

CURRICULUM VITAE

Ellen V. Rothenberg

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Education:

Harvard University, Cambridge, Massachusetts
September 1969-June 1972. A.B. summa cum laude in Biochemical Sciences, 1972
Harvard University—Massachusetts Institute of Technology, Boston, Massachusetts
September 1972-January 1973. Joint program in Health Sciences and Technology
Courses toward M.D. (no degree)
Massachusetts Institute of Technology, Cambridge, Massachusetts
Department of Biology and Center for Cancer Research
September 1972-January 1977. Ph.D. in Cell Biology, 1977 (advisor: David Baltimore)
Memorial Sloan-Kettering Cancer Center, New York, New York
Department of Cell Surface Immunogenetics
November 1977-September 1979. Postdoctoral (advisor: Edward A. Boyse)

Positions Held:

Edward B. Lewis Professor of Biology—California Institute of Technology, Division of Biology & Biological Engineering, Pasadena, CA, Nov 2021 – present.
Andrew D. White Professor-at-Large, Cornell University, July 2021-June 2027.
Distinguished Professor—California Institute of Technology, Division of Biology & Biological Engineering, Pasadena, CA, January 2021 – Nov 2021
Vice Chair of the Faculty, California Institute of Technology, Oct 2020-Sept 2022.
Albert Billings Ruddock Professor of Biology—California Institute of Technology, Division of Biology, Pasadena, CA, April 2007-January 2021
Professor of Biology—California Institute of Technology, Division of Biology, Pasadena, CA, September 1994-present
Associate Professor of Biology—California Institute of Technology, Division of Biology, Pasadena, California, July 1988-August 1994.
Assistant Professor of Biology—California Institute of Technology, Division of Biology, Pasadena, California, June 1982-June 1988
Assistant Research Professor—The Salk Institute for Biological Studies, Department of Cancer Biology, September 1979-May 1982
Postdoctoral Research Fellow—Memorial Sloan-Kettering Cancer Center, New York, New York, November 1977-September 1979
Research Associate—Center for Cancer Research, Massachusetts Institute of Technology (advisor: David Baltimore), February 1977-October 1977

Honors and Awards:

Andrew D. White Professor-at-Large, Cornell University, July 2021-June 2027.
 Member, National Academy of Sciences of the United States, elected 2021
 Distinguished Fellow, American Association of Immunologists, 2019 (inaugural class)
 NIH Director's Wednesday Afternoon Lecture (WALS), June 2018
 Fellow, American Academy of Arts and Sciences, elected 2018
 Fellow, American Association for the Advancement of Science, elected 2017
 Richard P. Feynman Prize for Excellence in Teaching, 2016
 American Association of Immunology Distinguished Lectureship, 2014
 NIH Director's Wednesday Afternoon Lecture (WALS), Feb 2010
 Associated Students of Caltech (ASCIT) Award for Excellence in Undergraduate Teaching:
 1998 & 2007
 Ferguson Prize for Undergraduate Teaching: 1995 & 1999
 Biology Undergraduate Students Advisory Committee Award for Excellence in Teaching: 1988,
 2001, 2004, and 2014
 Jane Coffin Childs Memorial Fund for Medical Research Postdoctoral Fellowship, 1977-1979
 National Science Foundation Predoctoral Fellowship, 1973-1976
 Phi Beta Kappa, 1971; A.B. summa cum laude, 1972, Harvard University
 National Merit Scholar, 1969

Special Lectureships (selected, since 2010):

Invited "guru", NIH intramural Immunology Interest Group retreat, 2011.
 Visiting Professor, Chiba University Graduate School of Medicine, 2012-2019.
 Keynote speaker, ESH-EHA conference on T-cell Acute Lymphoblastic Leukemia, Lisbon, 2013
 Presidential Symposium speaker, International Society for Experimental Hematology, Vienna,
 2013
 Faculty member and RIKEN IMS-JSI Symposium speaker, RIKEN Institute Summer Program in
 Immunology, Yokohama, Japan, 2014
 Keynote speaker, RECOMB-ISCB meeting on Regulatory and Systems Genomics, San Diego,
 Nov. 2014
 Keynote speaker, Walter & Eliza Hall Institute Centenary Symposium, July 2015
 Watson Lecturer, California Institute of Technology, November 2015
 Distinguished Lecturer, Edythe & Eli Broad CIRM Center for Regenerative Medicine and Stem
 Cell Research at the University of Southern California, April 2017.
 Keynote speaker, Cold Spring Harbor Workshop on Single Cell Analysis, November 2017.
 Keynote Speaker, David Wells Memorial Symposium, University of Alabama Birmingham,
 December 2017
 Keynote Speaker, HudsonAlpha Immunogenomics Conference, October 2018.
 Keynote Speaker, Australasian Society for Immunology annual conference, Dec 2018.
 Kimishige and Teruko Ishizaka Lecture in Immunology, La Jolla Institute for Immunology, March
 2019.
 Keynote Speaker, Southern California Flow Cytometry annual meeting, April 2019.

Keynote Speaker, ThymE: T-cell and thymus biology workshop, Weizmann Institute of Science, Israel, May 2019.

Keynote Speaker, International Human Epigenome Consortium (IHEC) meeting and 6th Canadian Conference on Epigenetics, Banff, Alberta, Canada, November 2019.

Keynote Speaker, Cytokines 2020, International Cytokine & Interferon Society, November 2020.

Featured Speaker, Global Immunotalks, January 2021.

Keynote Speaker invited (meeting cancelled due to COVID-19), Kyoto T-Cell Conference, Kyoto, Japan, October 2021.

Presidential Symposium Speaker, Society for Developmental Biology & Pan American Societies for Evolutionary and Developmental Biology joint meeting, July 2022.

Keynote Speaker, Cornell Immunogenomics Symposium, September 2022.

Distinguished Lecture in Cancer Research, University of Pennsylvania, November 2022.

20th Anniversary Seminar Speaker, Department of Immunology, University of Pittsburgh, November 2022.

George E. Peacock Memorial Lecturer, University of Texas Southwest Medical Center, February 2023.

Professional Societies:

American Association of Immunologists
 International Society for Experimental Hematology
 American Association for the Advancement of Science (Fellow)
 American Academy of Arts and Sciences (Fellow)
 National Academy of Sciences (Member)

Committee Memberships, Editorial Boards, and Advisory Panels (nonprofit)

Council Member—Midwinter Conference of Immunologists,	1/1981-1/1986
Member of review committee—American Cancer Society (California Division) Postdoctoral Fellowship Program,	9/1982-8/1985
Associate Editor, Journal of Molecular and Cellular Immunology,	1984-
Associate Editor, Journal of Immunology,	7/1986-6/1991
Associate Editor, Molecular Reproduction and Development,	1987-1997
Member, Awards Committee, American Association of Immunologists,	7/1986-6/1989
Member, Immunological Sciences Study Section, Division of Research Grants, National Institutes of Health/Public Health Service,	9/1988-6/1992
Program (Block) Chairman, American Association of Immunologists, T Cells (Block B),	1989-1992
Member of review committee, American Cancer Society (California Division) Postdoctoral Fellowship Screening Panel (2 nd term),	9/1992-7/1995
American Institute of Biological Sciences Scientific Working Group and Peer Review Panel to NASA: Physiological and Anatomical Rodent Experiment.04,	1992-1994
Member, Scientific Advisory Board, Hereditary Disease Foundation,	5/1991-2/1995
Member, NIAID-NIA Task Force on Immunology and Aging,	1994
International Union of Immunology Societies designated reporter for 9 th International Congress of Immunology,	1995

Member, National Research Council panel for review of Howard Hughes Medical Institute
 Predoctoral Fellowships in the Biological Sciences, 1996

Editorial Board Member, *Journal of Clinical Immunology*, 1997-2000

Editorial Board Member, *Developmental and Comparative Immunology*, 1997-2000

Member, External Advisory Board, The Lerner Research Institute (Cancer Center), Cleveland
 Clinic Foundation, 1997-2003

External Advisory Board, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan, 2001

Founding organizer, Aegean Conference on Gene Regulation in Lymphocyte Development, and
 co-chairman, 2002-2004

Section Editor, *Journal of Immunology*, 2004-2006

Associate Editor, *Immunity*, 2005 – present

Scientific Advisory Board, La Jolla Institute for Allergy and Immunology: 2005 – 2017.

