CURRICULUM VITAE

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Education

1993	**Master** Biomedical Sciences, Leiden University, NL Specialisation: Immunology
1998 (November 27)	**Doctorate**, University of Amsterdam Supervisors: R.A.W. van Lier and M.H.J. van Oers Thesis: Cell-surface receptors regulating normal and malignant B-cell function

Work experience since completion of PhD

1999 - 2001	**Post-doctoral fellow** from the Dutch Cancer Society at the Biochemistry Institute, University of Lausanne, Switzerland. Groupleader: J.T. Tschopp.
2001 - 2005	**Post-doctoral fellow**, Division of Molecular Biology, Netherlands Cancer Institute, Amsterdam, The Netherlands. Groupleader: R.H. Medema.
2005 - 2006	**Assistant Professor** and Principal Investigator in the Dept. of Medical Oncology, Laboratory of Experimental Oncology, University Medical Center Utrecht, The Netherlands.
2006 - 2013	**Associate Professor** and staff member in the Dept. of Medical Oncology, Laboratory of Experimental Oncology, University Medical Center Utrecht, The Netherlands.
2013 - present	**Professor** of "Genomic Instability" in the Dept. of Medical Oncology, and Since Jan. 1st 2014 in the Dept. of Molecular Cancer Research, University Medical Center Utrecht, The Netherlands.

Composition of current research group

Name	Position	Funding
M. Vromans	Research Technician	KWF, NWO-Vici
A. Bramer	Research Technician	KWF
R. Hengeveld	PhD student	KWF
A. Meppelink	PhD student	UU Stimulation Grant
S. Hindriksen	PhD student	KWF
I. Adriaans	PhD student	NWO-Vici
S. de Vries	PhD student	UMCU grant
M. Hadders	Post-doctoral fellow	NWO-Vici, NWO-Veni

Alumni

Gerben Vader, PhD student (2002-2007). Currently: Groupleader in the Max Planck Institute of Mol Physiology, Dortmund.
André Maia (visiting PhD student 2007-2008). Currently: Postdoc at IBMC, Porto.
Maike van der Waal, PhD student (2008-2012). Currently: Medical Scientific Liaison, Novartis.
Silvie Trantirkova, post-doc (2009-2012). Currently: Scientist, Central Eur. Instit. Tech., Brno.
Armando van der Horst, post-doc (2009-2013). Currently: Resident in Clinical Chemistry, NL

Summary of research

Research in my group is focussed on understanding the molecular mechanisms that ensure error-free propagation of the genome during cell division, and how defects in these mechanisms contribute to chromosomal instability in cancer cells.

Research highlights include an explanation for how the duplicated chromosomes attach to the opposite poles of the mitotic spindle, essential for successful cell division. The chromosomal passenger complex (CPC) regulates chromosome-spindle connections by phosphorylation of substrates that mediate these attachments. My group demonstrated how the non-enzymatic subunits of the CPC assist Aurora B, the core kinase of the complex, in reaching these substrates (*Mol. Biol Cell*, *EMBO Rep*, *J. Cell Biol*, *2006*; *Cell 2008*). In addition, we showed that two positive feedback loops, one between Aurora B and Haspin kinase and the other between Aurora B and the checkpoint kinase Mps1, promote the accumulation of the CPC at the centromere which is required for error-free chromosome segregation (*Curr. Biol 2011, EMBO Rep. 2012*). Moreover, we demonstrated that Aurora B kinase activity at the centromere is restrained by Sgo1-PP2A to promote proper chromosome-spindle connections *(Cell Rep. 2015a).*

Together with G. Kops, my group provided compelling evidence for a direct role of the CPC in the function of the mitotic checkpoint, a surveillance mechanism that inhibits anaphase onset until all chromosomes are properly connected to the mitotic spindle (*Mol. Biol Cell 2007; Cell Div. 2008, Nature Comm., 2011*). This finding challenged the prevailing idea that the mitotic checkpoint simply fails to be silenced because the CPC detaches microtubules from chromosomes when they do not connect the duplicated chromosomes to opposite poles of the cell.

