

15<sup>th</sup> International Conference on

# Orthopaedics, Arthroplasty and Arthroscopy

September 22, 2022 | Webinar

# Keynote Forum





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### **Orthopaedics, Arthroplasty and Arthroscopy**

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## Hans Joachim Pössel

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# A new way of hallux valgus fixation for early weightbearing? The European (GER-S-AUSS) stoffella osteomy for hallux valgus-case presentations

Hallux valgus (HV) is a valgus angulation of the first metatarsophalangeal (MTP) joint of the great toe. Hallux valgus is distinct from a bunion, which is an exostosis on the dorsomedial aspect of the first metatarsal (MT) head. The word bunion is derived from the Greek, bunio, and means turnip; better known is the meaning of the Latin derived hallux valgus, that roughly translates to "large toe with an outward angulation," but more informally as a "crooked big toe." Hallux valgus is also frequently painful and may both limit physical activities and create psychological distress for patients, depending on the severity of the deformity.

#### **Recent Publications**

- 1. BaroUK LS (1997) New osteotomies in the forefoot and their therapeutic role. In: Valtin B (ed) Cahiers denseignements de la SOFCOT. Paris Expansion Scientifique Française 4986
- 2. Kitaoka HI, Alexander R, Adelaar R, et al (1994) Clinical rating system for the ankle, hindfoot, midfoot, hallux, and lesser toes. Foot Ankle Int 15: 349–353
- Klein C, Zembsch A, Kiss H, Neumann D, Dorn U (2002) Inzidenz von avasculären Köpfchennekrosen und Pseudarthrosen nach subkapitaler Osteotomie I nach Stoffella. Orthop Praxis 38:766–770

#### **Biography**

Hans Joachim Pössel has completed his PhD in 2011 from Middleham University and postdoctoral studies at Heinrich-Heine-Universät Düsseldorf, School of Medicine. He is a senior consultant of Orthopaedic Surgery and Sports Medicine in Mediclinic Middle East, a top player in World Healthcare. He has published multiple papers in reputed journals and online and has been serving as an editorial board member of an Internet Based Journal.

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## Paulo V G Alabarse

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# Metabolomic biomarker candidates for skeletal muscle loss in collagen-induced arthritis (CIA) model

**Statement of the Problem:** There is no consensus on the diagnosis or treatment of RA muscle loss. We aimed to investigate metabolites in arthritic mice urine as biomarkers of muscle loss.

**Methodology & Theoretical Orientation:** DBA1/J mice comprised collagen-induced arthritis (CIA) and control (CO) groups. Urine samples were collected at 0, 18, 35, 45, 55, and 65 days of disease and subjected to nuclear magnetic resonance spectroscopy. Metabolites were identified using Chenomx and Birmingham Metabolite libraries. The statistical model used principal component analysis, partial least-squares discriminant analysis, and partial least-squares regression analysis. Linear regression and Fisher's exact test via the MetaboAnalyst website were performed (VIP-score).

**Findings:** Nearly 100 identified metabolites had CIA vs. CO and disease time-dependent differences (p<0.05). Twenty-eight metabolites were muscle-associated: carnosine (VIPs  $2.8 \times 102$ ) and succinyl acetone (VIPs  $1.0 \times 10$ ) showed high importance in CIA vs. CO models at day 65; CIA pair analysis showed histidine (VIPs  $1.2 \times 102$ ) days 55 vs. 65, histamine (VIPs  $1.1 \times 102$ ) days 55 vs. 65, and L-methionine (VIPs  $1.1 \times 102$ ) days 0 vs. 18. Carnosine was fatigue- (0.039) related, creatine was food intake- (-0.177) and body weight- (-0.039) related, and both metabolites were clinical score- (0.093; 0.050) and paw edema- (0.125; 0.026) related.

**Conclusion & Significance:** Therefore, muscle metabolic alterations were detected in arthritic mice urine, enabling further validation in RA patients' urine, targeting prognosis, diagnosis, and monitoring of RA-mediated muscle loss.

#### **Recent Publications**

- 1. Correa LB (2022) Protective effect of methyl gallate on murine antigen-induced arthritis by inhibiting inflammatory process and bone erosion. Inflammopharmacology. Online ahead of print.
- Alabarse PVG (2021) Metabolomic Biomarker Candidates for Skeletal Muscle Loss in the Collagen-Induced Arthritis (CIA) Model. Journal of Personalized Medicine 26;11(9):837.
- 3. Soares MPR (2019) The use of apocynin inhibits osteoclastogenesis. Cell Biology International 43(5):466-475.

#### **Biography**

Paulo Vinicius Gil Alabarse has expertise in rheumatoid arthritis and related muscle loss, as well as osteoarthritis. His research focuses on searching for novel drugs for the treatment of osteoarthritis and search for a metabolic biomarker of muscle loss targeting diagnosis, follow-up, and treatment response to improve individual disease progress and treatment response.

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