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## BIOGRAPHICAL SKETCH

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NAME Marianne L. Boes	POSITION TITLE Assistant professor in Dermatology		
eRA COMMONS USER NAME MARIANNEBOES			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Vrije Universiteit Amsterdam, Netherlands	B.Sc.	1992-1994	Biology
Vrije Universiteit Amsterdam, Netherlands	M.Sc.	1994-1996	Biology
Vrije Universiteit Amsterdam, Netherlands	PhD	1996-2000	Immunology
Harvard Medical School, Boston, MA	Post-doc	2000-2003	Immunology

### A. Positions and Honors.

#### Positions

- 2003- 2004: Instructor, Harvard Medical School, Department of Pathology.
- 2004- 2005: Instructor, Brigham and Women's Hospital, Department of Dermatology; Harvard Medical School.
- 2005-current: Assistant professor, Brigham and Women's Hospital, Department of Dermatology; Harvard Medical School.

#### Honors

- **Fellowships and Awards**
  - Pre-doctoral fellowships: Nierstichting Nederland (1996), Dr Saal van Zwanenberg stichting (1996), Stichting Het Vrije Universiteits Fonds (1996), Boehringer Ingelheim Foundation (1998-2000).
  - Post-doctoral fellowship from the Cancer Research Institute, (2001-2004).
- **Professional Societies**
  - American Association of Immunologists, Inc.

### B. Selected peer-reviewed publications (in chronological order).

1. M. Boes, C. Esau, M. Fischer, T. Schmidt, M. Carroll, and J. Chen. Enhanced B-1 cell development, but impaired IgG antibody responses in mice deficient in secreted IgM. *Journal of Immunology* 1998; 160:4776-4787.
2. M. Boes, A. Prodeus, T. Schmidt, M. Carroll, and J. Chen. A critical role of natural Immunoglobulin M in immediate defense against systemic bacterial infection. *Journal of Experimental Medicine* 1998; 188:2381-2386.
3. L. Gravestain, D. Amsen, M. Boes, C. Revilla Calvo, A. Kruisbeek, and J. Borst. The TNF receptor family member CD27 signals to Jun N-terminal kinase via Traf-2. *European Journal of Immunology* 1998; 28:2208-2216.
4. M. Boes, T. Schmidt, K. Linkemann, B. Beaudette, A. Marshak-Rothstein, and J. Chen. Accelerated development of IgG autoantibodies and autoimmune disease in the absence of secreted IgM. *Proc Natl Acad Sci USA* 2000; 97:1184-1189.