Furthermore we were the first to generate a functional analog-sensitive Aurora B kinase mutant that allowed us to find novel substrates of the CPC in collaboration with the group of K. Shokat from UCSF *(Mol Cell Proteomics, 2012).* When following up one of these substrates, Rif1 – a protein with a known function in DNA repair- we revealed a thus far unrecognized function for this protein in the resolution of ultrafine DNA bridges anaphase that are the result of persistent DNA catanenes *(Dev Cell, 2015).*

Together with our collaborators from the University of Pennsylvania, we discovered how the CPC is able to discriminate between 'right' and 'wrong'. Why does it sever error prone spindle-chromosome attachments, while it allows the stabilization of attachments that result in equal segregation? (*Science, 2009)*. Current research includes the understanding of how nuclear and cytoplasmic division are coordinated (*Cell Rep. 2015b*), and whether a deregulated CPC can explain chromosomal instability in cancer *(Biochem Soc Trans, 2015).*

Collaborations

The variety of approaches we are using and the competitive nature of our research ask for close collaboration within multiple disciplines. Locally, nationally and internationally we invested in a collaborative network with different research groups, allowing for rapid progress of the work and a strong competitive position in the field.

Local:
Geert Kops (Hubrecht, mitotic checkpoint)
Edwin Cuppen (UMCU, CPCT)
Hugo Snippert (UMCU Organoids)
Bas Ponsioen (FRET microscipy)
Ger Arkesteijn (Vet. Medicine, FACS-sorting of chromosomes)

National:
René Medema (NKI; cell cycle checkpoints)
Esther Baart (Erasmus MC; CPC in zygotes)
Benjamin Rowland (NKI; cohesion)
Marcel van Vugt (UMCG, resolution UFBs)

International:
M. Lampson (Philadelphia, USA: In vivo imaging of Aurora B kinase activity)
J. DeLuca (Denver, USA: Aurora B kinetochore substrates)
K. Shokat (San Francisco, USA: Chemical genetics)
D. Compton (Hanover, USA: CIN and phosphatases)
J. Higgins (Boston, USA: Aurora B centromere targeting)
P. Moore (Pittsburgh, USA: viruses and cancer)
A. A. Jeyaprakash (Edinburgh, UK: structure of Sgo1/CPC and MKLP2/CPC)

International activities

Organization of international meeting
Organizer of the EMBO Workshop on Chromosome Segregation and Aneuploidy 22-26 June 2013 at Nijenrode Estate, Breukelen

International seminars and meetings as speaker (since 2001)
2003 -Oral presentation, Salk Institute Cell Cycle meeting, San Diego, USA
2006 -Invited seminar, University of Sussex, Brighton, UK
2007 -Invited Speaker, 32nd FEBS Congress: Molecular Machines, Vienna, Austria
2008 -Invited seminar, Harvard Medical School, Boston, USA
-Invited seminar, University of Pennsylvania, Philadelphia, USA
-Oral presentation CSH - Cell Cycle meeting, Cold Spring Harbor, USA
-Invited Frontiers of Science Seminar, Turku, Finland
-Invited seminar NKI/AVL Seminar, Amsterdam, NL
2009 -Oral presentation, Abcam Mitosis and Cancer meeting, Amsterdam, NL
-Invited seminar, South Bohemian University, Budweis, Czech Republic
-Invited seminar, University of Lisbon, Portugal
-Invited speaker Dynamic Kinetochore Workshop, London, UK
-Invited speaker FASEB Summer Research Conference, Lucca, Italy
2010 -Invited seminar, Wellcome Trust Centre for Cell Biology, Edinburgh, UK
-Invited speaker TAT conference, Washington DC
-Invited seminar, Univ. of Porto, Portugal
-Invited speaker EMBO Workshop, Edinburgh, UK
-Invited seminar, College of Life Sciences, Univ. of Dundee, UK
2011 -Invited speaker, 2nd Dynamic Kinetochore Workshop, Vienna, Austria
2012 -Invited speaker, FASEB Summer Research Conference, Colorado, USA
-Oral presentation, EMBO workshop, Barcelona, Spain
-Invited seminar, University of Geneva, Switzerland
-Invited seminar, Max Planck Institute, Dortmund
-Invited seminar, University of Konstanz, Germany
2013 -Invited speaker, 3rd Dynamic Kinetochore Workshop, Porto, Portugal

