

CURRICULUM VITAE

Titia de Lange

Born: November 11, 1955 in Rotterdam, The Netherlands

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Education

- 1981 Master's equivalent: Doctoraal examen, highest honors. Univ. Amsterdam and NIMR, Mill Hill, UK. Thesis: Chromatin structure of the human β -globin gene locus. Advisor: Richard A. Flavell
- 1981 - 1985 Ph.D. Biochemistry, summa cum laude equiv., Univ. of Amsterdam and The Netherlands Cancer Institute, Amsterdam. Thesis: Activation and transcription of surface antigen genes in trypanosomes. Advisor: Piet Borst

Appointments

- 1981 - 1985 Graduate teaching assistant, Department of Biochemistry, Univ. of Amsterdam
- 1985 - 1990 Postdoctoral fellow with Harold E. Varmus at UCSF
- 1990 - 1991 University Fellow, Rockefeller University
- 1991 - 1994 Assistant Professor, Rockefeller University
- 1994 - 1997 Associate Professor, Rockefeller University
- 1997 - Professor, Rockefeller University
- 1999 - Leon Hess Professor, Rockefeller University
- 2006- 2011 Associate Director, Anderson Center for Cancer Research, Rockefeller University
- 2010- American Cancer Society Research Professor
- 2011- Director, Anderson Center for Cancer Research, Rockefeller University

Awards

- 1980 Dr. Catharine van Tussenbroek Award
- 1985 - 1987 Christiaan and Constantijn Huygens Award
- 1987 - 1995 Lucille P. Markey Trust Scholar Award
- 1993 - 1998 The Irma T. Hirschl - Monique Weill-Caulier Trust Award
- 1995 - 2000 Rita Allen Award
- 1997 - 2002 Burroughs Wellcome Toxicology Scholar Award
- 1997 - 1999 New York Community Trust Cancer Research Award
- 2000 - 2004 Ellison Medical Foundation Senior Scholar Award
- 2001 Paul Marks Prize for Cancer Research (with Elledge, Kaelin, and Wang)
- 2004 AACR Charlotte Friend Memorial Award
- 2005 NIH MERIT award (GM)
- 2005 NIH Director Pioneer Award
- 2007 Rockefeller University Award for Excellence in Teaching
- 2008 Third Annual Massachusetts General Hospital Cancer Center Prize
- 2010 AACR G.H.A. Clowes Memorial Award
- 2011 Vilcek Prize in Biomedical Sciences
- 2012 Rosalind E. Franklin Award, National Cancer Institute

2012	Vanderbilt Prize in Biomedical Science
2012	Dr. H.P. Heineken Prize for Biochemistry and Biophysics, Royal Netherlands Academy for Arts and Sciences
2013	Breakthrough Prize in Life Science
2013	Katharine Berkan Judd Award, Memorial Sloan-Kettering Cancer Center
2013	Jill Rose Award, Breast Cancer Research Foundation
2014	Canada Gairdner International Award
2016	NCI, Outstanding Investigator Award
2018	ASBMB Bert and Natalie Vallee Award in Biomedical Science
2018	Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Research
2019	Mike Hogg Award, MD Anderson Cancer Center
2022	Karl Friedrich Bonhoeffer Award, MPI Gottingen

Honorary Degrees

2003	University of Utrecht, The Netherlands
2015	University of Chicago
2019	University of Groningen, The Netherlands

Elected Memberships of Professional Societies

2000	Member/Foreign Correspondent of the Royal Dutch Academy of Sciences
2000 - 2001	President of the Harvey Society
2001	Foreign Member of the European Molecular Biology Organization
2005	Fellow of the New York Academy of Sciences
2006	Foreign Associate of the National Academy of Sciences, USA
2006	Fellow of the American Society for Microbiology
2007	Fellow of the American Academy for Arts and Sciences
2007	Fellow of the American Association for the Advancement of Science
2010	Institute of Medicine of the National Academy of Sciences, USA
2013	Foreign Member of the Koninklijke Hollandsche Maatschappij der Wetenschappen (the oldest Dutch Royal Academy)
2014	Fellow of the AACR Academy
2017	Honorary member, New York Academy of Sciences

