1985-1991 Co-Chairperson of the Biochemistry Component for the 11th International Histocompatibility Workshop

HONORS:

- 1984 Young Investigator Award, American Society for Histocompatibility and Immunogenetics.
- 2014 Women in Technology Award for Outstanding contribution in Science Innovation & Technology, Access Advocacy Westchester County Association Action.

PATENTS:

- Methods and Reagents for Typing HLA Class I Genes. Patent US serial# 08/577,081. WO: W97/23645.

PUBLICATIONS (Peer reviewed papers)

1. Ballow M, Shira JE, Harden L, Yang SY, and Day NK. Complete absence of the third component of complement in man. *J. Clin. Inv.* 56: 703-710, 1975.
2. O'Neill GJ, Yang SY, Tegoli J, Berger R, and Dupont B. Chido and Rodgers blood groups are distinct antigenic component of human complement C4. *Nature (London)* 272: 668-670, 1978.
3. O'Neill GJ, Yang SY, and Dupont B. Two HLA-linked loci controlling the fourth component of human complement. *Proc. Natl. Acad. Sci. USA* 75: 5165-5169, 1978.
4. Yang SY, Levine LS, Zachman M, New MI, Prader A, Oberfield SE, O'Neill GJ, Pollack MS, and Dupont B. Mapping of the 21-hydroxylase deficiency gene within the HLA linkage group. *Transplant Proc.* 10: 753-755, 1978.
5. Levine LS, Zachman M, New MI., Prader, A., Pollack, M.S., Yang, S.Y., Oberfield, S., and Dupont B. Gene mapping of the 21-hydroxylase deficiency gene within the HLA linkage group. *N Engl J Med* 299: 911-915, 1978.
6. O'Neill GJ, Yang SY, and Dupont B. Chido and Rodgers blood groups: Relationship to C4 and HLA. *Transplant Proc* 10: 749-752, 1978.
7. Pollack MS, Yang SY, O'Neill GJ, O'Reilly RD, Grossbard E, Kapoor N, Good RA, and Dupont B. Bone marrow transplantation using typing glyoxalase I as a tool in histocompatibility testing. *Transplantation* 28: 156-158, 1979.
8. O'Neill GJ, Pollack MS, Yang SY, Levine LS, New MI, and Dupont B. Gene frequencies genetic disequilibrium for the HLA-linked genes, Bf, C2, C4S, C4F, 21-hydroxylase deficiency and GL0-1. *Transplant Proc* 11: 1713-1715, 1979.
9. Yang SY, Coleman PS, Ochs H, and Dupont B. Inheritance and genetic linkage of Transcobalamin II. *Human Genet* 57: 307-311, 1981.
10. O'Neill GJ, Miniter P, Yang SY, Dupont B, and Pollack MS. The BF locus and HLA: Rare alleles of BF coding for functionally active and inactive Bf products. *Human Immunol* 5: 239-243, 1982.
11. Yang SY, Coleman PS, and Dupont B. The biochemical and genetic basis for the microheterogeneity of human R-type vitamin B12 binding proteins. *Blood* 59: 747-755, 1982.
12. Morishima Y, Kobayashi M, Yang SY, Collins NH, Hoffman MK, and Dupont B. Functional characteristics of human T lymphocytes and their quantitative expression of a T cell antigen defined by monoclonal antibody 4A. *J Immunol* 129: 1091-1098, 1982.
13. Gazit E, Gothelf Y, Gil R, Orgard S, Pitman T, Watson A., Yang SY, and Yunis EJ. Alloantibodies to PHA-activated lymphocytes detect human Qa-like antigens. *J Immunol* 132(1): 165-169, 1984.
14. Yang SY, Morishima Y, Collins NH, Alton T, Pollack MS, Yunis EJ, and Dupont B. Comparison of onedimensional IEF patterns for serologically detectable HLA-A and B allotypes. *Immunogenetics* 19: 217-231, 1984.