Program (Block) Co-Chairman, American Association of Immunologists, Hematopoiesis and
 Immune System Development, 2007-2010.

External Advisory Board, second appointment, Institute of Molecular Biology, Academia Sinica,
 Taipei, Taiwan, 2008

Editorial Board member, *Immunological Reviews*, 2009 -present.

Co-organizer, FASEB summer conference “Molecular Mechanisms of Lymphocyte
 Differentiation”, 2009

Organizer, AbCam sponsored symposium on Transcriptional Mechanisms of Early Lymphocyte
 Development, 11/2009

14th International Congress of Immunology Program Committee, 2010

Faculty of 1000, 2010-2016

Program Committee, Aegean Conference on Pathways, Networks and Systems Medicine,
 2010-2019.

American Association of Immunologists Nominating Committee Chairman, 2009-2010

Co-organizer, FASEB summer conference “Molecular Mechanisms of Immune Cell Development
 & Function” 2011

Scientific Advisory Board member, Institute for Systems Biology, Seattle, WA, 2012 - present.

External Scientific Advisory Board, SyMMYS: Centre of Excellence in Molecular Systems
 Immunology and Physiology Research, the Academy of Finland, 2012-2017.

Lead organizer, FASEB summer conference “Molecular Mechanisms of Lymphocyte
 Development & Function”, 2013

Scientific Advisory Board member, Max Planck Institute of Immunobiology and Epigenetics,
 Freiburg, Germany, 2014-2019
 (SAB chairman, 2019).

Co-organizer, Wellcome Genome Science Center Single Cell Biology meetings, Cambridge, UK
 2016, 2018, 2020, 2022.

External Advisory Board, NIA Program Project *Thymic and Peripheral Aspects of T cell
 rejuvenation* (Univ. of Arizona), 2018 - present.

Editorial Board, *Wiley Interdisciplinary Reviews (WIREs) in Systems Biology & Medicine*,
 2016-2019.

Editorial Advisory Board Member, *Science Immunology*, 2016 - present.

Editorial Board, *Experimental Hematology*, International Society for Experimental Hematology,
 2017 - present.

Editorial Committee Guest, *Annual Review of Immunology* vol. 37, 2019.

Co-organizer, Cold Spring Harbor Laboratory conference on Gene Regulation and Signaling in the Immune System, 2022
 Editorial Advisory Board member, *Cell Systems*, 2022 –
 Class Membership Committee member, National Academy of Sciences, 2023
 Co-organizer, International Society for Experimental Hematology meeting, 2023
 Advisory Editor Board member, *Journal of Experimental Medicine*, 2023-2026

Site visitor and ad hoc reviewer for NCI, NIA, NIAID, NICHD, NIDCR, and CSR (NIH); NASA; other agencies.

Journal reviewer for *Nature*, *Science*, *Cell*, *Proc. Natl. Acad. Sci. USA*, *Immunity*, *Nature Immunology*, *Journal of Immunology*, *Journal of Experimental Medicine*, *Science Immunology*, *Cell Stem Cell*, *Nature Biotechnology*, *eLife*, *Genes & Development*, *Blood*, *Genome Research*, *Developmental Biology*, *Development*, *PLoS Biology*, *Science STKE*, *Nature Communications*, *Cell Reports*, *Molecular and Cellular Biology*, and others.

Invited teaching outside primary appointment (since 2000):

Faculty, American Association of Immunologists (AAI) Advanced Immunology Course, 1996, 2005-6.
 Faculty, Japanese Society for Immunology summer immunology course, 2004
 External PhD examiner, University of Lund, Sweden (A. Lagergren) 2006
 Lecturer, Graduate Program in Immunology, University of Pennsylvania (1 talk) 2007
 Lecturer, University of Southern California Stem Cell Biology & Medicine course (1 lecture) 2007
 Faculty, Gene Regulatory Networks in Development course, Marine Biological Laboratory, Woods Hole, MA. (2 lectures/year and discussant) 2008-2018.
 Faculty, RIKEN Institute Summer Program in Immunology (Yokohama, Japan), 2009
 Lecturer, Medical University of Hannover Biomedical Research School (Germany) (1 lecture) 2010
 Visiting Professor, Chiba University Graduate School of Medicine 2012-2019
 External lecturer, UCLA Pathology 222 course (alternate years)(1 lecture/yr) 2013-2020
 External PhD examiner, University of Melbourne, Australia (J. Prier) 2017
 External PhD examiner, Ecole Nationale Supérieure, Paris (S. Collombet) 2017
 External PhD examiner, Chiba University, Japan (E. Komai) 2018
 Lecturer, Hokkaido University Medical School (1 lecture/yr) 2018-2021
 External PhD examiner, Chiba University, Japan (M. Fujimoto) 2019
 External PhD examiner, Institut Pasteur, Paris (R. Elsaid) 2019
 Faculty, Institute for Systems Biology (Seattle) advanced course in Systems Medicine (1 lecture) 2019
 Lecturer, Autonomous University of Mexico, Cuernavaca, Frontiers in Genomics (4 hr of lectures) 2019
 Andrew D. White Professor-at-Large, Cornell University July 2021-June 2027
 External PhD examiner, Weatherall Institute for Molecular Medicine, MRC Molecular Haematology Unit at the University of Oxford (UK) 2023.

Consulting for industry:

Consulting, A2 Biotherapeutics,	2018-2019
Scientific Advisory Board member, Century Therapeutics,	2020 - 2023.
Advisor, Kite Pharma,	2021

PUBLICATIONS:

1. Rothenberg, E. and D. Baltimore. 1976. Synthesis of long, representative DNA copies of the murine RNA tumor virus genome. *J. Virol.* **17**, 168-174. PMID: PMC515400
2. Haseltine, W. A., D. G. Kleid, A. Panet, E. Rothenberg and D. Baltimore. 1976. Ordered transcription of RNA tumor virus genomes. *J. Mol. Biol.* **106**, 109-131.
3. Rothenberg, E. and D. Baltimore. 1977. Increased length of DNA made by virions of murine leukemia virus at limiting magnesium ion concentration. *J. Virol.* **21**, 168-178. PMID: PMC353803
4. Rothenberg, E., D. Smotkin, D. Baltimore and R. A. Weinberg. 1977. *In vitro* synthesis of infectious DNA of murine leukemia virus. *Nature (London)* **269**, 122-126.
5. Rothenberg, E., D. J. Donoghue and D. Baltimore. 1978. Analysis of a 5' leader sequence on murine leukemia virus 21S RNA; heteroduplex mapping with long reverse transcriptase products. *Cell* **13**, 435-451.
6. Donoghue, D. J., E. Rothenberg, N. Hopkins, D. Baltimore and P. A. Sharp. 1978. Heteroduplex analysis of the nonhomology region between Moloney MuLV and the dual host range derivative HIX virus. *Cell* **14**, 959-970.
7. Shields, A., O. N. Witte, E. Rothenberg and D. Baltimore. 1978. High frequency of aberrant expression of Moloney murine leukemia virus in clonal interactions. *Cell* **14**, 601-609.
8. Baltimore, D., E. Gilboa, E. Rothenberg and F. Yoshimura. 1979. Production of a discrete infectious, double-stranded DNA by reverse transcription in virions of Moloney leukemia virus. *Cold Spring Harbor Symp. in Quant. Biol.* **43**, 869-874.
9. Rothenberg, E. and E. A. Boyse. 1979. Synthesis and processing of molecules bearing thymus leukemia antigen. *J. Exp. Med.* **150**, 777-791. PMID: PMC2185687
10. Rothenberg, E. 1980. Expression of differentiation antigens in subpopulations of mouse thymocytes: regulation at the level of de novo synthesis. *Cell* **20**, 1-9.
11. Michaelson, J., E. Rothenberg and E. A. Boyse. 1980. Genetic polymorphism of murine β_2 -microglobulin detected biochemically. *Immunogenetics* **11**, 93-95.
12. Rothenberg, E. and D. Triglia. 1980. *In vitro* maintenance of differentiation marker synthesis by subpopulations of mouse thymocytes. *Proc. 1980 ICN-UCLA Symp. on Control of Cellular Division and Development and J. Supramolec. Struct.* **14**, 371-382.
13. Triglia, D. and E. Rothenberg. 1981. "Mature" thymocytes are not glucocorticoid-resistant *in vitro*. *J. Immunol.* **127**, 64-68.

