

<b>Arbeitsgruppe:</b> <b>Priv. Doz. Dr. Markus Ganzera</b>	<b>Gewünschte Präsentation:</b> Vortrag <input type="checkbox"/> Poster <input checked="" type="checkbox"/> beides <input type="checkbox"/>
<b>Title: Treatment of Type-2 Diabetes Mellitus by Traditional Chinese Medicine</b>	
<b>Keywords:</b> TCM, metabolic syndrome, type-2 diabetes mellitus, bioactivity-guided isolation, PTP1B	
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<p><b>Abstract:</b> According to the International Diabetes Federation (IDF) treatment and prevention of type-2 diabetes mellitus (T2DM) are major challenges of our age, considering that 2010 already 285 million people worldwide suffered from this disease. Traditional Chinese Medicine (TCM) describes many herbal decoctions which are used against symptoms related to T2DM. Protein Tyrosine Phosphatase 1B (PTP1B) is a major negative regulator of the insulin signaling pathway and therefore its inhibition is a possible strategy to prevent the progression of T2DM.</p> <p>By means of bioactivity-guided isolation and analytical characterization three traditionally used TCM plants, namely <i>Paeonia lactiflora</i> Pall., <i>Phellodendron amurense</i> Rupr. and <i>Agrimonia pilosa</i> Ledeb., were investigated for their inhibition of PTP1B <i>in-vitro</i> and <i>in-vivo</i>. In course of our investigations we identified several active principles, like <i>Pentagalloylglucose</i><sup>[1]</sup> or <i>Oleic Acid</i><sup>[2]</sup>, which significantly contribute to the antidiabetic activity of their plant origins.</p> <p>[1] Baumgartner R., Steinmann D., Heiss E., Atanasov A., Ganzera M., Stuppner H., Dirsch V.; Bioactivity-Guided Isolation of 1,2,3,4,6-Penta-O-galloyol-D-glucopyranose from <i>Paeonia lactiflora</i> Roots As a PTP1b Inhibitor; <i>Journal of Natural Products</i> <b>2010</b>, 73, 1578-1581.</p> <p>[2] Steinmann D., Baumgartner R., Heiss E., Bartenstein S., Atanasov A., Dirsch V., Ganzera M., Stuppner H.; Bio-Guided Isolation of (9Z)-Octadec-9-enoic acid from <i>Phellodendron amurense</i> and identification of fatty acids as PTP1B inhibitors; <i>Planta Medica</i> <b>2011</b>, submitted.</p>	