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15. Orgard S, Yang SY, Gazit E, Relias V, Zaiger R, Lysin S, and Yunis EJ. Expression of Extra class I majorhistocompatibility antigens on T-cell acute lymphoblastic leukemia (ALL) lymphoblasts. *Human Immunology* 12: 133-141, 1985.
16. Yang SY, Chang A, Olivero R, Relias V, and Yunis EJ. IEF patterns of HLA-B13 antigens from Orientals and Caucasians. *Immunogenetics* 21: 125-134, 1985.
17. Brenner MB, Mclean J, Yang SY, Van der Poel JJ, Pious D, and Strominger J. Clonal lymphocyte recognition of the fine structure of the HLA-A2 molecule. *J Immunol* 135: 384-390, 1985.
18. Safai B, Johnson KG, Myskowsky PL, Koziner B, Yang SY, Cunningham-Rundles S, Godbold JH, and Dupont B. The natural history of Kaposi's sarcoma in the Acquired Immunodeficiency Syndrome. *Ann Intern Med* 103: 744-750, 1985.
19. Yang SY, Chouaib S, and Dupont B. A common pathway for T-lymphocyte activation. *J Immunol* 137: 1097-1100, 1986.
20. Eynon EE, Yang SY, Cronin CR, Alosco SM, Alper CA, and Yunis EJ. Characterization of HLA Bw73 by serology and one-dimensional isoelectric focusing patterns. *Human Immunol.* 16: 356-363, 1986.
21. Kosinski S, Hammerling U, and Yang SY, Human monoclonal antibody to an HLA-DRw53 (MT3-like) epitope on class II antigens. *Tissue Antigens* 28: 150-162, 1986.
22. Kosinski S, Yang SY, Ferrara GB, and Hammerling UA. Human monoclonal antibody recognizing a determinant shared by a group of HLA-B locus antigens associated with HLA-Bw6. *Immunogenetics* 26: 120-122, 1987.
23. Kosinski S, Ferrara GB, Yang SY, and Hammerling UA. Human monoclonal antibody against HLA-A25. *Tissue Antigens* 29: 177-183, 1987
24. Dupont, B., Flomenberg, N., and Yang, S.Y. Alloantigens stimulating graft versus host disease. *Transplant Proc.* 19:48-51, 1987.
25. Yang SY, Rhee S, Welte K, and Dupont.B. Differential in vitro activation of CD8-CD4+ and CD4-CD8+ T lymphocytes by combinations of anti-CD2 and anti-CD2 and anti-CD3 antibodies. *J Immunol* 140: 2115-2120, 1988.
26. Mizuno S, Trapani JA, Orr HT, Dupont B, and Yang SY. Isolation and nucleotide sequence of a cDNA clone encoding a novel HLA class I gene. *J Immunol* 140:4024-4030, 1988.
27. Kosinski S, Yang SY, Ferrara GB, and Hammerling UA. Supertypic HLA class II determinant shared by DR1 and DRw9 and cross reactive with DR2, defined by human monoclonal antibody. *Hum Immunol* 21: 221-231, 1988.
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29. Yang SY., Denning SM, Mizuno S, Dupont B, and Haynes BF. A novel activation pathway for maturethymocytes: Co-stimulation of CD2 [T,p50] and CD28 [T,p44] induces autocrine IL 2-IL 2 receptor mediated cellproliferation. *J Exp Med* 168: 1457-1468, 1988.
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31. Kato K, Dupont B, and Yang SY. Localization of nucleotide sequence which determines Mongoloid subtype of HLA-B13. *Immunogenetics* 29: 117-120, 1989.
32. Mizuno S, Kang S, Lee H, Trapani JA, and Yang SY. Isolation and expression of a cDNA clone encoding HLA-Cw6 antigen: Unique characteristics of HLA-C encoded gene products. *Immunogenetics* 29: 25-32, 1989.
33. Keever CA, Flomenberg N, Small T, Brochctein J, Collins N, Yang SY, Inset R, Dupont B, and O'Reilly R. Loss of tolerance associated with disappearance of B cells in a patient sequentially transplanted with paternal and maternal bone marrow for the treatment of severe combined immunodeficiency disease. *Hum Immunol* 26: 27-38, 1989.
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38. Jin Zand Yang SY. Activation of CD8+ T cells by HLA class II-deficient B-LCLs derived from patients with bare lymphocyte Syndrome. *Tissue Antigens* 35: 136-143, 1990.
39. Kulova L., Yang SY, and Dupont B. Identification of the anti-CD3-unresponsive subpopulation of CD4+, CD45RA+ peripheral T lymphocytes. *J Immunol* 145: 2035-2043, 1990.
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42. Fleischhauer K, Kernan NA, O'Reilly RJ, Dupont B, and Yang SY. Bone marrow allograft rejection by cytotoxic T lymphocytes recognizing a single amino acid at position 156 of HLA class I antigen. *New Engl J Med* 323: 1818-1822, 1990.
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44. Carabasi MH, Disanto JP, Yang SY, and Dupont B. Activation of peripheral CD3+ T-lymphocytes via CD28 plus CD2: evidence for IL-2 gene transcription mediated by CD28 activation. *Tissue Antigens* 37: 26-32, 1991.
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47. Speiser PW, New MI, Tannin GM, Pickering D, Yang SY, and White PC. Genotype of Yupik Eskimos with congenital adrenal hyperplasia due to 21-hydroxylase deficiency. *Hum Genet* 88: 647-648, 1992.
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49. Park JH, Lee HW, Fleichhauer K, Kim CG, Sheffrey M, and Yang SY. DNA-binding proteins for transcription enhancing region of HLA class I gen. *Tissue Antigen* 42: 78-86, 1993.
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53. Ng J, Hurley CK, Baxter-Lowe LA, Chopek M, Coppo PA, Hegland J, Kukuruga D, Monos D, Rosner G, Schmeckpeper B, Yang SY, Dupont B, and Hartzman BJ. Large-scale oligonucleotide typing for HLA-DRB 1/3/4 and HLA-DQB 1 is highly accurate, and reliable. *Tissue Antigens* 42: 473-479, 1993.
54. Cereb N and Yang SY. Locus-specific conservation and allelic variation of HLA class I promoter. *J. Immunol.* 152: 3873-3883, 1994.

