

# Prof. Dr. ir. Stefan Magez

Department of Molecular Biotechnology  
Center for Biomedical Research



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## Short Biographies

Professor Stefan Magez received his Engineering degree in Chemistry and Agriculture Industries from the Vrije Universiteit Brussel (VUB) in 1991, with a specialization in the field of Biotechnology and Immunology. In 1997, he received a PhD degree in Applied Biological Sciences at the same university. Subsequently, 9 years of post-doctoral research focused on various aspects of infection-associated inflammation and B-cell activation, working in Belgium, the USA and South Africa.

In 2007 he was appointed at the VUB as Full-time Research Professor, and from 2009 till 2013 he coordinated the European research consortium NANOTRYP that focused on the use of nanobodies for diagnostic development. Most recently, his group has been awarded a Bill & Melinda Gates Foundation sponsored vaccine research program, together with USA-based partners – the University of Maddison-Wisconsin and the University of Massachusetts, and Makerere University, Uganda.

In October 2015 Prof. Magez joined the Ghent University Global Campus in South Korea, where he is appointed as Full Professor for Biochemistry and Immunology, a position that was extended with an appointment as Full Professor at the UGent home campus, Faculty of Sciences, in 2016. He still coordinates his research group at the Vrije University Brussels, where he also teaches Immunology and Parasitology in the International MSc program for Molecular Biology, and is involved in several MSc research projects of which some are done in collaboration with GUGC.

Current additional affiliations:

- Laboratory of Cellular and Molecular Immunology, Faculty of Science and Bioengineering Sciences, VUB - Free University Brussels, Belgium.

<http://we.vub.ac.be/en/stefan-magez>

- Dept. Veterinary Sciences, UMASS, Amherst, USA

<https://www.vasci.umass.edu/research-faculty/stefan-magez>



## Research Area

Prof. Magez is currently the head of the research unit for Structural and Functional Immuno-parasitology at the Laboratory for Cellular and Molecular Immunology of the Vrije Universiteit Brussels, Belgium. Here, a group of 2 post-doctoral researchers, 4 PhD fellows and 3 MSc students focus on various aspects of host-parasite interactions, combining immunology and structural biology approaches. In the past, 16 PhD fellows and 46 MSc students obtained their research degree at the Magez laboratory. At GUGC the research of Prof. Magez focusses on the immunopathology of trypanosomosis, and B-cell pathology of parasitic infections. Diagnostic design research based on antibody technology is being conducted in collaboration with the laboratory in Brussels. The set-up of a semi-high throughput microscopy infrastructure for the screening of compounds with anti-parasitic activity is ongoing at GUGC.

## Education

- (1997) PhD in Applied Biological Sciences, Vrije Universiteit Brussel
- (1991) Engineering degree in Chemistry and Agriculture Industries – Vrije Universiteit Brussel

## Experience

- (2016 – To date) Full Professor, Ghent University, Ghent, Belgium
- (2015 – To date) Research Director Biomedical Research, Ghent University Global Campus, Songdo, South Korea
- (2010 - To date) Associate Professor Vrije Universiteit Brussel (VUB) - Dept. Science and Bioengineering Sciences
- (2005 - To date) Adjunct Associate Professor - Dept. Veterinary Sciences UMASS, Amherst, USA
- (2010 - 2016) Group Leader Structural and Functional Immuno - parasitology - Dept. Structural Biology, Flanders Institute for Biotechnology (VIB), Brussels, Belgium
- (2006-2010) Assistant Research Professor VUB
- (1997-2006) FWO postdoctoral researcher (Foundation for Scientific Research) – Assistant Professor Vrije Universiteit Brussel (VUB), Belgium

### International post-doctoral research positons:

- (2005) University of Massachusetts, USA
- (2002-2004) University Cape Town, South Africa



## Selected Publications

- Goossens J, Sein H, Lu S, Radwanska M, Muyldermans S, Sterckx Y, Magez S. Functionalization of gold nanoparticles with nanobodies through physical adsorption. **Anal. Methods**, 2017, 9, 3430.
- De Beule N, Menu E, Bertrand MJ, Favreau M, De Bruyne E, Maes K, De Veirman K, Radwanska M, Samali A, Magez S, Vanderkerken K, De Trez C. Experimental African trypanosome infection suppresses the development of multiple myeloma in mice by inducing intrinsic apoptosis of malignant plasma cells. **Oncotarget**. 2017 May 24.
- Radwanska M, Stijlemans B, De Trez C, Magez S. African Trypanosomes Undermine Humoral Responses and Vaccine Development: **Front. Immunol.**, 24 May 2017.
- Stijlemans B, Caljon G, Van Den Abbeele J, Van Ginderachter JA, Magez S, De Trez C. Immune Evasion Strategies of Trypanosoma brucei within the Mammalian Host: Progression to Pathogenicity. **Front Immunol**. 2016 Jun 24;7:233.
- Frenkel D, Zhang F, Guirnalda P, Haynes C, Bockstal V, Radwanska M, Magez S, Black SJ. Trypanosoma brucei Co-opts NK Cells to Kill Splenic B Cells. **PLoS Pathog**. 2016 Jul 12;12(7).
- Cnops J, De Trez C, Stijlemans B, Keirse J, Kauffmann F, Barkhuizen M, Keeton R, Boon L, Brombacher F, Magez S. NK-, NKT- and CD8-Derived IFN $\gamma$  Drives Myeloid Cell Activation and Erythrophagocytosis, Resulting in Trypanosomiasis-Associated Acute Anemia. **PLoS Pathog**. 2015 Jun 12;11(6).
- Salmon D, Vanwalleghem G, Morias Y, Denoëud J, Krumbholz C, Lhommé F, Bachmaier S, Kador M, Gossmann J, Dias FB, De Muylder G, Uzureau P, Magez S, Moser M, De Baetselier P, Van Den Abbeele J, Beschin A, Boshart M, Pays E. Adenylate cyclases of Trypanosoma brucei inhibit the innate immune response of the host. **Science**. 2012 Jul 27;337(6093):463-6
- Beschin A, Bilej M, Brys L, Toreele E, Lucas E, Magez S, De Baetselier P. Convergent evolution of cytokines. **Nature**. 1999, 400: 627.
- Lucas R, Magez S, De Leys R, Fransen L, Scheerlink J-P, Rampelberg M, Sablon R, De Baetselier P. Mapping the lectin like activity of tumor necrosis factor. **Science**. 1994, 263:814-817.

## Patent/Projects

- African Trypanosomiasis therapy with a nanobody-conjugated human trypanolytic factor. WO-2007039645-A1



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