



## Academy of Prosthodontics 2019 Annual Scientific Session Fairmont Banff Springs Hotel, Banff Canada May 29 – June 1, 2019

### Program Speaker – Dr. Ann Margvelashvili

#### Title

Teeth, Time, Tooth Wear  
2 Million Years of Physiology and Pathology of Dentoalveolar Structures

#### Abstract

Dentognathic apparatus gives an important insight for interpreting individual's lifestyle, dietary habits and health. Throughout lifetime tooth wear is an inevitability of mastication which via various bone remodeling processes is compensated for the lost dental hard tissues. Eventually, this entails morphological modifications of the masticatory system. Furthermore, due to multiple etiological factors, dentognathic pathologies develop. The research question is whether similar physiological and pathological patterns arise throughout human evolution as of in modern humans and in early *Homo* (Dmanisi hominins dated to 1.77 million years).

The quantitative analyses of modern human hunter-gatherer and early *Homo* mandibles have shown that we all share basic set of *in vivo* compensatory mechanisms to balance effects of tooth wear. Although the full spectrum of dentognathic pathologies (known from clinical dentistry) has been identified throughout human evolution, population-specific differences remain. They are related to different dietary and cultural habits as well as environmental stress-factors.

#### Learning Objectives

1. Tooth wear, related compensatory mechanisms and dental pathologies.
2. Evolution of dentognathic system and its way of coping with effects of mastication and environmental factors.
3. Humans now and humans (early *Homo*) 2 million years ago, similarities and differences of the dentognathic system.

#### Biography

DR. ANN MARGVELASHVILI

I am a senior research scientist at the Georgian National Museum and a coordinator of the annual international Dmanisi Paleoanthropology Field School running since 2009 in Dmanisi, Georgia. I graduated Tbilisi State Medical University, Stomatological Faculty. During my university years I volunteered as a young scientist to excavate at 1.8 million year old archaeological site of Dmanisi. After graduation I pursued Master's degree as an Erasmus Mundus fellow in Quaternary and Prehistory which took place in Portugal and Spain. Later, I became a Wenner-Grenn fellow (Wasworth Fellowship) to continue my research as a PhD candidate in Paleoanthropology at the University of Zurich, Switzerland with the thesis title - "Tooth Wear and Dentoalveolar Remodeling in Early *Homo* from Dmanisi". I have been intensively involved in planning the concept and preparations of the major exhibition – "Stone Age Georgia" – for Georgian National Museum.