5. L. Foghsgaard, D. Wissing, D. Mauch, U. Lademann, L. Bastholm, M. Boes, F. Elling, M. Leist, and M. Jäättelä. Cathepsin B acts as a dominant execution protease in tumor cell apoptosis induced by tumor necrosis factor. *J Cell Biol.* 2001; 153:999-1010.
6. C. Esau, M. Boes, H. Youn, L. Tatterson, J. Liu, and J. Chen. Deletion of calcineurin and myocyte enhancer factor 2 (MEF2) binding domain of Cabin1 results in enhanced cytokine gene expression in T cells. *J Exp Med* 2001;194(10):1449-59.
7. T. Langford, M. Housley, M. Boes, J. Chen, M. Kagnoff, F. Gillin, and L. Eckmann. Central importance of immunoglobulin A in host defense against *Giardia* spp. *Infect Immun* 2002; 70(1):11-8.
8. M. Boes\*, E. Pluger\*, C. Alfonso, C.J. Schroter, H. Kalbacher, H. Ploegh and C. Driessen. Specific role for cathepsin S in the generation of antigenic peptides in vivo. *Eur J Immunol* 2002; 32(2):467-76. \*contributed equally.
9. M. Boes, J. Cerny, R. Massol, M. Op den Brouw, T. Kirchhausen, J. Chen and H. Ploegh. T-cell engagement of dendritic cells rapidly rearranges MHC class II transport. *Nature* 2002; 418(6901):983-988.  
See comment in: *Nature*. 2002; 418(6901):923-4.
10. M. Boes, N. Bertho, J. Cerny, M. Op den Brouw, T. Kirchhausen and H. Ploegh. T cell induce tubular class II MHC compartments in dendritic cells in a toll-like receptor-dependent manner. *Journal of Immunology* 2003, 171:4081-8
11. N. Bertho, J. Cerny, E. Fiebiger, Y. Kim, H. Ploegh and M. Boes. Requirements for T-cell polarized tubulation of Class II+ compartments in dendritic cells. *Journal of Immunology* 2003; 171: 5689-96.
12. D. Palliser, H. Ploegh and M. Boes. Myeloid differentiation factor 88 is required for cross-presentation in vivo. *Journal of Immunology* 2004; 172: 3415-21.
13. L. Shen, L. J. Sigal, M. Boes and K. L. Rock. Important role of cathepsin S in generating peptides for TAP-independent MHC class I cross presentation in vivo. *Immunity* 2004; 21(2): 155-65.
14. N. Fehrenbacher, M. Gyrd-Hansen, B. Poulsen, U. Felbor, T. Kallunki, M. Boes, E. Weber, M. Leist and M. Jäättelä. Sensitization to the lysosomal cell death pathway upon immortalization and transformation. *Cancer Research* 2004; 64 (15):5301-10.
15. A. D. Straw, F. Dzierszinski, M. Boes, D. S. Roos and E. J. Pearce. Functional inactivation of immature dendritic cells by an intracellular parasite. *Journal of Immunology*, 2004; 173: 2632-40.
16. T. A. Rohn, M. Boes, D. Wolkers, S. Spindeldreher, B. Müller, H. Langen, H. Ploegh, A. B. Vogt and H. Kropshofer. Self-peptide CLIP up-regulated on mature dendritic cells antagonizes Th1 polarization. *Nature Immunology*, 2004; 5(9):909-18.
17. J.H. Niess, S. Brand, X Gu, L. Landsman, S. Jung, B.A. McCormick, J.M. Vyas, M. Boes, H. L. Ploegh, J. G. Fox, D. R. Littman, and H. C. Reinecker. CX3CR1-mediated dendritic cell access to the intestinal lumen and bacterial clearance. *Science*. 2005 Jan 14;307(5707):254-8.
18. M. Boes, N. van der Wel, V. Peperzak, Y. Kim, P. Peters and H. Ploegh. In vivo control of endosomal architectures by Class II MHC-associated invariant chain and cathepsin S. *Journal of Immunology*. 2005 Sep;35(9):2552-62.
19. A. Nishibu, B.R. Ward, J.V. Jester, H. L. Ploegh, M. Boes, A. Takashima. Behavioral responses of epidermal Langerhans cells in situ to local pathological stimuli. *Journal of Investigative Dermatology*. *J Invest Dermatol.* 2006 Apr;126(4):787-96.

20. Y.M. Kim, J.Y. Pan, G.A. Korbel, V. Peperzak, M. Boes, H.L. Ploegh. Monovalent ligation of the B cell receptor induces receptor activation but fails to promote antigen presentation. *Proc Natl Acad Sci U S A*. 2006 Feb 28;103(9):3327-32.

21. M. Vishwanath, A. Nishibu, S. Saeland, BR Ward, N. Mizumoto, HL Ploegh, M. Boes, and A. Takashima. Development of Intravital Intermittent Confocal Imaging System for Studying Langerhans Cell Turnover. *J Invest Dermatol*. 2006 Jun 22; [Epub ahead of print]

### *Reviews*

1. M. Boes. Role of natural and immune IgM antibodies in immune responses. Review. *Molecular Immunology* 2000; 37: 1141-1149.

2. M. Boes, A. Cuvillier and H. Ploegh. Membrane specializations and endosome maturation in dendritic cells and B cells.

Invited review, *Trends in Cell biology* 2004; 14(4): 175-83

3. M. Boes and H. Ploegh. Translating cell biology in vitro to immunity in vivo.

Invited review, *Nature* 2004; 430 (6996): 264-71

4. F. C. Sille, A. Visser and M. Boes. T cell priming by tissue-derived dendritic cells: new insights from recent murine studies. *Cell Immunol*. 2005 Oct;237(2):77-85.

### *Ph.D. Thesis*

M. Boes. Role of Secreted IgM in Immunity and Autoimmunity. March, 2000