-Invited speaker, 108th International Titisee Conference, Germany
2014 -Invited speaker, KU Leuven, Belgium
-Invited speaker, The Dynamic Cell, Cambridge, UK
-Invited speaker, Nordik Mitosis Network, Denmark
2015 -Invited speaker, 4th Dynamic Kinetochore Workshop, Copenhagen, Denmark
2016 -Invited session chair and speaker: Cold Spring Harbor Cell Cycle Meeting, USA
-Invited speaker, EMBO Workshop: Chromosome Segregation and Aneuploidy, Ireland

Examiner and opponent of international PhD theses

2008 - L. Ahonen, Univ. of Turku, Finland
2009 - E. Bourhis, Univ. de Provence, Marseille, France
2010 - A. Maia, Univ. of Porto, Portugal
2011- 2013 - V. Krenn (External co-supervisor for the European School of Molecular Medicine, at the IFOM-IEO Campus, Milan, Italy)
2014 - J. Qian, KU Leuven, Belgium
- F. Gohard, Unversity of Edinburgh, UK
- K. Schleicher, University of Dundee, UK
2016 - C. Smith, University of Warwick, UK

Talent, Teaching and Outreach

Talent

2008 Member of the NWO Mosaic evaluation committee. (Mosaic is an incentive of NWO that aims to stimulate and support highly talented undergraduate students from ethnic minority groups to start a PhD).

2013 - 2015 Member selection committee UMCU Clinical Research Talent Fellowship

2014 and 2015 Member of the UU Vici advisory committee.

2015 - present Member of the Alexander Suerman selection committee. Alexander Suerman is an MD/PhD program sponsored by the UMCU for young scientific top talents.

2015 Member of the NWO Rubicon evaluation committee. (Rubicon is an incentive of NWO that aims to support highly talented recently graduated PhD students in gaining research experience in a foreign top research institute).

Teaching

2006 - present Co-organizer and teacher of the yearly CSND master course (Utrecht University): "Chromosome Segregation, Aneuploidy and Cancer".

2009 - present Program coordinator, and since 2013 Program Director of the "Clinical and Translational Oncology" PhD program of the Graduate School of Life Sciences (GS-LS), Utrecht University (www.cto-phd.nl).

2011 - present Science coordinator and teacher for the Selective Utrecht Medical Master (SUMMA)

2011 - present Teacher at the Utrecht Summer School "Molecular Mechanisms in Cancer".

2013 - present Member of the Executive Board of Studies of the Graduate School of Life Sciences of Utrecht University.

2014 - present Teacher of 1st year Medical Students (GZC 1)

2014 - present Teacher of 2nd and 3rd year Biomedical Students (MMK, Clinical Oncology)

2015 - present	Member of the Educational Board of the UMCU
2015 - present	Teacher "NvvO Basiscursus Oncologie"

Outreach

2012	Appearance in the RTL 4 television program: "Lang zullen we leven" to disseminate and promote cancer research performed in the UMCU (http://vizoo.nl/rtl4/lang-zullen-we-leven/71415.html).
2014	Research tour for investors of the Dutch Cancer Society
2015	"Professoren op het podium" (Professors on Stage), Theater Purmaryn, Purmerend. Research debate for layman audience.
2015	Hosting and teaching tumor biology to high school students of the Junior College Utrecht (JCU).

Other academic activities

2005 - present	Reviewer for several scientific journals, including EMBO J, Journal of Cell Biology, Current Biology, Nature Cell Biology, Science, Cancer Cell.
2005 - present	Reviewer for grants from the Dutch Cancer Society, Netherlands Organisation for Scientific Research, Wellcome Trust (UK), Health Research Board (HRB, Ireland), FCT-Welcome II program (Portugal), European Research Council (ERC).
2015 - present	Member management team of the UMCU focus area: Cancer.
2015/2016	Denktank IMPACT indicatoren onderzoek, UMCU

