

## CURRICULUM VITAE

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### LICENSED PHYSICIAN:

1997 New York  
1991 Pennsylvania

### BOARD CERTIFICATE:

1994-present Laboratory Director (New York State) for Histocompatibility  
1994-2001 Pediatric Hematology-Oncology Board  
1992-1999 American Board of Pediatrics

### EDUCATION:

1975-1982 Hacettepe University Faculty of Medicine, MD, Ankara-Turkey

### POSTDOCTORAL TRAINING:

1990-1993 Clinical Fellow in Pediatric Hematology-Oncology  
Memorial Sloan-Kettering Cancer Center/Cornell University Medical  
College-The New York Hospital, New York, NY

1987-1990 PL-1, PL-2, PL-3 Resident in Pediatrics  
SUNY Health Science Center, Brooklyn, NY

1986-1987 Clinical and Research Fellow in Allergy/Clinical Immunology-Dept. of  
Pediatrics  
Georgetown University Hospital, Washington, DC

**POSITIONS AND APPOINTMENTS:**

2001-present	CEO & Co-Founder & Co-Director , Histogenetics LLC, Ossining, NY 10562
1999-2001	Assistant Professor of Medicine and Oncology, New York Medical College, Hawthorne, NY 10532
1998-1999	Attending Physician, Department of Pediatrics, Staten Island University Hospital, Staten Island, NY
1994-1998	Research Associate, Immunology Program, Sloan-Kettering Institute, New York, NY
1982-1983, 1984-1986	Compulsory Public Health Service in a rural health clinic in Eastern Turkey

**HONORS:**

1993-1995	Winston Fellow in Biomedical Research, Memorial Sloan-Kettering Cancer Center, New York, NY
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**SCIENTIFIC AND MEDICAL SOCIETIES:**

American Academy of Pediatrics  
The American Association of Immunologists

**PATENTS:**

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

## **PUBLICATIONS:**

### **I. Peer reviewed papers**

Pubmed: Cereb N[Author];

1. Robinson J, Guethlein LA, Cereb N, Yang SY, Norman PJ, Marsh SGE, Parham P. Distinguishing functional polymorphism from random variation in the sequences of >10,000 HLA-A, -B and -C alleles. *PLoS Genet.* 2017 Jun 26;13(6):e1006862. doi: 10.1371/journal.pgen.1006862. eCollection 2017 Jun PMID: 28650991
2. Diltthey AT, Gourraud PA, Mentzer AJ, Cereb N, Iqbal Z, McVean G. High-Accuracy HLA Type Inference from Whole-Genome Sequencing Data Using Population Reference Graphs. *PLoS Comput Biol.* 2016 Oct 28;12(10):e1005151. doi: 10.1371/journal.pcbi.1005151. eCollection 2016 Oct. PMID:27792722
3. Cereb N, Kim HR, Ryu J, Yang SY. Advances in DNA sequencing technologies for high resolution HLA typing. *Hum Immunol.* 2015 Dec;76(12):923-7. doi: 10.1016/j.humimm.2015.09.015. Epub 2015 Sep 28. PubMed PMID:26423536
4. Milius RP, Heuer M, Valiga D, Doroschak KJ, Kennedy CJ, Bolon YT, Schneider J, Pollack J, Kim HR, Cereb N, Hollenbach JA, Mack SJ, Maiers M. Histoimmunogenetics Markup Language 1.0. Reporting next generation sequencing-based HLA and KIR genotyping. *Hum Immunol.* 2015 Dec;76(12):963-74. doi: 10.1016/j.humimm.2015.08.001. Epub 2015 Aug 28. PubMed PMID:26319908
5. Maiers M, Halagan M, Joshi S, Ballal HS, Jagannathan L, Damodar S, Srinivasan P, Narayan S, Khattry N, Malhotra P, Minz RW, Shah SA, Rajagopal R, Cereb N, Yang SY, Parekh S, Mammen J, Daniels D, Weisdorf D. HLA match likelihoods for Indian patients seeking unrelated donor transplantation grafts: a population-based study. *Lancet Haematol.* 2014 Nov;1(2):e57-63. doi: 10.1016/S2352-3026(14)70021-3. Epub 2014 Oct 21. PubMed PMID:27030155
6. Hernández-Frederick CJ, Cereb N, Giani AS, Ruppel J, Maraszek A, Pingel J, Sauter J, Schmidt AH, Yang SY. Three hundred and seventy-two novel HLA class II alleles identified in potential hematopoietic stem cell donors from Germany, the United States, and Poland. *Tissue Antigens.* 2014 Nov;84(5):497-502. doi: 10.1111/tan.12432. Epub 2014 Sep 12. PubMed PMID: 25220445.
7. Fakhoury HA, Cereb N, Jawdat D, Al Jumah M, Alaskar AS, Hajeer AH. Two novel alleles HLA-DRB1\*11.150 and HLA-DRB1\*14.145 identified in Saudi individuals. *Int J Immunogenet.* 2014 Aug;41(4):340-1. doi: 10.1111/iji.12133. Epub 2014 Jun 12. PubMed PMID: 24920052.