14. Rothenberg, E. and D. Triglia. 1981. Structure and expression of glycoproteins controlled by the *Qa-1^a* allele. *Immunogenetics* **14**, 455-468.
15. Rothenberg, E. 1982. A specific biosynthetic marker for immature thymic lymphoblasts: active synthesis of thymus-leukemia antigen restricted to proliferating cells. *J. Exp. Med.* **155**, 140-154. PMCID: PMC2186575
16. Rothenberg, E. 1982. What is the role of T-lymphocyte surveillance in neoplastic disease? *Am. J. Surgery* **143**, 664-669.
17. Rothenberg, E. and D. Triglia. 1983. Lyt-2 glycoprotein is synthesized as a single molecular species. *J. Exp. Med.* **157**, 365-370. PMCID: PMC2186898
18. Rothenberg, E. and D. Triglia. 1983. Clonal proliferation unlinked to terminal deoxynucleotidyl transferase synthesis in thymocytes of young mice. *J. Immunol.* **130**, 1627-1633.
19. Rothenberg, E., B. Caplan, J. Trotter and D. Triglia. 1984. Thymic lymphoblasts: heterogeneity and developmental fates. In *Recognition and Regulation in Cell-Mediated Immunity*. J. D. Watson and J. Marbrook (Eds.). Marcel Dekker, Inc., New York, pp. 61-86.
20. Caplan, B. and E. Rothenberg. 1984. High-level secretion of interleukin-2 by a subset of proliferating thymic lymphoblasts. *J. Immunol.* **133**, 1983-1991.
21. Haas, M., A. Altman, E. Rothenberg, M. H. Bogart and O. W. Jones. 1984. Mechanism of T-cell lymphomagenesis: transformation of growth-factor-dependent T-lymphoblastoma cells to growth-factor-independent T-lymphoma cells. *Proc. Natl. Acad. Sci. USA* **81**, 1742-1746. PMCID: PMC344995
22. Rothenberg, E., B. Caplan and R. D. Sailor. 1984. Toward a molecular basis for growth control in T-lymphocyte development. In *Molecular Biology of Development*. UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 19. E. H. Davidson and R. A. Firtel (Eds.). Alan R. Liss, Inc., New York, pp. 511-525.
23. Lugo, J. P., S. N. Krishnan, R. D. Sailor, P. Koen, T. Malek and E. Rothenberg. 1985. Proliferation of thymic stem cells with and without receptors for interleukin-2: implications for intrathymic antigen recognition. *J. Exp. Med.*, **161**, 1048-1062. PMCID: PMC2187600
24. Rothenberg, E. and J. P. Lugo. 1985. Differentiation and cell division in the mammalian thymus. *Dev. Biol.* **112**, 1-17.
25. Lugo, J. P., S. N. Krishnan, R. Diamond Sailor and E. V. Rothenberg. 1986. Early precursor thymocytes can produce interleukin 2 upon stimulation with calcium ionophore and phorbol ester. *Proc. Natl. Acad. Sci. USA* **83**, 1862-1866. PMCID: PMC323184
26. Novak, T. J. and E. V. Rothenberg. 1986. Differential transient and long-term expression of DNA sequences introduced into T lymphocyte lines. *DNA* **5**, 439-451.
27. Kinnon C., R. A. Diamond and E. Rothenberg. 1986. Activation of T-cell antigen receptor α and β chain genes in the thymus. Implications for the lineages of developing cortical thymocytes. *J. Immunol.* **137**, 4010-4015.

28. Rothenberg, E. V., C. Kinnon, K. L. McGuire, J. P. Lugo and R. A. Diamond. 1987. Activation of receptor and response genes in T lymphocyte development. In *Molecular Approaches to Developmental Biology*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 51. R. A. Firtel and E. H. Davidson (Eds.). Alan R. Liss, Inc., New York, pp. 453-467.
29. Haas, M., A. Altman, E. Rothenberg, M. H. Bogart and O. W. Jones. 1987. Radiation leukemia virus and x-irradiation induce in C57BL/6 mice two distinct T-cell neoplasms: a growth factor-dependent lymphoma and a growth factor-independent lymphoma. *Leukemia Res.* **11**, 223-239.
30. McGuire, K. L. and E. V. Rothenberg. 1987. Inducibility of interleukin-2 (IL2) RNA expression in individual mature and immature T lymphocytes. *EMBO J.* **6**, 939-946. PMID: PMC553486
31. Kinnon, C., K. L. McGuire and E. V. Rothenberg. 1987. Differential regulation of T-cell receptor gamma genes in immature thymocyte populations. *Eur. J. Immunol.* **17**, 1265-1269.
32. Boyer, P. D. and E. V. Rothenberg. 1988. Interleukin-2 receptor inducibility is blocked in cortical-type thymocytes. *J. Immunol.* **140**, 2886-2892.
33. McGuire, K. L., J. A. Yang and E. V. Rothenberg. 1988. Influence of activating stimulus on functional phenotype: interleukin-2 mRNA accumulation differentially induced by ionophore and receptor ligands in subsets of murine T cells. *Proc. Natl. Acad. Sci. USA* **85**, 6503-6507. PMID: PMC282001
34. Rothenberg, E. V., K. L. McGuire, and P. D. Boyer. 1988. Molecular indices of functional competence in developing T cells. *Immunol. Rev.* **104**, 29-53.
35. Boyer, P. D., R. A. Diamond and E. V. Rothenberg. 1989. Changes in inducibility of interleukin-2 receptor alpha chain and T-cell receptor expression during thymocyte differentiation in the mouse. *J. Immunol.* **142**, 4121-4130.
36. Rothenberg, E. V. 1989. The long road to functional maturity for developing T cells. *Immunology Today* **10**, 116-117.
37. Rothenberg, E. V. and D. DeLuca. 1990. Discussion summary: Lymphocyte evolution and development. In *Defense Molecules*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 121. J. J. Marchalonis and C. Reinisch (Eds.). Alan R. Liss, Inc., New York, pp. 235-239.
38. Rothenberg, E. V., R. A. Diamond, K. A. Pepper and J. A. Yang. 1990. Interleukin-2 gene inducibility in T cells prior to T-cell receptor expression: changes in signaling pathways and gene expression requirements during intrathymic maturation. *J. Immunol.* **144**, 1614-1624.
39. Rothenberg, E. V., R. A. Diamond, T. J. Novak, K. A. Pepper and J. A. Yang. 1990. Mechanisms of effector lineage commitment in T lymphocyte development. In *Developmental Biology*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 125. E. H. Davidson, J. Ruderman and J. Posakony (Eds.). Alan R. Liss, Inc., New York, pp. 225-249.

40. Rothenberg, E. V. 1990. Death and transfiguration of cortical thymocytes: A reconsideration. *Immunol. Today* **11**, 116-119.
41. Novak, T. J., P. M. White, and E. V. Rothenberg. 1990. Regulatory anatomy of the murine interleukin-2 gene. *Nucl. Acids Res.* **18**, 4523-4533. PMID: PMC331273
42. Rothenberg, E. V. 1990. Developmental shifts in signaling pathways for lymphokine production and growth response. In *Forum on Interleukins and T-Cell Development*, C. Martinez-A., (Ed.). Research in Immunology **141**, 289-293.
43. Novak, T. J. and E. V. Rothenberg. 1990. cAMP inhibits induction of IL2 but not of IL4 in T cells. *Proc. Natl. Acad. Sci. USA* **87**, 9353-9357. PMID: PMC55163
44. Novak, T. J., D. Chen, and E. V. Rothenberg. 1990. Interleukin 1 synergy with phosphoinositide pathway agonists for induction of interleukin 2 gene expression: Molecular basis of costimulation. *Mol. Cell. Biol.* **10**, 6325-6334. PMID: PMC362908
45. Rothenberg, E. V., D. Chen, R. A. Diamond, M. Dohadwala, T. J. Novak, P. M. White, and J. A. Yang-Snyder. 1991. Acquisition of mature functional responsiveness in T cells: Programming for function via signaling. In: *Mechanisms of Lymphocyte Activation and Immune Regulation III*, S. Gupta, W. C. Paul, M. D. Cooper, and E. V. Rothenberg (Eds.). Plenum Publishing Corp., New York, NY, pp. 71-83.
46. Rothenberg, E. V. 1991. Cell separation and analysis: a strategic overview. *Methods: A Companion to Methods in Enzymology* **2**, 168-172.
47. Novak, T. J., F. K. Yoshimura, and E. V. Rothenberg. 1992. *In vitro* transfection of fresh thymocytes and T cells shows subset-specific expression of viral promoters. *Mol. Cell. Biol.* **12**, 1515-1527. PMID: PMC369593
48. Rothenberg, E. V. 1992. The development of functionally responsive T cells. *Adv. Immunol.* **51**, 85-214.
49. Chen, D. and E. V. Rothenberg. 1993. Molecular basis for developmental changes in interleukin-2 gene inducibility. *Mol. Cell. Biol.* **13**, 228-237. PMID: PMC358902
50. Yang-Snyder, J. A. and E. V. Rothenberg. 1993. Developmental and anatomical patterns of IL-2 gene expression *in vivo* in the murine thymus. *Devel. Immunol.* **3**, 85-102. PMID: PMC2275923
51. Rothenberg, E. V., D. Chen, and R. A. Diamond. 1993. Functional and phenotypic analysis of thymocytes in SCID mice: evidence for functional response transitions before and after the SCID arrest point. *J. Immunol.* **151**, 3530-3546.
52. Garrity, P. A., D. Chen, E. V. Rothenberg and B. J. Wold. 1994. IL-2 transcription is regulated *in vivo* at the level of coordinated binding of both constitutive and regulated factors. *Mol. Cell. Biol.* **14**, 2159-2169. PMID: PMC358576
53. Rothenberg, E. V. and R. A. Diamond. 1994. Costimulation by interleukin-1 of multiple activation responses in a developmentally restricted subset of immature thymocytes. *Eur. J. Immunol.* **24**, 24-33.