Funding

1999-2001	Fundamental and Pre-clinical Research Fellowship of the Dutch Cancer Society - The role of cellular inhibitor of apoptosis proteins (IAPs) in tumor growth.	Two-year post-doc salary and coverage of living expenses abroad
2002-2006	NKB/KWF (Dutch Cancer Society) project grant: NKI 2002-2764 - The role of Survivin in cell cycle regulation and lymphomagenesis.	€ 500,000
2005-2012	Vidi Innovational Research Incentive Scheme (ZonMW: 917.66.332) - The role of Survivin in chromosome stability and cancer.	€ 600,000
2006-2010	Aspasia (NWO: 015.002.012) - A financial incentive of the Netherlands Organisation of Scientific Research to promote talented women in science to associate professor or to full professor.	€ 50,000
2007-2009	Testing of a novel oral Aurora kinase inhibitor (Pfizer Inc.)	€ 153,000
2009-2013	NKB/KWF project grant: UU 2009-4311 - The role of the chromosomal passenger complex in spindle checkpoint control, chromosome stability and cancer.	€ 545,700
2011-2015	NKB/KWF project grant: UU 2011-5134 - Tumor-associated mutations in the Chromosomal Passenger Complex and their consequence to chromosomal stability.	€ 549,800
2011-2015	UU Stimulation Grant	€ 250,000
2012-2017	Vici Innovational Research Incentive Scheme (ZonMW: 918.12.610) How to maintain a stable genome? A Passenger Perspective.	€ 1,500,000

2013-2018	Aspasia (NWO: 015.008.005): 50% of this incentive is used for the UMC diversity program.	€ 100,000
2014-2019	UMCU Grant	€ 250,000
2015	NWO - Open Access Publication Subsidy - 1	€ 4,700
2015	NWO - Open Access Publication Subsidy - 2	€ 4,700

Publications

1. Hengeveld RC, de Boer HR, Schoonen PM, de Vries EG, **Lens SM*#**, van Vugt MA*. Rif1 is required for resolution of ultrafine DNA bridges in anaphase to ensure genomic stability. *Dev Cell* **34**: 466 (2015). **Equal contribution*, *#Corresponding author*.

2. Van de Werken C, Avo Santos M, Laven JS, Eleveld C, Fauser BC, **Lens SM**, Baart EB. Chromosome segregation regulation in human zygotes: altered mitotic histone phoshophorylation dynamics underlying centromeric targeting of the chromosomal passenger complex. *Human Reproduction* **30**: 2275 (2015).

3. Van der Horst A, Vromans MJ, Bouwman K, van der Waal MS, Hadders MA, **Lens SM**. Inter-domain cooperation in INCENP promotes Aurora B relocation from centromeres to microtubules. *Cell Reports* **12**: 380 (2015).

4. Meppelink A, Kabeche L, Vromans MJ, Compton DA, **Lens SM**. Shugoshin-1 balances Aurora B kinase activity via PP2A to promote chromosome bi-orientation. *Cell Reports* **11**: 508 (2015).

5. Vleugel M, Omerzu M, Groenewold V. Hadders MA, **Lens SM**, Kops GJ. Sequential multisite phosphor-regulation of KNL1-BUB3 interfaces of mitotic kinetochores. *Mol. Cell* **57**: 824 (2015).

6. Hindriksen S, Meppelink A, **Lens SM**. Functionality of the chromosomal passenger complex in cancer. *Biochem Soc Trans*. *43*:23 (2015).

7. Hadders MA, **Lens SM**. Cell biology. Mind the Midzone. Comment. *Science* **345**: 265 (2014).

8. van der Horst A, **Lens SM**. Cell division: control of the chromosomal passenger complex in time and space. *Chromosoma* **123**: 25 (2014).

9. Lei F, Song J, Haque R, Xiong X, Fang D, Wu Y, **Lens SM**, Croft M, Song J. Transgenic expression of survivin compensates for OX40-deficiency in driving Th2 development and allergenic inflammation. *Eur. J. Immunol.* **43**: 1914 (2013).

10. Earnshaw et al. Esperanto for histones: CENP-A, not CENH3, is the centromeric histone H3 variant. *Chromosoma Res* **21**: 101 (2013).

11. Van der Waal MS, Saurin AT, Vromans MJ, Vleugel M, Wurzenberger C, Gerlich DW, Medema RH, Kops GJ, **Lens SM**. Mps1 promotes rapid centromere accumulation of Aurora B. *EMBO Rep.* **13**: 847 (2012).

12. Van der Waal MS, Hengeveld RC, van der Horst A, **Lens SM**. Cell division control by the Chromosomal Passenger Complex. *Exp Cell Res.* **318**: 1407 (2012).

