Brief Biography of H.P. Jennissen

Herbert P. Jennissen is University-Professor of Physiological Chemistry (em.) (1989) at the Institute of Physiological Chemistry in the Medical Faculty of the University of Duisburg Essen in D-45147 Essen, Germany. He holds a Dr. med. degree (1970) from the Albert-Ludwigs-University of Freiburg (Germany) and a Habilitation in Physiological Chemistry (1977) from the Ruhr-University of Bochum (Germany). Before coming to Essen he was University-Professor at the Institute of Physiological Chemistry and Nutritional Physiology (1981-1989) in the Faculty of Veterinary Sciences at the Ludwig-Maximilians-University of Munich (Germany. Co-opted memberships were held in the Faculties of Chemistry at the Universities of Essen/Duisburg-Essen, Munich and Bochum. Academic teaching in foreign countries: 1997 Nizhny Novgorod, Russia, State Medical Academy of Nizhny Novgorod: Biochemistry Lecture Cycle was held; 2008 Jeddah, Saudi Arabia, Bait Albatterjee Medical School: Biochemistry Lecture Cycle was held.

Research activities of Prof. Jennissen and coworkers comprise the following Themes: **(1) Enzymology**: Ca^{++} -dependent protein kinases and ubiquitin-proteasome system with discovery of novel enzyme "Ubiquitin-Calmodulin Ligase" (EC 6.3.2.21); **(2) Hydrophobic Interaction Chromatography (HIC):** Introduction of "Critical Hydrophobicity HIC"; **(3) Protein Adsorption on Biomaterials:** Introduction of positive and negative surface cooperativity and adsorption-desorption hysteresis of proteins on surfaces, development of "Hystallosteric Protein Adsorption" model; **(4) Proteomics:** First *in situ* proteomic scale protein layer analysis on hip and dental implants, new field of "implantomics"; **(5) Surface structuring of metals**: Acidic micro- and nano-structuring of implants for wettability enhancement. **(6) Surface wettability:** Introduction of "complex contact angles" and "hyperhydrophilicity"; **(7) Polymer based Scaffolds**: Electrospinning of 2D and 3D PDLLA implant carriers. **(8) Affinity Constant Defined Biohybrids (Stats):** Paracrine BMP-2 and VEGF releasing biohybrids as "Pico(molar) Stats". **(9) Receptors:** First Angiogenic receptor for rhBMP-2 with evidence for inverse agonism mechanism.

Patents: Eleven patent families with over 65 issued country-specific patents.

Award: His achievements on protein-surface interactions in the field of Affinity- and Hydrophobic Interaction Chromatography were recognized with the "Pierce Award in Affinity Chromatography" in 2007 in New York, USA.

International Symposia Organization:

7th International Symposium of Affinity Chromatography and Interfacial Macromolecular Interactions,
Aug. 17-21, 1987,Oberammergau, Germany
Symposium Chairman: H.P. Jennissen; Co-Chairman W. Müller
Abstracts: 120 abstracts published in Biol. Chem. Hoppe-Seyler 368, 733-785 (1987)
Proceedings: 35 Papers published in Makromol. Chem. Macromol. Symp. 17, 1-497 (1988)

1-12 International Essen Symposia on Biomaterials: Fundamentals and Clinical Applications, 1998-2010

Major organizers: H.P. Jennissen, A. Fischer, D. Bingmann, et al. of 12 Symposia from 1998 at the University of Essen to 2010 at the renamed University of Duisburg-Essen (UDE-Symposia), with support from the Wissenschaftsministerium NRW, Lord Majors of the City of Essen and the "Fördervereinigung" of the City of Essen".
Abstracts: Full page abstracts of the Symposia were published in the journal
BIOmaterialien Vol. 7-11 (2006-2010)
Proceedings: Proceedings of all 12 Symposia were published in the journal
Materialwiss.Werkstofftech.(Mat.Sci.Engineer.Technol) Vol. 30-41 (1999-2010).