54. Chen, D. and E. V. Rothenberg. 1994. Interleukin-2 transcription factors as molecular targets of cAMP inhibition: delayed inhibition kinetics and combinatorial transcription roles. *J. Exp. Med.* **179**, 931-942. PMID: PMC2191402
55. Rothenberg, E. V. 1994. Signaling mechanisms in thymocyte selection. *Curr. Opin. Immunol.* **6**, 257-265.
56. Rothenberg, E. V., R. A. Diamond, and D. Chen. 1994. Programming for recognition and programming for response: separate developmental subroutines in the murine thymus. *Thymus* **22**, 215-244.
57. Lindenboim, L., R. Diamond, E. Rothenberg, and R. Stein. 1995. Apoptosis induced by serum-deprivation of PC12 cells is not preceded by growth arrest and can occur at each phase of the cell cycle. *Cancer Res.* **55**, 1242-1247.
58. Scherer, L. J., R. A. Diamond, and E. V. Rothenberg. 1995. Developmental regulation of cAMP signaling pathways in thymocyte development. *Thymus* **23**, 231-257.
59. Reya, T., J. A. Yang-Snyder, E. V. Rothenberg, and S. R. Carding. 1996. Regulated expression and function of IL2/IL15R- β (CD122) during lymphoid development. *Blood* **87**, 190-201.
60. Rothenberg, E. V. 1995. Developmental biology of lymphocytes. *The Immunologist* **3**, 172-175.
61. Rothenberg, E. V. and Ward, S. B. 1996. A dynamic assembly of diverse transcription factors integrates activation and cell-type information for interleukin-2 gene regulation. *Proc. Natl. Acad. Sci. USA* **93**, 9358-9365. PMID: PMC38432
62. Rothenberg, E. V. 1996. How T cells count. *Science* **273**, 78-79.
63. Diamond, R. A., Ward, S. B., Owada-Makabe, K., Wang, H., and Rothenberg, E. V. 1997. Different developmental arrest points in RAG-2^{-/-} and *scid* thymocytes on two genetic backgrounds: developmental choices and cell death mechanisms before TCR gene rearrangement. *J. Immunol.* **158**, 4052-4064.
64. Yang-Snyder, J. A., and Rothenberg, E. V. 1998. Spontaneous expression of interleukin-2 *in vivo* in specific tissues of young mice. *Devel. Immunol.* **5**, 223-245. PMID: PMC2275993
65. Wang, H., Diamond, R. A., and Rothenberg, E. V. 1998. Cross-lineage expression of Ig- β (B29) in thymocytes: positive and negative gene regulation to establish T-cell identity. *Proc. Natl. Acad. Sci. USA* **95**, 6831-6836. PMID: PMC22652
66. Rothenberg, E. V. 1998. Gene regulation in T-cell lineage commitment. In: *Molecular Biology of B-Cell and T-Cell Development*, J. G. Monroe and E. V. Rothenberg (Eds.), Humana Press, Totowa, NJ, pp.337-365.
67. Ward, S. B., Hernandez-Hoyos, G., Chen, F., Waterman, M., Reeves, R., and Rothenberg, E. V. 1998. Chromatin remodeling of the interleukin-2 gene: distinct alterations in the proximal versus distal enhancer regions. *Nucl. Acids Res.* **26**, 2923-2934. PMID: PMC147656

68. Wang, H., Diamond, R. A., Yang-Snyder, J. A., and Rothenberg, E. V. 1998. Precocious expression of T-cell functional response genes *in vivo* in primitive thymocytes before T-lineage commitment. *Int. Immunol.* **10**, 1623-1635.
69. Chen, F., Chen, D., and Rothenberg, E. V. 1999. Specific regulation of Fos family transcription factors in thymocytes at two developmental checkpoints. *Int. Immunol.* **11**, 677-688.
70. Rothenberg, E. V., Telfer, J. C., and Anderson, M. K. 1999. Transcriptional regulation of lymphocyte lineage commitment. *BioEssays* **21**, 726-742.
71. Anderson, M. K. and Rothenberg, E. V. 2000. Transcription factor expression in lymphocyte development: Clues to the evolutionary origins of lymphoid cell lineages? *Curr. Top. Microbiol. Immunol.* **248**, 137-155.
72. Anderson, M. K., Hernandez-Hoyos, G., Diamond, R. A., and Rothenberg, E. V. 1999. Precise developmental regulation of Ets family transcription factors during specification and commitment to the T cell lineage. *Development* **126**, 3131-3148.
73. Hernandez-Hoyos, G., Sohn, S. J., Rothenberg, E. V., and Alberola-Illa, J. 2000. Lck activity controls CD4/CD8 T-cell lineage commitment. *Immunity* **12**, 313-322.
74. Telfer, J. C. and Rothenberg, E. V. 2001. Expression and function of a stem-cell promoter for the murine CBF α 2 gene: distinct roles and regulation in natural killer and T cell development. *Devel. Biol.* **229**, 363-382.
75. Rothenberg, E. V. 2000. Stepwise specification of lymphocyte developmental lineages. *Curr. Opin. Genet. Dev.* **10**, 370-379.
76. Yui, M. A., Hernandez-Hoyos, G., and Rothenberg, E. V. 2001. A new regulatory region of the murine IL-2 locus that confers position-independent transgene expression. *J. Immunol.* **166**, 1730-1739.
77. Makita, T., Hernandez-Hoyos, G., Chen, T. H.-P., Wu, H., Rothenberg, E. V., and Sucov, H. M. 2001. A developmental transition in definitive erythropoiesis: erythropoietin expression is sequentially regulated by retinoic acid receptors and HNF4. *Genes Dev.* **15**, 912-924. PMID: PMC312661
78. Chen, F., Rowen, L., Hood, L., and Rothenberg, E. V. 2001. Differential transcriptional regulation of individual T-cell receptor V β segments before gene rearrangement. *J. Immunol.* **166**, 1771-1780.
79. Anderson, M. K., Sun, X., Miracle, A. L., Litman, G. W., and Rothenberg, E. V. 2001. Evolution of hematopoiesis: three members of the PU.1 transcription factor family in a cartilaginous fish, *Raja eglanteria*. *Proc. Natl. Acad. Sci. USA* **98**, 553-558. PMID: PMC14625
80. Miracle, A. L., Anderson, M. K., Litman, R. T., Walsh, C. J., Luer, C. A., Rothenberg, E. V., and Litman, G. W. 2001. Complex expression patterns of lymphocyte-specific genes during the development of cartilaginous fish implicate unique lymphoid tissues in generating an immune repertoire. *Int. Immunol.* **13**, 567-580.
81. Rothenberg, E. V. 2001. Notchless T cell maturation?. *Nat. Immunol.* **2**, 189-190.

