

**BERTALANFFY CENTER FOR THE STUDY OF SYSTEMS SCIENCE**

**Paulanergasse 13 / 5**

**1040 Wien**

**[www.BCSSS.org](http://www.BCSSS.org)**

**Prof. Dr.med. Dr.phil. Dr.rer.pol. Felix Tretter**

**Vizepräsident**

**Email: [felix.tretter@bcsss.org](mailto:felix.tretter@bcsss.org)**

**T: 0660 6270 666**

**WORKSHOP INTEGRATIVE SYSTEMS MEDICINE II:  
COMORBIDITY OF DIABETES AND DEPRESSION AS AN EXAMPLE FOR “PSYCHO-  
NEURO-ENDOCRINO-IMMUNOLOGY”?**

**22<sup>nd</sup> / 23<sup>rd</sup> October, BCSSS**

**Preface (Draft - Version from 15<sup>th</sup> October)**

Ludwig von Bertalanffy was one of the main creators of the internationally well known “General System Theory”, a supradisciplinary approach that allows for better understanding of living beings as nonlinear complex adaptive self-organizing systems. Following his ideas we organized a first workshop in March on basics of “Organismal Systems Medicine” (OSM) that is a developmental biological top-down approach compared to the bottom-up approach of Molecular Systems Medicine (MSM). OSM highlights the principle “structure follows function” versus traditional “function follows structure” but is integrative in theorizing.

The participants, before all well-known Uri Alon (Tel Aviv), tried to build bridges between clinical findings, experimental laboratory data and mathematical modeling. Focus was endocrinology and its circuitry links to the brain and to metabolism regulating organs and molecular processes especially regarding diabetes.

In consequence, we organize this second workshop in order to discuss *comorbidity, namely that of diabetes and depression*, from a *multi-level cyber-systemic viewpoint* that aims to connect conceptually mind, brain, endocrine structures and the immune system on the basis of empirical evidence.

<b>PROGRAM</b>
<b>Tuesday Oct. 22<sup>nd</sup></b>
1:00 p.m. <i>Integrative Systems Medicine - Co-morbidities and control loops: a system of systems of systems...</i>
Felix TRETTER (BCCCS, Vienna)
<i>CLINICAL ISSUES - 40 min talk / 20 min discussion</i>
2:00 p.m. <i>Clinical aspects of Diabetes mellitus</i>
<i>* development, diagnosis, therapy</i>
Peter FASCHING (Wilhelminen Spital, Vienna, A)
3:00 p.m. <i>Clinical aspects of Depression</i>
Henriette LÖFFLER-STASTKA (Psychotherapy, psychiatric Clinic, Medical Univ. Vienna)
4: 00 Break
4:30 p.m. <i>Comorbidity of Diabetes and Depression</i>
<i>* epidemiology, possible mechanisms</i>
Alexander KAUTZKY (Psychiatric Clinic, Medical Univ., Vienna)
5:30 p.m. <i>Imaging of brain topography of the serotonin system</i>
Rupert LANZENBERGER (Imaging Center, Med.Univ. Vienna )
6:30 Discussion
7:00 End of first day
7:30 Dinner
<b>Wednesday Oct. 23<sup>rd</sup></b>
<i>FROM CLINIC TO BASIC RESEARCH - 40 min talk / 20 min discussion</i>
9:00 p.m. <i>Cybernetic modeling of endocrine control loop systems</i>
Johannes DIETRICH (Bergmannsheil Hospital, Bochum)
10:00 The biochemists perspective - diabetes and serotonin metabolism
Wolfram WECKWERTH (Univ. Vienna)
11: 00 Break
10:30 <i>Perspectives of pharmacopsychiatry of depression</i> Gerhard GRÜNDER (Zentral Inst.f. Mental Health, Mannheim,D)
11:30 <i>Aspects of a methodology of modelling as a Theoretical Systems Medicine</i>
Angelika SCHANDA (BCSSS)
12:30 Final Discussion and Perspectives
13:00 End of the Workshop

### Sources:

Tretter, F., Löffler-Stastka, H. Medical knowledge integration and "systems medicine": Needs, ambitions, limitations and options. Med Hypotheses 2019 Sep 5;133: 109386. Epub 2019 Sep 5.doi: 10.1016/j.mehy.2019.109386.PMID: 31541780