13. Hengeveld RC, Hertz NT, Vromans MJ, Zhang C, Burlingame AL, Shokat KM, **Lens SM**. Development of a chemical genetic approach for human Aurora B kinase identifies novel substrates of the chromosomal passenger complex. *Mol. Cell. Proteomics* **11**: 47 (2012).

14. Wang F, Ulyanova NP, van der Waal MS, Patnaik D, **Lens SM**, Higgins JMG. A positive feedback loop involving Haspin and Aurora B promotes CPC accumulation at centromeres in mitosis. *Current Biology* **21**: 1061 (2011).

15. Saurin AT, van der Waal MS, Medema RH, **Lens SM**, Kops GJ. Aurora B potentiates Mps1 activation to ensure rapid checkpoint establishment at the onset of mitosis. *Nature Communications* **2**: 316 (2011).

16. Santos MA, van Werken C, de Vries M, Jahr H, Vromans MJM, Laven JSE, Fauser BCJM, Kops GJ, **Lens SM**, Baart EB. The chromosomal passenger complex in human oocytes and during preimplantation embryo development: a novel role for Aurora C. *Human Reproduction* **26**:1868 (2011).

17. DeLuca KF, **Lens SM**, DeLuca JG. Temporal changes in Hec1 phosphorylation control kinetochore-microtubule attachment stability in mitosis. *J. Cell Science* **124**: 622 (2011).

18. **Lens SM***, Voest EE, Medema RH*. Shared and separate functions of Polo-like and Aurora kinases in cancer. *Nature Reviews Cancer* **10**: 825 (2010). **Corresponding authors*

19. Vader G and **Lens SM**. Chromosome Segregation: Taking the Passenger Seat. Dispatch, *Current Biology* **20**: R879-81 (2010).

20. Van der Waal MS and **Lens SM**. Aurora B levels at the centromere key to its controversial role in the mitotic checkpoint? News & Views, *Cell Cycle* **9**: 1456 (2010).

21. Maia AF, Feijao T, Vromans MJM, Sunkel CE and **Lens SM**. Aurora B kinase cooperates with CENP-E to promote timely anaphase onset. *Chromosoma* **119**: 405 (2010).

22. Liu D, Vader G, Vromans MJ, Lampson MA*, **Lens SM***. Sensing chromosome bi-orientation by spatial separation of aurora B kinase from kinetochore substrates. *Science* **323**:1350-53 (2009). **Equal contribution.*

23. Vader G and **Lens SM**. The Aurora kinase family in cell division and cancer. *Biochim. Biophys. Acta-Reviews on Cancer* **1786**:60-72 (2008).

24. Jelluma N, Brenkman AB, van den Broek NJ, Cruijsen CW, van Osch MH, **Lens SM**, Medema RH, Kops GJ. Mps1 phosphorylates borealin to control aurora B activity and chromosome alignment. *Cell* **132**:233-246 (2008).

25. Vader G, Maia AF and **Lens SM**. The chromosomal passenger complex and the spindle assembly checkpoint: kinetochore-microtubule error correction and beyond. *Cell Division* **3**:10 (2008).

26. Vader G, Cruijsen CW, van Harn T, Vromans MJ, Medema RH, **Lens SM**. The chromosomal passenger complex controls spindle checkpoint function independent from its role in correcting microtubule kinetochore interactions. *Mol Biol Cell* **18**:4553-64 (2007).

27. Wheatley SP, Barrett RM, Andrew PD, Medema RH, Morley SJ, Swedlow JR, **Lens SM**. Phosphorylation by aurora-B negatively regulates survivin function during mitosis. *Cell Cycle* **6**:1220-1230 (2007).

28. Vader G, Medema RH, **Lens SM**. The chromosomal passenger complex: guiding Aurora-B through mitosis. *J Cell Biol* **173**:833-837 (2006).

29. Vader G, Kauw JJ, Medema RH, **Lens SM**. Survivin mediates targeting of the chromosomal passenger complex to the centromere and midbody. *EMBO Rep* **7**:85-92 (2006).

30. **Lens SM***, Rodriguez JA, Vader G, Span SW, Giaccone G, Medema RH. Uncoupling the central spindle-associated function of the chromosomal passenger complex from its role at centromeres. *Mol Biol Cell* **17**:1897-1909 (2006). **Corresponding author*.