8. Fakhoury HA, Jawdat D, Alaskar AS, Al Jumah M, Cereb N, Hajeer AH. Two novel alleles HLA-A\*02.433 and HLA-A\*02.434 identified in Saudi bone marrow donors using sequence-based typing. *Int J Immunogenet*. 2014 Aug;41(4):338-9. doi: 10.1111/iji.12131. Epub 2014 Jun 12. PubMed PMID: 24919814.
9. Hernández-Frederick CJ, Giani AS, Cereb N, Sauter J, Silva-González R, Pingel J, Schmidt AH, Ehninger G, Yang SY. Identification of 2127 new HLA class I alleles in potential stem cell donors from Germany, the United States and Poland. *Tissue Antigens*. 2014 Mar;83(3):184-9. doi: 10.1111/tan.12304. PubMed PMID: 24571476; PubMed Central PMCID: PMC4199310.
10. Beaton A M D, Sable C M D, Brown J PhD, Hoffman J, Mungoma M M D, Mondo C M D, Cereb N, Brown C PhD, Summar M M D, Freers J M D, Ferreira MB Md, Yacoub M M D, Mocumbi AO M D. Genetic susceptibility to endomyocardial fibrosis. *Glob Cardiol Sci Pract*. 2014 Dec 31;2014(4):473-481. eCollection 2014. PubMed PMID: 25780800; PubMed Central PMCID: PMC4355520.
11. Gourraud PA, Khankhanian P, Cereb N, Yang SY, Feolo M, Maiers M, Rioux JD, Hauser S, Oksenberg J. HLA diversity in the 1000 genomes dataset. *PLoS One*. 2014 Jul 2;9(7):e97282. doi: 10.1371/journal.pone.0097282. eCollection 2014. PubMed PMID: 24988075; PubMed Central PMCID: PMC4079705.
12. Isobe N, Gourraud PA, Harbo HF, Caillier SJ, Santaniello A, Khankhanian P, Maiers M, Spellman S, Cereb N, Yang S, Pando MJ, Piccio L, Cross AH, De Jager PL, Cree BA, Hauser SL, Oksenberg JR. Genetic risk variants in African Americans with multiple sclerosis. *Neurology*. 2013 Jul 16;81(3):219-27. doi: 10.1212/WNL.0b013e31829bfe2f. Epub 2013 Jun 14. PubMed PMID: 23771490; PubMed Central PMCID: PMC3770164.
13. Pyo CW, Wang R, Vu Q, Cereb N, Yang SY, Duh FM, Wolinsky S, Martin MP, Carrington M, Geraghty DE. Recombinant structures expand and contract inter and intragenic diversification at the KIR locus. *BMC Genomics*. 2013 Feb 8;14:89. doi: 10.1186/1471-2164-14-89. PubMed PMID: 23394822; PubMed Central PMCID: PMC3606631.
14. Schmidt AH, Solloch UV, Pingel J, Sauter J, Böhme I, Cereb N, Dubicka K, Schumacher S, Wachowiak J, Ehninger G. Regional HLA differences in Poland and their effect on stem cell donor registry planning. *PLoS One*. 2013 Sep 12;8(9):e73835. doi: 10.1371/journal.pone.0073835. eCollection 2013. PubMed PMID: 24069237; PubMed Central PMCID: PMC3772002.
15. Schmidt AH, Baier D, Solloch UV, Stahr A, Cereb N, Wassmuth R, Ehninger G, Rutt C. Estimation of high-resolution HLA-A, -B, -C, -DRB1 allele and haplotype frequencies based on 8862 German stem cell donors and implications for strategic donor registry planning. *Hum Immunol*. 2009 Nov;70(11):895-902. doi:10.1016/j.humimm.2009.08.006. Epub 2009 Aug 13. PubMed PMID: 19683023.

