

Prof. Dr. Magdalena Radwanska

Center for Biomedical Research

- Office #831, Ghent University Building, Incheon Global Campus, 119 Songdomunhwa-Ro, Yeonsu-Gu, Incheon, Korea
- Phone +82 32 626 4208
- Email magdalena.radwanska@ghent.ac.kr



Short Biographies

Professor Dr. Magdalena Radwanska obtained her PhD from the Université Libre de Bruxelles, Belgium. She has extensive scientific expertise in molecular diagnostics, biomarker discovery, and vaccine development against various infectious diseases. She is a post-doctoral fellow of the Tufts University, MA, USA and the University of Cape Town, South Africa. She served as a senior R&D manager at the Foundation for Innovative New Diagnostics (FIND) in Geneva, Switzerland, under a patronage of the Bill & Melinda Gates Foundation. She managed biomedical research projects on a pan-European scale and provided advice on research priorities for Science Europe, Brussels, Belgium. Professor Radwanska joined the GUGC in 2015. She teaches Microbiology, Molecular Biological Analysis, Animal Biology, and Immunology.

Research Area

Research conducted at the Biomedical Research Center focuses on understanding of various mechanisms underlying B cell dysfunction and vaccine failure against parasitic (*T. brucei*) and bacterial diseases (*B. pertussis*). In particular, Professor Radwanska is interested in the events triggering apoptosis in B cells leading to the loss of memory responses. Various gene candidates are being analyzed with the purpose of identifying rescue gene targets capable of preventing B cells depletion. In the context of vaccine design, her research includes identification of novel pattern associated molecular patterns (PAMPs) and their interactions with corresponding pattern recognition receptors (PRRs). Moreover, conducted vaccination studies also involve the analysis of immunomodulatory properties of molecules derived from microorganisms present in fermented food such as kimchi and the role of microbiome. Currently various research projects are performed in collaboration with the Vrije Universiteit Brussel and Ugent University, Belgium, as well as Korea University.

Education

- MSc, Warsaw University, Poland
- PhD, Université Libre de Bruxelles, Brussels, Belgium

Experience

- Post-doctoral Fellow, University of Cape Town, South Africa
- Post-doctoral Fellow, Tufts/Cummings University, Boston, MA, USA
- Senior R&D Manager, FIND, Geneva, Switzerland
- Senior Scientific Manager, Science Europe, Brussels, Belgium

Selected Publications

- African Trypanosomes Undermine Humoral Responses and Vaccine Development. Radwanska M, Stijlemans B, De Trez C, Magez S. *Front. Immunol.*, 24 May 2017 | <https://doi.org/10.3389/fimmu.2017.00582>
- *Trypanosoma brucei* Co-opts NK Cells to Kill Splenic B2 B Cells. Frenkel D, Zhang F, Guirnalda P, Haynes C, Bockstal V, Radwanska M, Black SJ. *PLoS Pathog.* 2016 Jul 12;12(7):e1005733. doi: 10.1371/journal.ppat.1005733. eCollection 2016 Jul
- Emerging trends in the diagnosis of human African Trypanosomiasis. Radwanska M. *Parasitology.* 2010 Dec;137(14):1977-86. doi: 10.1017/S0031182010000211. Epub 2010 Apr 12. Review.
- Trypanosomiasis-induced B cell apoptosis results in loss of protective anti-parasite antibody responses and abolishment of vaccine-induced memory responses. Radwanska M, Guirnalda P, De Trez C, Ryffel B, Black S, Magez S. *PLoS Pathog.* 2008 May 30;4(5):e1000078. doi: 10.1371/journal.ppat.1000078.
- Deletion of IL-4Ralpha on CD4 T cells renders BALB/c mice resistant to Leishmania major infection. Radwanska M, Cutler AJ, Hoving JC, Holscher C, Bohms A, Arendse B, Kirsch R, Hunig T, Alexander J, Kaye P, Brombacher F. *PLoS Pathog.* 2007 May 11;3(5):e68.
- Optimizing gene suppression in schistosomes using RNA interference. Radwanska M, Krautz-Peterson G, Ndegwa D, Shoemaker CB, Skelly PJ. *Mol Biochem Parasitol.* 2007 Jun;153(2):194-202. Epub 2007 Mar 12.
- Alternative macrophage activation is essential for survival during schistosomiasis and down-modulates T helper 1 responses and immunopathology. Herbert DR, Hölscher C, Mohrs M, Arendse B, Schwegmann A, Radwanska M, Leeto M, Kirsch R, Hall P, Mossmann H, Claussen B, Förster I, Brombacher F. *Immunity.* 2004 May;20(5):623-35. Erratum in: *Immunity.* 2004 Sep;21(3):455.