31. Rodriguez JA, **Lens SM**, Span SW, Vader G, Medema RH, Kruyt FA, Giaccone G. Subcellular localization and nucleocytoplasmic transport of the chromosomal passenger proteins before nuclear envelope breakdown. *Oncogene* **25**:4867-4879 (2006).

32. **Lens SM**, Vader G, Medema RH. The case for Survivin as mitotic regulator. *Curr Opin Cell Biol* **18**:616-622 (2006).

33. Tardivel A, Tinel A, **Lens S**, Steiner QG, Sauberli E, Wilson A, Mackay F, Rolink AG, Beermann F, Tschopp J, Schneider P. The anti-apoptotic factor Bcl-2 can functionally substitute for the B cell survival factor but not for the marginal zone B cell differentiation activity of BAFF. *Eur. J. Immunol*. **34**:509-18 (2004).

34. Eldering E, Mackus WJM, Derks IAM, Evers LM, Beuling E, Teeling P, **Lens SM**, van Oers MHJ, van Lier RAW. Apoptosis via the B cell antigen receptor requires Bax translocation and involves mitochondrial depolarization, cytochrome C release, and caspase-9 activation. *Eur J. Immunol*. **34**:1950-60 (2004).

35. **Lens SM**, Medema RH. The survivin/Aurora B complex: its role in coordinating tension and attachment. *Cell Cycle* **2**:507-510 (2003).

36. **Lens SM**, Wolthuis RM, Klompmaker R, Kauw J, Agami R, Brummelkamp T, Kops G, Medema RH. Survivin is required for a sustained spindle checkpoint arrest in response to lack of tension. *EMBO J* **22**:2934-47 (2003).

37. **Lens SM**, Kataoka T, Fortner KA, Tinel A, Ferrero I, MacDonald RH, Hahne M, Beermann F, Attinger A, Orbea HA, Budd RC, Tschopp J. The caspase 8 inhibitor c-FLIP(L) modulates T-cell receptor-induced proliferation but not activation-induced cell death of lymphocytes. *Mol Cell Biol.* **22**:5419-33 (2002).

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39. van der Kolk LE, Evers LM, Omene C, **Lens SM**, Lederman S, van Lier RA, van Oers MH, Eldering E. CD20-induced B cell death can bypass mitochondria and caspase activation. *Leukemia* **16**:1735-44 (2002).

40. Stahl M, Dijkers PF, Kops GJ, **Lens SM**, Coffer PJ, Burgering BM, Medema RH. The forkhead transcription factor FoxO regulates transcription of p27Kip1 and Bim in response to IL-2. *J Immunol.* **168**:5024-31 (2002).

41. van Oirschot BA, Stahl M, **Lens SM,** Medema RH. Protein kinase A regulates expression of p27(kip1) and cyclin D3 to suppress proliferation of leukemic T cell lines. *J Biol Chem***. 276**:33854-60 (2001).

42. Micheau O, **Lens S**, Gaide O, Alevizopoulos K, Tschopp J. NF-kappaB signals induce the expression of c-FLIP. *Mol Cell Biol*. **21**:5299-305 (2001).

43. Schneider P, Takatsuka H, Wilson A, Mackay F, Tardivel A, **Lens S**, Cachero TG, Finke D, Beermann F, Tschopp J. Maturation of marginal zone and follicular B cells requires B cell activating factor of the tumor necrosis factor family and is independent of B cell maturation antigen. *J Exp Med.* **194**:1691-7 (2001).

44. Rescigno M, Piguet V, Valzasina B, **Lens S**, Zubler R, French L, Kindler V, Tschopp J, Ricciardi-Castagnoli P. Fas engagement induces the maturation of dendritic cells (DCs), the release of interleukin (IL)-1beta, and the production of interferon gamma in the absence of IL-12 during DC-T cell cognate interaction: a new role for Fas ligand in inflammatory responses. *J Exp Med.* **192**:1661-8 (2000).

45. Schlapbach R, Spanaus KS, Malipiero U, **Lens S**, Tasinato A, Tschopp J, Fontana A. TGF-beta induces the expression of the FLICE-inhibitory protein and inhibits Fas-mediated apoptosis of microglia. *Eur J Immunol.* **30**:3680-8 (2000).