82. Rothenberg, E. V. 2001. Commentary: Mapping of complex regulatory elements by pufferfish/zebrafish transgenesis. *Proc. Natl. Acad. Sci. USA* **98**, 6540-6542. PMID: PMC34387
83. Anderson, M. K., Weiss, A. H., Hernandez-Hoyos, G., Dionne, C. J., and Rothenberg, E. V. 2002. Constitutive expression of PU.1 in fetal hematopoietic progenitors blocks T cell development at the pro-T cell stage. *Immunity* **16**, 285-296.
84. Rothenberg, E. V. and Davidson, E. H. 2003 (Nov 2002). Regulatory cooptions in the evolution of deuterostome immune systems. In: R. A. B. Ezekowitz & J. A. Hoffmann (eds.) *Innate Immunity*. Humana Press, Totowa, N. J. Chapter 4, pp. 61-87.
85. Rothenberg, E. V. and Anderson, M. K. 2002. Elements of transcription factor network design for T-lineage specification. *Devel. Biol.* **246**, 29-44.
86. Anderson, M. K., Hernandez-Hoyos, G., Dionne, C. J., Arias, A. M., Chen, D., and Rothenberg, E. V. 2002. Definition of regulatory network elements for T-cell development by perturbation analysis with PU.1 and GATA-3. *Devel. Biol.* **246**, 103-121.
87. Rothenberg, E. V. 2002. T lineage specification and commitment: a gene regulation perspective. *Semin. Immunol.* **14**, 431-440.
88. Rothenberg, E. V., Telfer, J. C., and Yui, M. A. 2003. T cell developmental biology. In: W. E. Paul (ed.) *Fundamental Immunology, 5th Edition*. Lippincott/Williams & Wilkins. Chapter 9, pp. 259-301.
89. Rothenberg, E. V. and Dionne, C. J. 2002. Lineage plasticity and commitment in T-cell development. *Immunol. Rev.* **187**, 96-115.
90. Hernández-Hoyos, G., Anderson, M. K., Wang, C., Rothenberg, E. V., and Alberola-Ila, J. 2003. GATA-3 expression is controlled by TCR signals and regulates CD4/CD8 differentiation. *Immunity* **19**, 83-94.
91. Warren, L. A. and Rothenberg, E. V. 2003. Regulatory coding of lymphoid lineage choice by hematopoietic transcription factors. *Curr. Opin. Immunol.* **15**, 166-175.
92. Yui, M. A., Sharp, L. L., Havran, W. L., and E. V. Rothenberg. 2004. Preferential activation of an Interleukin-2 (IL-2) regulatory sequence transgene in TCR $\gamma\delta$ and NKT cells: subset-specific differences in IL-2 regulation. *J. Immunol.* **172**, 4691-4699.
93. Telfer, J. C., Hedblom, E. E., Anderson, M. K., Laurent, M. N., and Rothenberg, E. V. 2004. Localization of the domains in Runx transcription factors required for the repression of CD4 in thymocytes. *J. Immunol.* **172**, 4359-4370.
94. Anderson, M. K., Pant, R., Miracle, A. L., Sun, X., Luer, C. A., Walsh, C. J., Telfer, J. C., Litman, G. W., and Rothenberg, E. V. 2004. Evolutionary origins of lymphocytes: Ensembles of T-cell and B-cell transcriptional regulators in a cartilaginous fish. *J. Immunol.* **172**, 5851-5860.
95. Rothenberg, E. V. 2004. From totipotency to T in a dish. *Nature Immunol.* **5**, 359-360.
96. Rothenberg, E. V. and Pant, R. 2004. Origins of lymphocyte developmental programs: Transcription factor evidence. *Semin. Immunol.* **16**, 227-238.

97. Yui, M. A. and Rothenberg, E. V. 2004. Deranged early T cell development in immunodeficient strains of non-obese diabetic (NOD) mice. *J. Immunol.* **173**, 5381-5391.
98. Rothenberg, E. V. and Taghon, T. 2005. Molecular genetics of T-cell development. *Annu. Rev. Immunol.* **23**, 601-649.
99. Dionne, C. J., Tse, K. Y., Weiss, A. H., Franco, C. B., Wiest, D. L., Anderson, M. K., and Rothenberg, E. V. 2005. Subversion of T lineage commitment by PU.1 in a clonal cell line system. *Devel. Biol.* **280**, 448-466.
100. Rothenberg, E. V. 2005. Thymic regulation – hidden in plain sight. *Science* **307** (5711), 858-859.
101. Taghon, T., David, E.-S., Zúñiga-Pflücker, J. C., and Rothenberg, E. V. 2005. Delayed, asynchronous, and reversible T-lineage specification induced by Notch/Delta signaling. *Genes Dev.* **19**, 965-978. PMID: PMC1080135
102. Adachi, S., and Rothenberg, E. V. 2005. Cell type-specific epigenetic marking of the *IL2* gene at a distal *cis*-regulatory region in competent, nontranscribing T cells. *Nucl. Acids Res.* **33**, 3200-3210. PMID: PMC1142491
103. Taghon, T., Yui, M. A., Pant, R., Diamond, R. A., and Rothenberg, E. V. 2006. Developmental and molecular characterization of emerging β - and $\gamma\delta$ -selected pre-T cells in the adult mouse thymus. *Immunity* **24**, 53-64.
104. David-Fung, E.-S., Yui, M. A., Morales, M., Wang, H., Taghon, T., Diamond, R. A., and Rothenberg, E. V. 2006. Progression of regulatory gene expression states in fetal and adult pro-T cell development. *Immunol. Rev.* **209**, 212-236. PMID: PMC4157939
105. Wang, D., Claus, C. L., Vaccarelli, G., Braunstein, M., Schmitt, T. M., Zúñiga-Pflücker, J.-C., Rothenberg, E. V., and Anderson, M. K. 2006. The basic helix-loop-helix transcription factor HEBAIt is expressed in pro-T cells and enhances the generation of T cell precursors. *J. Immunol.* **177**, 109-119.
106. Franco, C. B., Scripture-Adams, D. D., Proekt, I., Taghon, T., Weiss, A. H., Yui, M. A., Adams, S. L., Diamond, R. A., and Rothenberg, E. V. 2006. Notch/Delta signaling constrains re-engineering of pro-T cells by PU.1. *Proc. Natl. Acad. Sci. USA* **103**, 11993-11998. PMID: PMC1567686
107. Rothenberg, E. V. 2007. Cell lineage regulators in B and T cell development. *Nat. Immunol.* **8**, 441-444.
108. Rothenberg, E. V. 2007. Regulatory factors for initial T-lymphocyte lineage specification. *Curr. Opin. Hematol.* **14**, 322-329.
109. Tydell, C. C., David-Fung, E.-S., Moore, J. E., Rowen, L., Taghon, T., and Rothenberg, E. V. 2007. Molecular dissection of prethymic progenitor entry into the T lymphocyte developmental pathway. *J. Immunol.* **179**, 421-438.
110. Rothenberg, E. V. 2007. Negotiation of the T-lineage fate decision by transcription factor interplay and microenvironmental signals. *Immunity* **26**, 690-702.