Keynote and Named Lectures

2000	Keynote, "Telomeres and Telomerase" meeting, Montreal, Canada
2001	Keynote, "ADPR 2001" meeting, NYC
2001	Keynote, "Genes and Cancer" meeting Warwick, UK
2002	Keynote, Fifth Annual Cell and Dev. Biol. Symp., U. Penn.
2004	Keynote, Dutch Tumor Biology Meeting
2004	Keynote, IMP meeting, Vienna
2004	Keynote, AACR meeting on Role of Telomeres and Telomerase in Cancer
2005	Reginal Harris Lecturer. CSH Symp. Quant. Biol.
2006	EMBO Lecture; Telomeres and the DNA damage response, Villars, Switzerland
2006	Tolmach Lecture; Telomeres and DNA repair Symposium Wash. U., St. Louis
2007	Keynote, Gordon Conference on Mammalian DNA Repair
2007	EMBO Lecture; 32 nd Ann. FEBS Congress. Vienna
2007	Frederick Ruysch Lecture, Amsterdam Medical Center
2007	Mendel Lecture, Brno, Czech Republic
2008	Keynote, DNA Repair Symposium, Univ. Pittsburgh
2009	Keynote, Keystone Symposium on Genome Instability and DNA repair
2009	Rupert E. Billingham Lecture, UTSW
2009	Alexander Cruickshank Lecture, Gordon Conference on Chromosome Dynamics
2010	Harvey Lecture, Harvey Society, New York

2010	Osborne Lecture, Univ. Connecticut
2010	Marguerite Vogt Lecture, Salk Institute
2010	“Speaker of the year” Lecturer, Netherlands Soc. Biochem. Mol. Biol.
2011	Rose Winer Levin Lecture, Dana Farber Cancer Institute
2011	Keynote, Gordon Conference on Cell Growth and Proliferation
2012	Cancer Biology Distinguished Lecture, Rockefeller University
2012	Keynote, EMBO meeting on Telomeres and the DNA damage response
2012	Keynote, Gordon Conference on Mutagenesis
2013	Distinguished Cancer Researcher Lecture, USCF
2013	Cynthia and Alexander Tseng, Jr., MD Memorial Lecture, Stanford University
2014	Don W. Fawcett Lectures (2), Department Cell Biology, Harvard Med School
2014	Nicholson Lecture, Nobel Forum, Karolinska Institute
2014	Jean Weigle Lecture, Univ. Geneva
2014	Keynote, EMBO meeting on Telomeres
2016	Cyma Rubin Lecture, Weill Cornell Medical School
2016	George Palade Lecture, Yale
2016	Keynote, Abcam meeting on Recombination
2016	Keynote, Boston Mitosis meeting, Whitehead Institute, MIT
2016	Keynote, Rita Allen Foundation 40 th Anniversary meeting
2016	Keynote, Frontiers in DNA Repair, Berlin
2016	Keynote, Telomere Biology in Health and Disease, Inst. Curie, Paris
2017	Keynote, Abcam meeting on Genome Instability, Boston
2017	Keynote, MSKCC Geoffrey Beene Center Retreat
2019	Kathleen Dexter McCormick Distinguished Lecture, Stanford University
2019	Keynote, GRC on Nucleic Acids
2019	Zubrod Memorial Distinguished Lecture, Miller School of Medicine, Univ. Miami
2019	Mike Hogg Award Lecture, MD Anderson Cancer Center
2019	Kapteyn Lecture, University of Groningen, Netherlands
2020	Mark S. Brower Lecture, Weill Cornell Medical College, NYC
2021	Joseph L. Mayberry Lecture, Northwestern University Feinberg School of Medicine
2022	Karl Friedrich Bonhoeffer Award Lecture, MPI, Gottingen