16. Pearce EL, Mullen AC, Martins GA, Krawczyk CM, Hutchins AS, Zediak VP, Banica M, DiCioccio CB, Gross DA, Mao CA, Shen H, Cereb N, Yang SY, Lindsten T, Rossant J, Hunter CA, Reiner SL. Control of effector CD8+ T cell function by the transcription factor Eomesodermin. *Science*. 2003 Nov 7;302(5647):1041-3. PubMed PMID: 14605368.
17. Afkarian M, Sedy JR, Yang J, Jacobson NG, Cereb N, Yang SY, Murphy TL, Murphy KM. T-bet is a STAT1-induced regulator of IL-12R expression in naïve CD4+ T cells. *Nat Immunol*. 2002 Jun;3(6):549-57. Epub 2002 May 13. PubMed PMID:12006974.
18. Mullen AC, Hutchins AS, Villarino AV, Lee HW, High FA, Cereb N, Yang SY, Hua X, Reiner SL. Cell cycle controlling the silencing and functioning of mammalian activators. *Curr Biol*. 2001 Oct 30;11(21):1695-9. PubMed PMID: 11696328.
19. Mullen AC, High FA, Hutchins AS, Lee HW, Villarino AV, Livingston DM, Kung AL, Cereb N, Yao TP, Yang SY, Reiner SL. Role of T-bet in commitment of TH1 cells before IL-12-dependent selection. *Science*. 2001 Jun 8;292(5523):1907-10. PubMed PMID: 11397944.
20. Cereb N, Yang SY. Dimorphic primers derived from intron 1 for use in the molecular typing of HLA-B alleles. *Tissue Antigens*. 1997 Jul;50(1):74-6. PubMed PMID: 9243761.
21. Cereb N, Kim C, Hughes AL, Yang SY. Molecular analysis of HLA-B35 alleles and their relationship to HLA-B15 alleles. *Tissue Antigens*. 1997 Apr;49(4):389-96. PubMed PMID: 9151391.
22. Cereb N, Hughes AL, Yang SY. Cw\*1701, a new HLA-C allelic lineage with an unusual transmembrane domain. *Tissue Antigens*. 1997 Mar;49(3 Pt 1):252-5. PubMed PMID: 9098932.
23. Cereb N, Hughes AL, Yang SY. Locus-specific conservation of the HLA class I introns by intra-locus homogenization. *Immunogenetics*. 1997;47(1):30-6. PubMed PMID: 9382918.
24. Cereb N, Kong Y, Lee S, Maye P, Yang SY. Nucleotide sequences of MHC class I introns 1, 2 and 3 in humans and intron 2 in nonhuman primates. *Tissue Antigens*. 1996 Sep;48(3):235-6. PubMed PMID: 8896188.
25. Cereb N, Kong Y, Lee S, Maye P, Yang SY. Nucleotide sequences of MHC class I introns 1, 2, and 3 in humans and intron 2 in nonhuman primates. *Tissue Antigens*. 1996 Jun;47(6):498-511. Erratum in: *Tissue Antigens* 1996 Sep;48(3):235-6. PubMed PMID: 8813739.
26. Cereb N, 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*. 1996 Jan 1;156(1):18-26. PubMed PMID:8598460.
27. Ragupathi G, Cereb N, Yang SY. The relative distribution of B35 alleles and their IEF isotypes in a HLA-B35-positive population. *Tissue Antigens*. 1995 Jul;46(1):24-31. PubMed PMID: 7482493.

28. Cereb N, Maye P, Lee S, Kong Y, 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*. 1995 Jan;45(1):1-11. PubMed PMID: 7725305.
29. Cereb N, Choi JW, Riu KZ, Yang SY. HLA-B\*5105, a newly identified B51 IEF variant. *Tissue Antigens*. 1994 Oct;44(4):271-3. PubMed PMID: 7871530.
30. Cereb N, Lee S, Maye P, Kong Y, Yang SY. Nonrandom allelic variation in the regulatory complex of HLA class I genes. *Hum Immunol*. 1994 Sep;41(1):46-51. PubMed PMID: 7836064.
31. Cereb N, Choi JW, Lee S, Maye P, Kong Y, 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*. 1994 Sep;44(3):193-5. PubMed PMID: 7839353.
32. Cereb N, Yang SY. The regulatory complex of HLA class I promoters exhibits locus-specific conservation with limited allelic variation. *J Immunol*. 1994 Apr 15;152(8):3873-83. PubMed PMID: 8144957.
33. Spielberg H, June CH, Blair OC, Nystrom-Rosander C, Cereb N, Deeg HJ. UV irradiation of lymphocytes triggers an increase in intracellular Ca<sup>2+</sup> and prevents lectin-stimulated Ca<sup>2+</sup> mobilization: evidence for UV- and nifedipine-sensitive Ca<sup>2+</sup> channels. *Exp Hematol*. 1991 Sep;19(8):742-8. PubMed PMID: 1651252.
34. Spielberg H, June C, Cereb N, Nystrom-Rosander C, Deeg HJ. Differential sensitivity of human leukocyte subpopulations to ultraviolet light. *Transplant Proc*. 1989 Feb;21(1 Pt 1):180-1. PubMed PMID: 2705220.
35. Bellanti JA, Sordelli DO, Cerquetti MC, Wan KS, Arias G, Cereb N, Zuba D, Kulczycki L, Hooke AM. Live, attenuated vaccines against *Pseudomonas*: observations in the experimental animal and the human. *Ann Sclavo Collana Monogr*. 1986;3(1-2):247-58. PubMed PMID: 3122803.