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55. Cereb N, Lee S, Maye P, Kong Y, and Yang SY. Nonrandom allelic variation in the regulatory complex of HLA class I genes. *Hum. Immunol.* 41: 46-51, 1994.
56. Levine J and Yang SY. SSOP typing of the Tenth International Histocompatibility Workshop reference cell lines for HLA-C alleles. *Tissue Antigens* 44: 174-183, 1994.
57. Cereb N, Choi JW, Lee S, Maye P, Kong Y, and Yang SY. Identification of two new HLA-C alleles, Cw*1203 and Cw*1402, from the sequence analysis of seven HLA homozygous cell lines carrying HLA-C blank. *Tissue Antigens* 44: 193-195, 1994.
58. Cereb N, Choi JW, Riu KZ, and Yang SY. HLA-B*5105, a newly identified B51 IEF variant. *Tissue Antigens* 44: 271-273, 1994.
59. Mansky P, Park JH, Choi JW, Fleischhauer K, and Yang SY. The second kB element, kB2, of the HLA-A class I regulatory Complex (CRC) is an essential part of the promoter. *J. Immunol.* 153: 5082-5090, 1994.
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61. Cereb N, Maye P, Lee S, Kong Y, and Yang SY. Locus-specific amplification of HLA class I genes from genomic DNA: Locus-specific sequences in the first and third introns of HLA-A, B, and C alleles. *Tissue Antigens* 45: 1-11, 1995.
62. Ragupathi G, Cereb N, and Yang SY. The relative distribution of B35 alleles and their IEF isotypes in a HLA-B35+ population. *Tissue Antigens* 46: 24-31, 1995.
63. Levine J and Yang SY. Allelic frequencies of the HLA-B 17 antigen group: comparative analysis by serology, IEF and group-specific PCR-SSOP typing. *Tissue Antigens* 46: 368-373, 1995.
64. Cereb N, Lee S, and Yang SY. Induction of microvariant-specific CTL lines reactive to a single amino acid mismatch in bulk cultures using a transfectant expressing a single HLA class I molecule. *J Immunol.* 156: 18-26, 1996.
65. Prosad VK and Yang SY. Allele assignment for HLA-A, -B, and -C genes to the Tenth International Histocompatibility Workshop cell lines. *Tissue Antigens* 47: 538-546, 1996.
66. Cereb N, Kong Y, Lee S, Maye P, and Yang SY. Nucleotide sequences of MHC class I introns 1, 2, and 3 in humans and intron 2 in primates. *Tissue Antigens* 47: 498-511, 1996.
67. Bocchia M, Wentworth M, McGraw K, Yang SY, Scheinberg, DA, and Sette A. Specific binding of leukemia oncogene fusion protein peptides to HLA class I molecules. *Blood* 85: 2680-2684, 1995.
68. Bocchia M, Korontsvit T, Xu Q, Mackinnon S, Yang SY, Sette A, and Scheinberg, DA. Specific human cellular immunity to bcl-abl oncogene-derived peptides. *Blood* 87: 3587-3592, 1996.