Scientific advisory boards and selection committees

2001-	Board of Scientific Consultants of Memorial Sloan-Kettering Cancer Center
2001-	External Advisory Committee for the Endowed Scholars Program in Biomedical Sciences at UT Southwestern Medical School at Dallas
2002-2009	Trustee, Cold Spring Harbor Laboratory, LI
2002-2008	Scientific Advisory Board, Institute for Molecular Pathology, Vienna
2003-2011	Scientific Advisory Board, MIT Cancer Center
2003-2009	Paul Marks Award Selection Committee (Chair 2009)
2003-	Pearl Meister Greengard Prize Selection Committee
2004	Overseers’ Committee for Dept. MCB at Harvard
2004	Search committee for Director of IMP, Vienna
2005-2012	Scientific Advisory Board, CRUK, Clare Hall and Lincoln’s Inn Field (LRI)
2005-	Lasker Award Jury
2005-	Scientific Advisory Board, Dutch Cancer Institute
2006-	Executive Committee of the Starr Cancer Consortium
2008-2016	Advisory Council, Dept. Mol. Biol., Princeton University
2009	W.M. Keck Foundation, Subcommittee on Evaluation Cell Biology
2010-2013	AACR Special Conference Committee
2010-2017	NAS section 41; search and screen committee
2011-2014	Scientific Advisory Committee, Ludwig Institute for Cancer Research

2011-	Selection Committee Vilcek Prize in Biomedical Sciences
2012-2017	Biomedical Scientific Advisory Board, Vanderbilt University
2012-2016	Executive Committee American Italian Cancer Foundation
2013	Search committee for Director of IMP, Vienna
2013	External advisor, search committee for Director of SKI, MSKCC
2013-	Wiley Prize Jury (chair since 2017)
2014-2017	Selection Committee NAS Award in Molecular Biology
2014-	Selection Committee Breakthrough Prize in Life Sciences
2015-	Board member, Vilcek Foundation
2015-	Selection committee, Dr. H.P. Heineken Prize for Biochemistry and Biophysics
2016-	Member, National Advisory Committee of the Pew Scholars Program in Biomedical Sciences
2017	Scientific Advisory Committee, Basic Science Division, Fred Hutchinson Cancer Center
2017	Chair, NAS Kovalenko Medal selection committee
2018-	Pershing Square Sohn Prize selection committee
2019-	Fudan-Zongzhi Prize Award committee
2019	NAS Kovalenko Medal selection committee

Editorial Boards

1997-	Molecular and Cellular Biology
2000-	Trends in Biological Science
2004 -2007	PLoS Biology
2008-	Genes and Development
2009-	Nucleus
2010-2018	Journal of Cell Biology
2011-	Current Opinion in Genetics and Development

Commercial enterprises

2010-2015	Director, Nestle SA, Vevey, Switzerland
2018-	Scientific Advisory Board, Calico Life Sciences, San Francisco

BIBLIOGRAPHY (Reviews, book chapters, and commentaries in italics.)

