

## Curriculum Vitae

Name: Herman van Wietmarschen, PhD  
Address: Akkerweg 152, 3972 AE Driebergen

Place of birth: Oss  
Date of birth: 28-3-1974

### Education

1995 - 1996 Philosophy at the Utrecht University  
1992 - 1997 Medical Biology at the Utrecht University  
Minor in Oncology in the Academic hospital in Utrecht. Subject: regulation of expression of adhesion molecules on endothelial cells.  
Major in BioPhysics in the BBL Utrecht. Subject was the interaction of depth cues.

### Work experience since graduating

Okt 2012 – Staff member Sino-Dutch centre for Preventive and Personalized Medicine  
Okt 2012 - Scientist at TNO  
Nov 2010 – Dec 2012 Editor Journal of Integral Medicine (Dutch)  
Okt 2008 – Nov 2009 Board member of the CAM researchers network, Netherlands  
Feb 2008 – Sept 2012 PhD student, LACDR, Leiden University. Subject diagnosis of arthritis.  
Feb 2008 – Dec 2010 Member of the Scientific Advisory Board of the Osteo- and Rheumatoid Arthritis foundation.  
Jun 2007 – Jun 2010 Board member of the Taoist Tai Chi Society of the Netherlands  
nov 2006 – feb 2008 Researcher at the Osteo- and Rheumatoid arthritis foundation. Responsible for funding arthritis related research in the complementary and alternative medicine (CAM) field.  
2006 – nov 2007 Associated Researcher at Critical Technology Construction, Wageningen University.  
2003 – Jun 2010 Branch committee member of the Taoistische Tai Chi Society Middle branch (2003-2006 president).  
2002 - 2012 Volunteer Taoist Tai Chi Instructor  
1998 - 2007 Research journalist at the foundation Discussion about Biotechnology

### Man-years of research

Eight

### Brief summary of research over the last four years

Van Wietmarschen found biological evidence for two sub-types of rheumatoid arthritis patients based on a Chinese diagnosis. Gene expression profiling and metabolomics analysis showed that apoptosis was found to be differently regulated in the two groups (joint with Prof XU). A questionnaire was subsequently developed to standardize and characterize the Chinese diagnosis related to these two groups of patients. Non-linear principal component techniques were used to analyse the data (joint with Prof Meulman). Additional metabolomics analysis showed differences in acylcarnitine excretion in urine between the two groups indicating different muscle turnover rate and/or mass.

Currently, van Wietmarschen is leading a study to see whether differences in response to therapy with TNF- $\alpha$  blocker can be observed in the two groups of patients (joint with Prof Lafeber, Utrecht University). He is leading a study in which biopsychosocial predictors for successful weight loss in type 2 diabetes patients on

a very low caloric diet are found. He is now studying the contribution of Chinese diagnosis to the predictive power of the model (joint with Dr Mulder, Erasmus University). This work is part of the Sino Dutch Centre for Preventive and Personalized Medicine of which he is a staff member and is currently supervising 4 PhD students. Two of those PhD students focus on the integration of ultra-weak bioluminescence measurements with metabolomics data (joint with van Wijk, Leiden University).

Van Wietmarschen is recently involved in a Samuëli Institute project which aims to develop tools to measure and model resilience and wellness.

## International activities

### International collaborations

- Global Research Alliance (Traditional Medicine in Vietnam)
- Samuëli Institute (US), Dr Shamini Jain, Dr John Ives
- Dalian Institute of Chemical Physics (Dalian, China), Prof Dr Guowang Xu
- Institute of Basic Research in Clinical Medicine (Beijing, China), Prof Dr Aiping Lu
- Zhejiang College of Traditional Chinese Medicine (Hangzhou, China), Dr Ziliang Xu

### Other academic activities

- **Reviewing:** Journal of Ethnopharmacology, Journal of Translational Medicine, Evidence-based Complementary and Alternative Medicine
- **Teaching:** Undergraduate courses on analytical chemistry, lectures in drug development courses, guest lecture at Wageningen University
- **Memberships:** Dutch Rheumatology Association, American Psychosomatic Society
- **Invited lectures:** Health Innovation Lab (Zeist, the Netherlands), European TCM association (Brugge, Belgium), DICP symposium XIX (Dalian, China), Rheumatology department UMC (Utrecht, the Netherlands), Opening SD-PPM (Leiden, the Netherlands), American Psychosomatic Society Annual meeting (Athens, Greece), PAO Farmacie congress (Utrecht, NL), GP-TCM congress (Leiden, NL), USUS CHAMP lecture (Alexandria, USA)
- **Keynote lectures:** Systems and Network biology and TCM conference (Adelaide, Australia), CERP meeting (Irvine, USA)