111. Taghon, T., Yui, M. A., and Rothenberg, E. V. 2007. Mast cell lineage diversion of T lineage precursor cells by the essential T cell transcription factor GATA-3. *Nat. Immunol.* **8**, 845-855. PMID: PMC3140173
112. Rothenberg, E. V., Moore, J. E., and Yui, M. A. 2008. Launching the T-lineage developmental programme. *Nat. Rev. Immunol.* **8**, 9-21. PMID: PMC3131407
113. Rothenberg, E. V. and Yui, M. A. 2008. Development of T cells. In: W. E. Paul, (ed.) *Fundamental Immunology, 6th Edition*. Lippincott, Williams & Wilkins, Chapter 12, pp. 376-406.
114. Guo, Y., Maillard, I., Chakraborti, S., Rothenberg, E. V., and Speck, N. A. 2008. Core binding factors are necessary for natural killer cell development, and cooperate with Notch signaling during T cell specification. *Blood* **112**, 480-492. PMID: PMC2481540
115. Rothenberg, E. V. 2008. Erg in stem cells: a function emerges. *Nat. Immunol.* **9**, 714-716.
116. Rothenberg, E. V. and Scripture-Adams, D. D. 2008. Competition and collaboration: GATA-3, PU.1, and Notch signaling in early T-cell fate determination. *Semin. Immunol.* **20**, 236-246. PMID: PMC2634812
117. Georgescu, C., Longabaugh, W. J. R., Scripture-Adams, D. D., David-Fung, E.-S., Yui, M. A., Zarnegar, M. A., Bolouri, H., and Rothenberg, E. V. 2008. A gene regulatory network armature for T-lymphocyte specification. *Proc. Natl. Acad. Sci. USA* **105**, 20100–20105. PMID: 19104054. PMID: PMC2629331.
118. Taghon, T. and Rothenberg, E. V. 2008. Molecular mechanisms that control mouse and human TCR- $\alpha\beta$ and TCR- $\gamma\delta$ T cell development. *Semin. Immunopathol.* **30**, 383-398.
119. David-Fung, E.-S., Butler, R., Buzi, G., Yui, M. A., Diamond, R. A., Anderson, M. K., Rowen, L., and Rothenberg, E. V. 2009. Transcription factor expression dynamics of early T-lymphocyte specification and commitment. *Devel. Biol.* **325**, 444–467. PMID: PMC2663971
120. Rothenberg, E. V. 2009. Decision by committee: new light on the CD4/CD8-lineage choice. *Immunol. Cell Biol.* **87**, 109–112.
121. Rothenberg, E. V., and Murre, C. 2010. Editorial Overview [Lymphocyte Development]. *Curr. Opin. Immunol.* **22**, 145-147.
122. Yui, M. A., Feng, N., and Rothenberg, E.V. 2010. Fine-scale staging of T-cell lineage commitment in adult mouse thymus. *J. Immunol.* **185**, 284-293. PMID: PMC4091773
123. Rothenberg, E. V. 2010. B cell specification from the genome up. *Nat. Immunol.* **11**, 572-4.
124. Li, L., Leid, M., and Rothenberg, E. V. 2010. An early T-cell lineage commitment checkpoint dependent on the transcription factor *Bcl11b*. *Science* **329**, 89-93. PMID: 20595614. PMID: PMC2935300
125. Zarnegar, M. A., Chen, J., and Rothenberg, E. V. 2010. Cell type-specific activation and repression of PU.1 by a complex of discrete, functionally specialized cis-regulatory elements. *Mol. Cell. Biol.* **30**, 4922-4939. PMID: PMC2950536

126. Rothenberg, E. V., Zhang, J., and Li, L. 2010. Multilayered specification of the T-cell lineage fate. *Immunol. Rev.* **238**, 150-68. PMID: PMC2965335
127. Rothenberg, E. V. 2010. Lineage determination in the immune system. *Immunol. Rev.* **238**, 5-11. PMID: PMC3058842
128. Feng, N., Vegh, P., Rothenberg, E. V., and Yui, M. A. 2011. Lineage divergence at the first TCR dependent checkpoint: preferential $\gamma\delta$ and impaired $\alpha\beta$ T cell development in non-obese diabetic (NOD) mice. *J. Immunol.* **186**, 826-837. PMID:21148803. PMID: PMC4087166
129. Rothenberg, E. V. 2011. T cell lineage commitment: identity and renunciation. *J. Immunol.* **186**, 6649-6655. PMID: 21646301. PMID: PMC3111953
130. Rothenberg, E. V. and Zhang, J. A. 2012. T-cell identity and epigenetic memory. In: C. Murre (ed.) *Epigenetic Regulation of Lymphocyte Development*. Springer-Verlag, Berlin Heidelberg. *Curr. Top. Microbiol. Immunol.* **356**, 117-144. PMID: 21833836. PMID: PMC3679184.
131. Kueh, H. Y. and Rothenberg, E. V. 2012. Regulatory gene network circuits underlying T cell development from multipotent progenitors. *Wiley Interdiscip. Rev. Syst. Biol. Med.*, **4**, 79-102. PMID: 1976153. PMID: PMC3242926.
132. Zarnegar, M. A. and Rothenberg, E. V. 2012. Ikaros represses and activates PU.1 cell-type-specifically through the multifunctional *Sfp1* URE and a myeloid specific enhancer. *Oncogene* **31**, 4647-4654. PMID: 22231443. PMID: PMC3679182.
133. Rothenberg, E. V. 2012. Transcriptional drivers of the T-cell lineage program. *Curr. Opin. Immunol.* **24**, 132-138. PMID: PMC3319509
134. Rothenberg, E. V. and Champhekar, A. 2013. T lymphocyte developmental biology, in W. E. Paul (ed.), *Fundamental Immunology*, 7th edition, Lippincott, Williams and Wilkins, Philadelphia. Chapter 13, pp. 325-354.
135. Zhang, J. A., Mortazavi, A., Williams, B. A., Wold, B. J., and Rothenberg, E. V. 2012. Dynamic transformations of genome-wide epigenetic marking and transcriptional control establish T cell identity. *Cell* **149**, 467-482. PMID: 22500808. PMID: PMC3336965
136. Manesso, E., Chickarmane, V., Kueh, H. Y., Rothenberg, E. V., and Peterson, C. 2013. Computational modeling of T-cell formation kinetics: output regulated by initial proliferation-linked deferral of developmental competence. *J. R. Soc. Interface*, **10**, 20120774. PMID: 23152106. PMID: PMC3565808
137. Del Real, M. M., and Rothenberg, E. V. 2013. Architecture of a lymphomyeloid developmental switch controlled by PU.1, Notch, and GATA-3. *Development*, **140**, 1207-19. doi: 10.1242/dev.088559. PMID: 23444353. PMID: PMC3585658
138. Rothenberg, E. V. 2013. GATA-3 locks the door to the B-cell option. *Blood*, **121**, 1673-1674. PMID:23471221. PMID: PMC3591792
139. Yui, M. A., Feng, N., Zhang, J. A., Liaw, C. Y., Rothenberg, E. V., and Longmate, J. A. 2013. Loss of T cell progenitor checkpoint control underlies leukemia initiation in *Rag1*-deficient NOD mice. *J. Immunol* **190**, 3276-3288. PMID: 23440410. PMID: PMC3608698

140. Li, L., Zhang, J. A., Dose, M., Kueh, H. Y., Mosadeghi, R., Gounari, F., and Rothenberg, E. V. 2013. A far downstream enhancer for murine *Bcl11b* controls its T-cell specific expression. *Blood* **122**, 902-911. PMID: 23741008. PMCID:PMC3739036
141. Kueh, H. Y., Champhekar, A., Nutt, S. L., Elowitz, M. B., and Rothenberg, E. V. 2013. Positive feedback between PU.1 and the cell cycle controls myeloid differentiation. *Science* **341**, 670-673. PMID:23868921. PMCID:PMC3913367.
142. Rothenberg, E. V. 2013. Epigenetic mechanisms and developmental choice hierarchies in T-lymphocyte development. *Brief Funct Genomics* **12**, 512-524. PMID:23922132. PMCID: PMC3838197.
143. Rothenberg, E. V., Champhekar, A., Damle, S., Del Real, M. M., Kueh, H. Y., Li, L., and Yui, M. A. 2013. Transcriptional establishment of cell-type identity: dynamics and causal mechanisms of T-cell lineage commitment. *Cold Spring Harbor Symp. Quant. Biol.* **78**, 31-41. PMID: 24135716. PMCID: PMC3990665
144. Rothenberg, E. V. 2014. Transcriptional control of early T and B cell developmental choices. *Annu. Rev. Immunol.* **32**, 283-321. PMID:24471430. PMCID: PMC3994230
145. Rothenberg, E. V. 2014. The chromatin landscape and transcription factors in T cell programming. *Trends Immunol* **35**, 195-204. PMID: 24703587 PMCID: PMC4039984
146. Yui, M. A. and Rothenberg, E. V. 2014. Developmental gene networks: a triathlon on the course to T cell identity. *Nat. Rev. Immunol.* **14**, 529–545. Featured article. PMID: 25060579. PMCID: PMC4153685
147. Scripture-Adams, D. D., Damle, S. S., Li, L., Elihu, K. J., Qin, S., Arias, A. M., Butler, R. R. III, Champhekar, A., Zhang, J. A., and Rothenberg, E. V. 2014. GATA-3 dose-dependent checkpoints in early T cell commitment. *J. Immunol.* **193**, 3470-3491. PMID: 25172496. PMCID: PMC4170028
148. Champhekar, A., Damle, S. S., Freedman, G., Carotta, S., Nutt, S. L., and Rothenberg, E.V. 2015. Regulation of early T-lineage gene expression and developmental progression by the progenitor-cell transcription factor PU.1. *Genes Dev* **29**, 832-848. doi:10.1101/gad.259879.115. PMID: 25846797. PMCID: PMC4403258.
149. Rothenberg, E. V. 2016. Transcriptional regulation of T-cell lineage commitment. In (Ratcliffe, M. J. H., ed.) *Encyclopedia of Immunobiology*, **1**, 201-210. Elsevier (Academic Press). ISBN: 9780123742797 (print), 9780080921525 (ebook).
150. Rothenberg, E. V. 2015. Immune cell identity: perspective from a palimpsest. *Perspect Biol Med* **58**, 205-228. doi: 10.1353/pbm.2015.0020. PMID:26750603
151. Rothenberg, E. V., Ungerback, J., and Champhekar, A. 2015. Forging T-lymphocyte identity: intersecting networks of transcriptional control. *Adv. Immunol.* **129**, 107-174. doi:10.1016/bs.ai.2015.09.002. PMID: 26791859. PMCID: PMC4747653
152. Hood, L., and Rothenberg, E. V. 2015. Developmental biologist Eric H. Davidson, 1937-2015. *Proc. Natl. Acad. Sci. USA* **112**, 13423-13425. doi:10.1073/pnas.1518876112. PMID: 26499244. PMCID: PMC4640791.

