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Prof. Thomas Monsees

Position: Research
Department: **Medical BioScience Programme**
Faculty: Faculty of Natural Science
(/Lists/Faculties/DispForm.aspx?
ID=9&RootFolder=*)
Qualifications: Habilitation, Reproductive Biology (2nd PhD,
JLU Giessen)
Venia legendi, Anatomy (TU Dresden)
PhD, Bioorganic Chemistry (Bremen)
MSc, Chemistry (Bremen)
Tel: 021 959 2387
Fax: 021 959 3125
Email: tmonsees@uwc.ac.za
(<mailto:tmonsees@uwc.ac.za>)
Research:

Biography

Prof. Monsees joined the Department of Medical Biosciences at UWC in 2008. His current research projects focuses on the effects of traditional African medicinal plants on mammalian reproduction and fertility as well as the analysis of testicular cell physiology in response to external stimuli via Vital Imaging Fluorescence Microscopy. Since 2012, he is also head of the 'Vital Cell Fluorescence Imaging Facility' and director of the 'Centre for Male Reproductive Health and Biotechnology'.

Prof. Monsees has over 20 years of experience in teaching different subjects including Physiology, Anatomy and Chemistry and supervised so far 24 theses in different disciplines. Monsees published more than 50 papers and book chapters and above 100 abstracts in international journals of different disciplines. He is editorial board member as well as peer reviewer for several international journals and international research awards.

Prof. Thomas Monsees obtained his MSc (Chemistry, 1988) and PhD (Bioorganic Chemistry, 1992) from the University of Bremen, Germany. After intensive postdoctoral training in Biochemistry and Cell Biology at the Justus-Liebig University Giessen, Germany, Prof. Monsees achieved his 'Habilitation' for the subject 'Reproductive Biology' in 2005. This is a 2nd research PhD and included a formal examination on

teaching experience. Major research topics included regulation of spermatogenesis via peptide hormones and influence of environmental pollutants on male reproduction. At the University of Technology, Dresden, Prof. Monsees was head of the lab for Cytotoxicity and Biocompatibility testing of new implant materials. Applications included modified flexible polyurethane surfaces for stents and heart valves, collagenous coatings as well as laser-induced nanosize surface patterning of titanium implants. In 2007, he additionally obtained the 'Venia legendi' for the subject 'Anatomy'. Monsees research specialization here was analysing the interaction of cells with the implant's surface via Vital Imaging Fluorescence Microscopy.

Prof Monsees joined the Department of Medical Biosciences at UWC in 2008. His current research projects focuses on the effects of traditional African medicinal plants on mammalian reproduction and fertility as well as the analysis of testicular cell physiology in response to external stimuli via Vital Imaging Fluorescence Microscopy. Since 2012, he is also head of the 'Vital Cell Fluorescence Imaging Facility' and director of the 'Centre for Male Reproductive Health and Biotechnology (Pty) Ltd.' Monsees was awarded with Ratings by the National Research Foundation of South Africa in 2009 and 2016.

Prof Monsees has over 20 years of experience in teaching different subjects including Physiology, Anatomy and Chemistry and supervised so far 30 theses in different disciplines. Monsees published 62 papers and book chapters and more than 100 abstracts in international journals of different disciplines. He is editorial board member as well as peer reviewer for several international journals and international research awards.

Prof Monsees obtained his MSc (Chemistry, 1988) and PhD (Bioorganic Chemistry, 1992) from the University Bremen, Germany. After intensive postdoctoral training in Biochemistry and Cell Biology at the Justus-Liebig University Giessen, Germany, Prof. Monsees achieved his 'Habilitation' for the subject 'Reproductive Biology' in 2005. This is a 2nd research PhD and included a formal examination on teaching experience. Major research topics included regulation of spermatogenesis via peptide hormones and influence of environmental pollutants on male reproduction. At the University of Technology, Dresden, Prof Monsees was head of the lab for Cytotoxicity and Biocompatibility testing of new implant materials. Applications included modified flexible polyurethane surfaces for stents and heart valves, collagenous coatings as well as laser-induced nanosize surface patterning of titanium implants. In 2007, he additionally obtained the 'Venia legendi' for the subject 'Anatomy'. Monsees research specialization here was analysing the interaction of cells with the implant's surface via Vital Imaging Fluorescence Microscopy.