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69. Kim DS, LaQuaglia M, and Yang SY. A cDNA encoding a putative 37 kD a leucine-rich repeat (LRR) protein, p37NB, isolated from S-type neuroblastoma cell has a differential tissue distribution. *Biochimica et Biophysica Acta*, 1309: 183-188, 1996.
70. Cereb N, Hughs A, Yang SY. Cw*1701, a new HLA-C allelic lineage with an unusual transmembrane domain. *Tissue Antigens* 49: 252-255, 1997.
71. Cereb N, Hughs A, Yang SY. Molecular analysis of HLA-B35 alleles and their relationship to HLA-B 15 alleles. *Tissue Antigens* 49: 389-396, 1997.
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74. Cereb N, Hughs A, Yang SY. Locus-specific conservation of the HLA class I introns by intralocus homogenization. *Immunogenetics* 47: 30-36, 1997.
75. Prasad VK, Kernan, NA, Heller G, O'Reilly RJ, and Yang SY. DNA typing for HLA-A and -B identifies disparities between patients and unrelated donors matched by HLA-A, and HLA-B serology and HLA DRB 1. *Blood* 93: 399-409, 1999.
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82. Maiers M, Hurley CK, Perlee L, Fernandez-Vina M, Baisch J, Cook D, Fraser P, Heine U, Hsu S, Leffell MS, Mauer D, Noreen H, Tang T, Trucco M, Yang SY, Hartzman RJ, Setterholm M, Winden T, Shepherd D, Hegland J. Maintaining updated DNA-based HLA assignments in the National Marrow Donor Program Bone Marrow Registry. *Rev Immunogenet*. 2(4):449-60. Review. PubMed PMID: 12361088, 2000.
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92. Yang KL, Lee SK, Chu CC, Lin CC, Jiang S, Chiu HM, Lin S, Chen YC, Chen MJ, Jian YF, Yang CF, Yang SY, Shyr MH, Lin CL, Lin PY. Identification of two novel HLA-B*40 alleles, B*40:137 and B*40:158, in Taiwanese individuals. *Int J Immunogenet*. 38(4):277-80. doi: 10.1111/j.1744-313X.2011.01001.x. PubMed PMID: 21382176, 2011 Aug, Epub 2011 Mar 7.

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93. Yang KL, Lee SK, Lin CC, Jiang S, Chiu HM, Lin S, Chen YC, Yang SY, Jian YF, Shyr MH, Lin CL, Lin PY. Discovery of two novel HLA-B alleles, B*46:13:03 and B*15:189, in two Taiwanese volunteer bone marrow donors by sequence-based typing. *Int J Immunogenet.* 38(6):539-42. doi: 10.1111/j.1744-313X.2011.01030.x. PubMed PMID: 21819546, 2011 Dec, Epub 2011 Aug 8.
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