153. Rothenberg, E. V. 2016. Eric Davidson: Steps to a gene regulatory network for development. *Devel. Biol.* **412**, S7-S19. doi: 10.1016/j.ydbio.2016.01.020. PMID:26825392. PMCID:PMC4828313
154. Rothenberg, E. V., Kueh, H. Y., Yui, M. A., and Zhang, J. A. 2016. Hematopoiesis and T cell specification as a model developmental system. *Immunol. Rev.* **271**, 72-97. doi: 10.1111/imr.12417. PMID: 27088908. PMCID:PMC4837658.
155. Van de Walle, I., Dolens, A.-C., Durinck, K., De Mulder, K., Van Loocke, W., Damle, S., Waegemans, E., De Medts, J., Velghe, I., De Smedt, M., Vandekerckhove, B., Kerre, T., Plum, J., Leclercq, G., Rothenberg, E. V., Van Vlierberghe, P., Speleman, F., and Taghon, T. 2016. GATA3 induces human T cell commitment by restraining Notch activity and repressing NK cell fate. *Nat. Commun.* **7**, 11171. doi: 10.1038/ncomms11171. PMID:27048872. PMCID: PMC4823830.
156. Kueh, H. Y., Yui, M. A., Ng, K. K.-H., Pease, S. S., Zhang, J. A., Damle, S. S., Freedman, G., Siu, S., Bernstein, I. D., Elowitz, M. B., and Rothenberg, E. V. 2016. Asynchronous combinatorial action of four regulatory factors activates *Bcl11b* for T cell commitment. *Nat Immunol.* **17**, 956-65. PMID: 27376470. PMCID: PMC4837658.
157. Manesso, E., Kueh, H. Y., Freedman, G., Rothenberg, E. V. and Peterson, C. 2016. Irreversibility of T-cell specification: insights from computational modelling of a minimal network architecture. *PLoS ONE* **11**, e0161260. doi: 10.1371/journal.pone.0161260. PMID:27551921. PMCID: PMC4995000.
158. Tsagaratou, A., González-Avalos, E., Rautio, S., Scott-Browne, J. P., Togher, S., Pastor, W. A., Rothenberg, E. V., Chavez, L., Lähdesmäki, H., and Rao, A. 2016. TET proteins regulate the lineage specification and TCR-mediated expansion of iNKT cells. *Nat Immunol.* **18**, 45-53. doi: 10.1038/ni.3630. PMID:27869820. PMCID: PMC5376256.
159. Longabaugh, W. J. R., Zeng, W., Zhang, J. A., Hosokawa, H., Jansen, C., Li, L., Romero-Wolf, M., Liu, P., Kueh, H. Y., Mortazavi, A., and Rothenberg, E. V. 2017. Bcl11b and combinatorial resolution of cell fate in the T-cell gene regulatory network. *Proc. Natl. Acad. Sci. USA* **114**, 5800-5807. doi: 10.1073/pnas.1610617114. PMID:28584128. PMCID: PMC5468679.
160. Hosokawa, H. and Rothenberg, E. V. 2017. Cytokines, transcription factors, and the initiation of T cell development. *Cold Spring Harbor Perspectives in Biology: Cytokines* (ed. W. J. Leonard and R. L. Schreiber), doi: 10.1101/cshperspect.a028621. PMID:28716889. PMCID: PMC5876153.
161. Rothenberg, E. V. 2017. Fitting structure to function in gene regulatory networks. *Hist. Philos. Life Sci.* **39**, 37. doi: 10.1007/s40656-017-0164-z. PMID: 29038942 PMCID: PMC5660880.
162. He, Z., Ma, J., Wang, R., Zhang, J., Huang, Z., Wang, F., Sen, S., Rothenberg, E.V., Sun, Z. 2017. A two-amino-acid substitution in the transcription factor ROR γ t disrupts its function in TH17 differentiation but not in thymocyte development. *Nat Immunol.* **18**, 1128-1138. PMID:28846085. PMCID: PMC5678981.
163. Hu, G., Cui, K., Fang, D., Hirose, S., Wang, X., Wangsa, D., Jin, W., Ried, T., Liu, P., Zhu, J., Rothenberg, E. V., and Zhao, K. 2018. Transformation of accessible chromatin

- and 3D nucleome underlies lineage commitment of early T cells. *Immunity* **48**, 227–242. doi: 10.1016/j.immuni.2018.01.013. PMID: 29466755. PMC5847274.
164. Hosokawa, H., Ungerbäck, J., Wang, X., Matsumoto, M., Nakayama, K. I., Cohen, S. M., Tanaka, T., and Rothenberg, E. V. 2018. Transcription factor PU.1 represses and activates gene expression in early T cells by redirecting partner transcription factor binding. *Immunity* **48**, 1119-1134. doi: 10.1016/j.immuni.2018.04.024. PMID: 29924977. PMCID: PMC6063530.
 165. Guerrero-Peña, F. A., Marrero Fernandez, P. D., Ing Ren, T., Yui, M., Rothenberg, E., and Cunha, A. 2018 . Multiclass Weighted Loss for Instance Segmentation of Cluttered Cells. 25th IEEE International Conference on Image Processing (ICIP), Athens, pp. 2451-2455. Publisher: IEEE. doi: 10.1109/ICIP.2018.8451187.
 166. Ungerbäck, J., Hosokawa, H., Wang, X., Strid, T., Williams, B. A., Sigvardsson, M., and Rothenberg, E. V. 2018. Pioneering, chromatin remodeling, and epigenetic constraint in early T-cell gene regulation by SPI1 (PU.1). *Genome Res.* **28**, 1508-1519. doi: 10.1101/gr.231423.117. PMID: 30171019. PMCID: PMC6169891.
 167. Hosokawa, H., Romero-Wolf, M., Yui, M. A., Ungerbäck, J., Quiloan, M. L. G., Matsumoto, M., Nakayama, K. I., Tanaka, T., and Rothenberg, E. V. 2018. Bcl11b sets pro-T cell fate by site-specific cofactor recruitment and by repressing *Id2* and *Zbtb16*. *Nat. Immunol.* **19**, 1427-1440. doi: 10.1038/s41590-018-0238-4. PMID:30374131. PMCID: PMC6240390.
 168. Ng, K. K. H., Yui, M. A., Mehta, A., Siu, S., Irwin, B., Pease, S., Hirose, S., Elowitz, M. B., Rothenberg, E. V., and Kueh, H. Y. 2018. A stochastic epigenetic switch controls the dynamics of T-cell lineage commitment. *eLife* **7**, e37851. doi: 10.7554/eLife.37851. PMID: 30457103. PMCID: PMC6245732.
 169. Rothenberg, E. V. 2019. Encounters across networks: Windows into principles of genomic regulation. *Mar. Genomics* **44**, 3-12. doi: 10.1016/j.margen.2019.01.003. PMID: 30661741. PMCID: PMC6431589
 170. Rothenberg, E. V., Hosokawa, H., and Ungerbäck, J. 2019. Mechanisms of action of hematopoietic transcription factor PU.1 in initiation of T-cell development. *Front. Immunol.* **10**, 228. (23 pp) doi: 10.3389/fimmu.2019.00228. PMID:30842770. PMCID: PMC6391351.
 171. Rothenberg, E. V. 2019. Causal gene regulatory network modeling and genomics: second-generation challenges. *J. Comp. Biol.* **26**, 703-718. doi: 10.1089/cmb.2019.0098. PMID: 31063008. PMCID: PMC6661971.
 172. Rothenberg, E. V. 2019. Programming for T-lymphocyte fates: modularity and mechanisms. *Genes Dev.* **33**, 117-1135. doi: 10.1101/gad.327163.119. PMID: 31481536. PMCID: PMC6719619.
 173. Zhou, W., Yui, M. A., Williams, B. A., Yun, J., Wold, B. J., Cai, L., and Rothenberg, E..V. 2019. Single-cell analysis reveals regulatory gene expression dynamics leading to lineage commitment in early T cell development. *Cell Systems* **9**, 321-337. doi: 10.1016/j.cels.2019.09.008. PMID: 3162968. PMCID: PMC6932747