## **II. Monograms**

1. Cereb N, Xiao H, Muthaura P, Yang SY. The alloreactive CTL response to a single alloantigen involves CTL clones with diverse specificities. In: Charron D, ed. *Genetic Diversity of HLA: Functional and Medical Implications*, vol II. Paris: EDK, 1997:513-515.
2. Lee JL, Kim DS, Maye P, Cereb N, Yang SY. Variations in HLA Class I promoter sequences and differential regulation of HLA-A, -B, and -C alleles. In: Charron D, ed. *Genetic Diversity of HLA: Functional and Medical Implications* vol II. Paris: EDK, 1997:292-294.

### **III. Manuscripts in Preparation**

1. Lee JL, Kim DS, Maye P, Cereb N, and Yang SY. Comparative analysis of HLA class I promoter variations for promoter enhancing activity.
2. Cereb N and Yang SY. Enhanced resolution of oligotyping for HLA-B alleles by using group-specific primers derived from dimorphic sites in intron 1.
3. Cereb N and Yang SY. HLA-A, -B, and -C DNA typing strategy.
4. Cereb N and Yang SY. Allelic frequencies of the HLA-A10 group: comparative analysis of serology, IEF and PCR-SSOP typing.
5. Cereb N and Yang SY. Limited TCR repertoire usage in HLA-B\*44 Micromismatch-specific CTL clones.
6. Cereb N and Yang SY. HLA-B\*3501 vs B\*3503 Mismatch recruits diverse TCR repertoire.

### **IV. Abstracts**

1. Cereb N, Yang SY. An *in vitro* model to study alloreactivity between MHC class I micromismatches [Abstract]. Hum Immunol 1993; 37. 67:40.
2. Cereb N, Yang SY. Locus specific diversity of the regulatory complex of HLA class I promoter exhibits limited allelic variations [Abstract]. Blood 1993; 82. 968:246a.
3. Cereb N, Yang SY. Microvariant-specific CTL lines can be generated in bulk cultures using transfectants expressing single HLA class I antigens [Abstract]. Blood 1994; 82. 123:2a
4. Cereb N, Yang SY. The Regulatory complex of HLA class I promoters exhibits locus specific conservation with limited allelic variation [Abstract]. Hum Immunol 1994; 39. 123:2a.
5. Cereb N, Maye P, Lee S, Kong Y, and Yang SY. Polymorphism of introns 1, 2, and 3 of HLA class I genes [Abstract]. Eur. J. Immunogenetics 1995; 22. (2):3.
6. Cereb N, Maye P, Lee S, Kong Y, and Yang SY. Locus-specific amplification of HLA class I genes from genomic DNA [Abstract]. Eur. J. Immunogenetics 1995; 22. (176):91.
7. Lee JL, Kim DS, Maye P, Cereb N, and Yang SY. Comparative analysis of HLA class I promoter variations for promoter enhancing activity [Abstract]. Hum Immunol 1995; 44. 171:256a.
8. Cereb N, Hughs A, Yang SY. A dual evolutionary process shapes the HLA class I genes [Abstract]. Hum Immunol 1995; 44. 39: 2.4.

9. Cereb N and Yang SY. Enhanced resolution of oligotyping for HLA-B alleles by using group-specific primers derived from dimorphic sites in intron 1 [Abstract]. Hum Immunol 1995; 44. 153:221a.
10. Cereb N and Yang SY. Alloreactive CTL response to a single alloantigen involves CTL clones with diverse specificities [Abstract]. Blood 1995; 86. 621:158a.
11. Cereb N, Kaneko M, and Yang SY. Comparative analysis of routine typing data for HLA-A and HLA-B from PCR-SSO, IEF, and serology tests in a clinical laboratory [Abstract]. Hum Immunol 1996; 47. 45: P232.
12. Lee JL, Kim DS, Maye P, Cereb N, Yang SY. Variations in HLA Class I promoter sequences and differential regulation of HLA-A, -B, and -C alleles. [Abstract]. Hum Immunol 1996; 47. 11:O38.