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- Health and Safety Committee (Chair)
- Executive Committee
- Post-Grad and Research Committee
- Examination and Assessment Committee

Publications

Original papers

1. Opuwari CS, Monsees TK (2015) Reduced testosterone production in TM3 Leydig cells treated with *Aspalathus linearis* (rooibos) or *Camellia sinensis* (tea). *Andrologia*. 47:52-58
2. Beboy Edjenguele SN, Akano Nantia E, Tsague Manfo FP, Vidari G, Moundipa Fewou P, Monsees TK (2014) Effects of methanol fractions of *Basella alba* L. (Basellaceae) on TM3 Leydig cell steroidogenesis. *J Biological Chemical Research*. 31 (2) 912-922
3. Opuwari CS, Monsees TK (2014) In vivo effects of *Aspalathus linearis* (rooibos) on male rat reproductive functions. *Andrologia* 46:867-877

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2. Monsees TK, Heidl K, Funk R (2008) Einfluß von Nanostrukturierung und Oberflächenbeladung auf die Bioaktivität. In: K. M. Peters, D. P. Koenig (Hrsg.): *Fortbildung Osteologie 2*, Springer, pp. 105-109 (ISBN: 978 3 7985 1824 7)
3. Monsees TK, Funk R (2008). Effect of nanostructures on orientation and physiology of osteoblasts. In: J. Breme, J. Ch. Kirkpatrick, R. Thull (Hrsg.): *Metallic Biomaterial Interfaces*, Wiley-VCH, Weinheim, pp. 233-237 (ISBN-10 3 527 31860 7)
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6. Funk RHW, Monsees TK (2007) Effects of surface charge and dc EF fields on cells. In: *Biological effects of EMFs. 4th International Workshop*. P. Kostarakis (ed.) Vol II, pp 1329-1333
7. Wetzel C, Hollstein F, Kitta D, Özkucur N, Funk R, Monsees T (2006). Untersuchungen zur Langzeitstabilität PVD-beschichteter flexibler Implantate. In: 2. Thüringer Grenz- und Oberflächentage. Jena, September 2006
8. Wetzel C, Hollstein F, Kitta D, Özkucur N, Funk R, Monsees T (2005). Metallisierung der Oberfläche von Polyurethan als Basiswerkstoff für flexible medizinische Implantate. In: 1. Thüringer Grenz- und Oberflächentage. Jena, September 2005
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Proceedings

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2. Monsees TK (2007) Expression and physiology of kinin receptors in the male reproductive tract. *Iranian J Reprod Med* 5:13-14
3. Schade I, Wetzel C, Kitta D, Monsees TK, Özkucur N, Funk R, Matschke K, Knaut M (2006). Untersuchungen zur Werkstoffermüdung Zr-beschichteter und unbeschichteter PUR-Folien als Basiswerkstoff für in Blutkontakt stehende Implantate. 14. Neues Dresdner Vakuumtechnik Kolloquium, 19.-20.10 2006, Dresden
4. Wetzel C, Hollstein F, Richter E, Kitta D, Özkucur N, Funk R, Monsees T (2005). Verbesserte Blutkompatibilität bei Polyurethanwerkstoffen durch Oberflächenmodifizierung. 5. Workshop Funktionelle Oberflächen für die Medizintechnik. 11. Oktober 2005, Erfurt
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Networks

- Editorial board member of 'Andrologia' & 'Iranian Journal of Reproductive Medicine'
- Regular reviewer of national and international research articles due to expertise in the fields of male reproduction, reproductive toxicology & biocompatibility of implants
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