174. Zhou, W., and Rothenberg, E. V. 2019. Building a human thymus: a pointillist view. *Immunity* **51**, 788-790. doi: 10.1016/j.immuni.2019.10.003. PMID: 31747579.
175. Rothenberg, E. V. 2019. Dynamic control of the T cell specification gene regulatory network. *Curr. Opin. Syst. Biol.* **18**, 62-76. doi: 10.1016/j.coisb.2019.10.012. PMID: 32051903. PMCID: PMC7015151.
176. Hosokawa, H., Romero-Wolf, M., Yang, Q., Motomura, Y., Levanon, D., Groner, Y., Moro, K., Tanaka, T., and Rothenberg, E. V. 2020. Cell-type specific actions of Bcl11b in early T-lineage and group 2 innate lymphoid cells. *J. Exp. Med.* **217**, e20190972. doi: 10.1084/jem.20190972. PMID: 31653691. PMCID: PMC7037248.
177. Romero-Wolf, M., Shin, B., Zhou, W., Koizumi, M., Rothenberg, E. V., and Hosokawa, H. 2020. Notch2 complements Notch1 to mediate inductive signaling that initiates early T cell development. *J. Cell Biol.* **219**, e202005093. Epub. 05 Aug 2020. doi: 10.1083/jcb.202005093. PMID: 32756905. PMCID: PMC7659720.
178. Wang, X. and Rothenberg, E. V. 2020. Illuminating the core of adaptive immunity — how the regulatory genome controls *Rag* chromatin dynamics. (Focus). *Sci. Immunol.* **5**, eabd6427. doi: 10.1126/sciimmunol.abd6427. PMID: 32887844.
179. Hosokawa, H. and Rothenberg, E. V. 2021. How transcription factors drive choice of the T cell fate. *Nat. Rev. Immunol.* **21**:162-176. epub 11 Sept 2020. doi: 10.1038/s41577-020-00426-6. PMID: 32918063. PMCID: PMC7933071.
180. Rothenberg, E. V. and Göttgens, B. 2021. How hematopoiesis research became a fertile ground for regulatory network biology as pioneered by Eric Davidson. *Curr. Opin. Hematol.* **28**, 1-10. doi: 10.1097/MOH.0000000000000628. PMID: 33229891. PMCID: PMC7755131.
181. Shin, B., Hosokawa, H., Romero-Wolf, M., Zhou, W., Masuhara, K., Tobin, V. R., Levanon, D., Groner, Y., Rothenberg, E. V. 2021. Runx1 and Runx3 drive progenitor to T-lineage transcriptome conversion in mouse T-cell commitment via dynamic genomic site switching. *Proc. Natl. Acad. Sci. USA* **118** (4), e2019655118. doi: 10.1073/pnas.2019655118. PMID: 33479171. PMCID: PMC7848575
182. Olariu, V., Yui, M. A., Krupinski, P., Zhou, W., Deichmann, J., Andersson, E., Rothenberg, E. V., and Peterson, C. 2021. Multi-scale dynamical modelling of T-cell development from an early thymic progenitor state to lineage commitment. *Cell Reports* **34**, 108622. doi: 10.1016/j.celrep.2020.108622. PMID: 33440162. PMCID: PMC7943435.
183. Rothenberg, E. V. 2021. Single-cell insights into the hematopoietic generation of T lymphocyte precursors in mouse and man. *Exp. Hematol.* **95**, 1-12. doi: 10.1016/j.exphem.2020.12.005. PMID: 33454362. PMCID: PMC8018899.
184. Sidwell, T. and Rothenberg, E. V. 2021. Epigenetic dynamics in the function of T-lineage regulatory factor Bcl11b. *Front. Immunol.* **12**, 669498. doi: 10.3389/fimmu.2021.669498. PMID: 33936112. PMCID: PMC8079813.
185. Rothenberg, E. V. 2021. Logic and lineage impacts on functional transcription factor deployment for T-cell fate commitment. *Biophys J.* **120**, 4162–4181. doi: 10.1016/j.bpj.2021.04.002. PMID: 33838137. PMCID: PMC8516641.

186. Hosokawa, H., Koizumi, M., Masuhara, K., Romero-Wolf, M., Tanaka, T., Nakayama, T., and Rothenberg, E. V. 2021. Stage-specific action of Runx1 and GATA3 controls silencing of PU.1 expression in mouse pro-T cells. *J. Exp. Med.* **218**, e20202648. doi: 10.1084/jem.20202648. PMID: 34180951. PMCID: PMC8241539.
187. Zhou, W., Gao, F., Romero-Wolf, M., Jo, S., Rothenberg, E. V. 2022. Single-cell deletion analyses show control of pro-T cell developmental speed and pathway by Tcf7, Spi1, Gata3, Bcl11a, Erg, and Bcl11b. *Sci. Immunol.* **7**, eabm1920. doi: 10.1126/sciimmunol.abm1920. PMID: 35594339. PMCID: PMC9273332.
188. Rothenberg, E. V. 2022. The Heart of the Machine: Construction of T Cell Identity, Made Accessible. *J. Immunol.* **209**, 1235-1236. doi: 10.4049/jimmunol.2200264. PMID: 36167356.
189. Rothenberg, E. V. 2022. Transcription factors specifically control change. *Genes Dev.* **36**, 1097-1099. doi: 10.1101/gad.350308.122. PMID: 36622807.
190. Shin, B. and Rothenberg, E. V. 2023. Multi-modular structure of the gene regulatory network for specification and commitment of murine T cells. *Front. Immunol.* **14**, 1108368. Epub Jan 31 2023. doi: 10.3389/fimmuno.2023.1108368. PMID: 36817475. PMCID: PMC9928580
191. Rothenberg, E. V. 2023. The β -selection step shapes T-cell identity. *Nature* **613**, 440-442. doi: 10.1038/d41586-023-00025-0. PMID: 36646871.
192. MacNabb, B. W. and Rothenberg, E. V. 2023. Speed and navigation control of thymocyte development by the fetal T cell gene regulatory network. *Immunol. Rev.* **315**, 171-196. doi: 10.1111/imr.13190. PMID: 36722494.
193. Shin, B., Zhou, W., Wang, J., Gao, F., and Rothenberg, E. V. Runx factors launch T cell and innate lymphoid programs via direct and gene network-based mechanisms. *Nat. Immunol.* in press 12 July 2023. doi: 10.1038/s41590-023-01585-z.

Preprints:

Spolski, R., Li, P., Chandra, V., Shin, B., Liu, C., Oh, J., Ren, M., Enomoto, Y., West, E. E., Christensen, S., Wan, E. C. K., Ge, M., Lin, J.-X., Vijayanand, P., Rothenberg, E. V., and Leonard, W. J. Distinct super-enhancer elements differentially control *Il2ra* gene expression in a cell-type specific fashion. bioRxiv 2022.11.18.516445; doi: 10.1101/2022.11.18.516445

Schulte, S. L., Shin, B., Rothenberg, E. V., and Pierce, N. A. Multiplex, quantitative, high-resolution imaging of protein:protein complexes via hybridization chain reaction. bioRxiv 2023.07.22.550181; doi: <https://doi.org/10.1101/2023.07.22.550181>.

NCBI My Bibliography (includes book chapters only after 2002):

<https://www.ncbi.nlm.nih.gov/myncbi/103jFp70Ymx/bibliography/public/>