## Scholarships, grants, prizes

### Co-applicant on project grants

- Co-writer of : USAMRA grant on multidimensional resilience assessment tools (1.5M dollar TNO)
- Modeling successful reintegration, Samuëli Institute (100k dollar).
- Writer of: EFSD/Chinese Diabetes Society/Lilly. Personalized medicine for diabetes (200k euro total).
- Writer of: International Innovation. Applicant SUBiomedicine. Cardioflow: theranostic expert system for a cardiovascular product. (500k euro)
- Work package writer in: FP7-KBBE-2012-6. SmallBlue: Innovative marine biodiscovery pipelines for novel industrial products. (550k euro of total 9M euro)
- Writer of three Chinese Scholarship Council grants for Chinese PhD students (granted in 2012)

### Prizes

- 1st Poster price 26th Symposium on Chemometrics in 2010

## Publications

### Academic journal publications

1. Jan van der Greef, **Herman van Wietmarschen**, Jan Schroën, Mei Wang, Thomas Hankemeier, Guowang Xu. Systems biology-based diagnostic principles as the pillars of the bridge between Chinese and Western medicine. *Planta Medica* 2010; 76(17): 2036-2047.
2. **Herman van Wietmarschen**, Kailong Yuan, Cheng Lu, Peng Gao, Jiangshan Wang, Cheng Xiao, Xiaoping Yan, Mei Wang, Jan Schroën, Aiping Lu, Guowang Xu, Jan van der Greef. Systems biology guided by Chinese medicine reveals new markers for sub-typing rheumatoid arthritis patients. *Journal of Clinical Rheumatology* 2009; 15(7): 330-337.

3. **van Wietmarschen, Herman A**, Theo H Reijmers, Anita J van der Kooij, Jan Schroën, Heng Wei, Thomas Hankemeier, Jacqueline J Meulman, and Jan van der Greef. 2011. Sub-typing of rheumatic diseases based on a systems diagnosis questionnaire. *PloS One* 2011; 6 (9): e24846.
4. **Herman van Wietmarschen**, Jan van der Greef. Metabolite space of rheumatoid arthritis. *British Journal of Medicine and Medical Research* 2012; 2(3): 469-483.
5. **Herman A. van Wietmarschen**, Weidong Dai, Anita J. van der Kooij, Theo H. Reijmers, Yan Schroën, Mei Wang, Zhiliang Xu, Xinchang Wang, Hongwei Kong, Guowang Xu, Thomas Hankemeier, Jacqueline J. Meulman, Jan van der Greef. Characterization of rheumatoid arthritis subtypes using symptom profiles, clinical chemistry and metabolomics measurements. *PloS One* 2012; 7(9): e44331.
6. Jan van der Greef, **Herman van Wietmarschen**, Ben van Ommen, Elwin Verheij. Looking back into the future: 30 years of metabolomics at TNO. *Mass Spectrom Rev* 2013; 32(5): 399-415.
7. Yan Schroën, **Herman A. van Wietmarschen**, Mei Wang, Eduard van Wijk, Thomas Hankemeier, Guowang Xu, Jan van der Greef. East is East, and West is West, and never the twain shall meet? . *In preparation for Science*.
8. **Herman van Wietmarschen**, Mei Wang, Jan van der Greef. Personalized treatment effects of Rehmannia 6 on subjects with metabolic syndrome. *J of Ethnopharmacology* 2013; 11(5): 1-9.
9. Roel van Wijk, Eduard van Wijk, **Herman van Wietmarschen**, Jan van der Greef. Towards whole-body ultra-weak photon counting and imaging with a focus on human. *J of Photobiology and Photochemistry* 2013.
10. **Herman van Wietmarschen**, Yan Schroën, Victor Kallen, Marvin Steijaert, Albert de Graaf, Ben van Ommen, Jan van der Greef. Systems biology of resilience and optimal health. *Submitted to Interface Focus*.
11. Kirstin Aschbacher, Maria Rodriguez-Fernandez, Shamini Jain, **Herman van Wietmarschen**, Frank Doyle, Jan van der Greef. System Dynamics of Leptin & the Hypothalamic-Pituitary Adrenal (HPA) Axis Are Linked with Greater Body Fat and Insulin Resistance in Obese Women. *Submitted to Interface Focus*.

#### Book chapters

1. **Herman van Wietmarschen**, Jan van der Greef. Systeemdenken als basis voor duurzame gezondheidszorg. In: Duurzame gezondheidszorg. Christofoor, 2011.
2. **Herman van Wietmarschen**, Jan van der Greef. Systeembioogie integreert Chinese en Westerse kennis over reumatoïde artritis. In: TIG jaarboek, 2011.
3. **Herman van Wietmarschen**, Mei Wang. Systeemdenken in de Chinese kruidengeneeskunde. In: TIG jaarboek, 2012.

#### Reports

1. Jan van der Greef, **Herman van Wietmarschen**, Yan Schroën, Nathalie Babouraj, Marion Trousselard. Systematic Approaches to Evaluation and Integration of Eastern and Western Medical Practices. In: NATO-RTG panel report, chapter 9, 2014.