1. S. Hueting, **T. de Lange**, D. Tempest (1978) Properties and regulation of synthesis of the glycerol dehydrogenase present in *Klebsiella aerogenes* NCTC 418, growing in chemostat culture. FEMS 4: 195-198.
2. S. Hueting, **T. de Lange**, D.W. Tempest (1979) Energy requirement for maintenance of the transmembrane potassium gradient in *Klebsiella aerogenes* NCTC 418: a continuous culture study. Arch. Microbiol. 123: 183-188.
3. F. van der Mark, **T. de Lange**, H.F. Bienfait (1981) The role of ferritin in developing primary bean leaves under various light conditions. Planta 153: 338-342.
4. **T. de Lange** and P. Borst (1982) Genomic environment of the expression-linked extra copies of genes for surface antigens of *Trypanosoma brucei* resembles the end of the chromosome. Nature 299: 451-453.
5. L.H.T. van der Ploeg, D. Valerio, **T. de Lange**, A. Bernards, P. Borst, F.G. Grosveld (1982) An analysis of cosmid clones of nuclear DNA from *Trypanosoma brucei* shows that the genes for Variant Surface Glycoprotein are clustered in the genome. Nucl. Acids Res. 10: 5905-5923.
6. L.H.T. van der Ploeg, A.Y.C. Liu, P.A.M. Michels, **T. de Lange**, P. Borst, H.K. Majumder, H. Weber, G.H. Veeneman, J.C. van Boom (1982) RNA splicing is required to make the messenger RNA for a Variant Surface Glycoprotein in trypanosomes. Nucl. Acids Res. 10: 3591-3604.
7. **T. de Lange**, A.Y.C. Liu, L.H.T. van der Ploeg, P. Borst, M.C. Tromp, J.C. van Boom (1983) Tandem repetition of the 5' mini-exon of Variant Surface Glycoprotein genes. Cell 34: 891-900.
8. **T. de Lange**, J.M. Kooter, P.A.M. Michels, P. Borst (1983) Telomere conversion in trypanosomes. Nucl. Acids Res. 11: 8149-8165.
9. P. Borst, A. Bernards, L.H.T. van der Ploeg, P.A. Michels, A.Y. Liu, **T. de Lange**, J.M. Kooter (1983) The control of variant surface antigen synthesis in trypanosomes. Eur. J. Biochem. 137: 383-389.
10. D. Kioussis, D. Vanin, **T. de Lange**, R.A.F. Flavell, F.G. Grosveld (1983) β -globin gene inactivation by DNA translocation in γ/β -thalassemia. Nature 306: 662-666.
11. A. Bernards, **T. de Lange**, P.A.M. Michels, M.J. Huisman, P. Borst (1984) Two modes of activation of a single surface antigen gene of *Trypanosoma brucei*. Cell 36: 163-170.
12. **T. de Lange**, P.A.M. Michels, H.J.G. Veerman, A.W.C.A. Cornelissen, P. Borst (1984) Many trypanosome messenger RNAs share a common 5' terminal sequence. Nucl. Acids Res. 12: 3777-3790.
13. J.M. Kooter, **T. de Lange**, P. Borst (1984) Discontinuous transcription in trypanosomes. EMBO J. 3: 2387-2392.
14. **T. de Lange**, T.M. Berkvens, H.G. Veerman, A.C.C. Frasch, J.D. Barry, P. Borst (1984) Comparison of the genes coding for the common 5' terminal sequence of messenger RNAs in three trypanosome species. Nucl. Acids Res. 12: 4431-4443.
15. **T. de Lange**, J.M. Kooter, J. Luirink, P. Borst (1985) Transcription of a transposed trypanosome surface antigen gene starts upstream of the transposed segment. EMBO J. 4: 3299-3306.
16. A. Bernards, L.H.T. van der Ploeg, W.C. Gibson, P. Leegwater, F. Eijgenraam, **T. de Lange**, P. Weyers, J. Calafat, P. Borst (1986). Rapid change of the repertoire of Variant Surface Glycoprotein genes in trypanosomes by gene duplication and deletion. J. Mol. Biol. 190: 1-10.
17. M. Imboden, B. Blum, **T. de Lange**, R. Braun, T. Seebeck (1986) The tubulin mRNAs of *Trypanosoma brucei*. J. Mol. Biol. 188: 393-402.
18. **T. de Lange** (1986) The molecular biology of antigenic variation in trypanosomes: Gene rearrangements and discontinuous transcription. Intern. Rev. Cytol. 99: 85-113.
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20. J. Stone, **T. de Lange**, G. Ramsay, E. Jacobovits, J.M. Bishop, H.E. Varmus, W.M.F. Lee (1987) Definition of regions in human c-myc that are involved in transformation and nuclear localization. Mol. Cell. Biol. 7: 1697-1709.