46. Baars PA, Ribeiro Do Couto LM, Leusen JH, Hooibrink B, Kuijpers TW, **Lens SM**, van Lier RA. Cytolytic mechanisms and expression of activation-regulating receptors on effector-type CD8+CD45RA+CD27- human T cells*. J Immunol.* **165**:1910-7 (2000).

47. **Lens SM**, Drillenburg P, den Drijver BF, van Schijndel G, Pals ST, van Lier RA, van Oers M. Aberrant expression and reverse signalling of CD70 on malignant B cells. *Br J Haematol.* **106**:491-503 (1999).

48. **Lens SM**, den Drijver BF, Potgens AJ, Tesselaar K, van Oers MH, van Lier RA. Dissection of pathways leading to antigen receptor-induced and Fas/CD95-induced apoptosis in human B cells. *J Immunol*. **160**:6083-92 (1998).

49. **Lens SM**, Tesselaar K, van Oers MH, van Lier RA. Control of lymphocyte function through CD27-CD70 interactions. *Semin Immunol.* **10**:491-9 (1998).

50. **Lens SM**, Baars PA, Hooibrink B, van Oers MH, van Lier RA. Antigen-presenting cell-derived signals determine expression levels of CD70 on primed T cells. *Immunology* **90**: 38-45 (1997).

51. Wolthers KC, Otto SA**, Lens SM**, Van Lier RA, Miedema F, Meyaard L. Functional B cell abnormalities in HIV type 1 infection: role of CD40L and CD70. *AIDS Res Hum Retroviruses* **13**:1023-9 (1997).

52. **Lens SM**, de Jong R, Hooibrink B, Koopman G, Pals ST, van Oers MH, van Lier RA. Phenotype and function of human B cells expressing CD70 (CD27 ligand). *Eur J Immunol***. 26**:2964-71 (1996).

53. **Lens SM**, Keehnen RM, van Oers MH, van Lier RA, Pals ST, Koopman G. Identification of a novel subpopulation of germinal center B cells characterized by expression of IgD and CD70. *Eur J Immunol.* **26**:1007-11 (1996).

54. **Lens SM**, Tesselaar K, den Drijver BF, van Oers MH, van Lier RA. A dual role for both CD40-ligand and TNF-alpha in controlling human B cell death. *J Immunol*. **156**:507-14 (1996).

55. Wolthers KC, Otto SA, **Lens SM**, Kolbach DN, van Lier RA, Miedema F, Meyaard L. Increased expression of CD80, CD86 and CD70 on T cells from HIV-infected individuals upon activation *in vitro*: regulation by CD4+ T cells. *Eur J Immunol*. **26**: 1700-6 (1996).

56. Hamann D, Hilkens CM, Grogan JL, **Lens SM**, Kapsenberg ML, Yazdanbakhsh M, van Lier RA. CD30 expression does not discriminate between human Th1- and Th2-type T cells. *J Immunol.* **56**:1387-91 (1996).

57. **Lens SM**, de Jong R, Hintzen RQ, Koopman G, van Lier RA, van Oers RH. CD27-CD70 interaction: unravelling its implication in normal and neoplastic B-cell growth. *Leuk. Lymphoma* **18**:51-9 (1995).

58. Hintzen RQ, **Lens SM**, Lammers K, Kuiper H, Beckmann MP, van Lier RA. Engagement of CD27 with its ligand CD70 provides a second signal for T cell activation. *J Immunol.* **154**:2612-23 (1995).

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60. Hintzen RQ, **Lens SM**, Koopman G, Pals ST, Spits H, van Lier RA. CD70 represents the human ligand for CD27. *Int Immunol* **6**:477-80 (1994).

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63. Hintzen RQ, de Jong R, **Lens SM**, Brouwer M, Baars P, van Lier RA. Regulation of CD27 expression on subsets of mature T-lymphocytes. *J Immunol*. **151**:2426-35 (1993).

64. James K, van den Haan J, **Lens S**, Farmer K. Preliminary studies on the interaction of TNF alpha and IFN gamma with alpha 2-macroglobulin. *Immunol Lett*. **32**:49-57 (1992).