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23. **T. de Lange** (1992) Human telomeres are attached to nuclear matrix. EMBO J. 11: 717-724.
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32. **T. de Lange** (1995) *Telomere dynamics and genome instability in human cancer*. In: Telomeres. E.H. Blackburn and C.W. Greider, eds. CSH press, pp. 265-293.
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39. B. van Steensel and **T. de Lange** (1997) Control of telomere length by the human telomeric protein TRF1. Nature 385: 740-744.
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41. **T. de Lange** (1998) *Ending up with the right partner*. Nature 392: 753-754.
42. J. Griffith, A. Bianchi, **T. de Lange** (1998) TRF1 promotes parallel pairing of telomeric DNA in vitro. J. Mol. Biol. 278: 79-88.
43. B. van Steensel, A. Smogorzewska, **T. de Lange** (1998) TRF2 protects human telomeres from end-to-end fusions. Cell 92: 401-413.
44. **T. de Lange** (1998) *Telomeres and senescence: ending the debate*. Science 279: 334-335.
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46. S. Smith, I. Gariat, A. Schmitt, **T. de Lange** (1998) Tankyrase, a poly(ADP-ribose)polymerase at human telomeres. *Science* 282: 1484-1488.
47. L. Zhu, S. Smith, **T. de Lange**, M. F. Seldin. (1999) Chromosomal mapping of the Tankyrase gene in human and mouse. *Genomics* 57: 320-321.
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54. A. Bianchi, R. M. Stansel, L. Fairall, J. D. Griffith, D. Rhodes, **T. de Lange** (1999) TRF1 binds a bipartite telomeric site with extreme spatial flexibility. *EMBO J.* 18: 5735-5744.
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71. H. Takai, A. Smogorzewska, **T. de Lange** (2003) DNA damage foci at dysfunctional telomeres. *Curr. Biol.* 13: 1549-1556.

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73. **T. de Lange** (2003) *Protection and maintenance of human telomeres.* Encyclopedia of the Human Genome. D. Cooper, editor. Nature Publishing group. McMillan press.
74. B. Li and **T. de Lange** (2003) Rap1 affects the length and heterogeneity of human telomeres. Mol. Biol. Cell 14: 5060-5068.
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77. J. Z.-S. Ye and **T. de Lange** (2004) TIN2 is a tankyrase 1 PARP-modulator in the TRF1 telomere length control complex. Nature Genet. 36: 618-623.
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82. J. Karlseder, K. Hoke, O. Mirzoeva, C. Bakkenist, M. Kastan, J.H.J. Petrini, **T. de Lange** (2004) The telomeric protein TRF2 binds the ATM kinase and can inhibit the ATM-dependent DNA damage response. PLoS Biology 2: 1150-1157.
83. J. Silverman, H. Takai, S.B.C. Buonomo, F. Eisenhaber, **T. de Lange** (2004) Human Rif1, ortholog of a yeast telomeric protein, is regulated by ATM and 53BP1 and functions in the S-phase checkpoint. Genes and Development 18: 2108-2119.
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86. J.J.L. Jacobs and **T. de Lange** (2004) Significant role for p16^{INK4a} in p53-independent telomere-directed senescence. Curr. Biol. 14: 1-20.
87. D. Hockemeyer, A. J. Sfeir, J.W. Shay, W.E. Wright, **T. de Lange** (2005) POT1 protects telomeres from a transient DNA damage response and determines how human chromosomes end. EMBO J. 24: 2667-2678.
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89. **T. de Lange** (2005). *Shelterin: the protein complex that shapes and safe-guards human telomeres.* Genes and Development 19: 2100-2110.
90. **T. de Lange** (2005) *Mammalian telomeres.* In "Telomeres" T. de Lange, V. Lundblad, and E.H. Blackburn eds., CSH press.
91. J.J.L. Jacobs and **T. de Lange** (2005) p16^{INK4a} as a second effector of the telomere damage response. Cell Cycle 4: 1364-1368.
92. **T. de Lange** (2005) *Telomere-related genome instability in cancer.* CSH Symp. Quant. Biol. 70: 197-204.
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