ATPBOne

Research Areas

- Basic Research
- Data-Sharing Enabler
- Product Development

At a Glance

- Status: Completed Consortium
- Year Launched: 2008
- Initiating Organization: EU Seventh Framework Programme
- Initiator Type: Government
- Location: Europe

Abstract

The project involved on the one hand a fundamental part, aiming to give a basic description of the purinergic signaling system, and on the other hand a translational part to demonstrate the importance of the purinergic system in osteoporosis treatment. Multiple experimental approaches have been made, including physiological challenge of bone metabolism by mechanical loading and pharmacological intervention on the purinergic signaling system.

Mission

Purinergic signaling, where ATP and its metabolite adenosine act as extracellular signaling molecules is a rapidly expanding field. Evidence has accumulated that the purinergic system plays a central role in bone physiology. Thus, the overall aim of the project is to provide mechanistic basis for nucleotide-based therapeutics in osteoporosis. The work plan included:

(A) basic in vitro investigations on ATP release and signaling;
(B) a translational section involving in vivo experiments including transgenic mice; and
(C) studies of human cohorts and clinical intervention studies.

**Consortium History**

Commenced 1 January 2008 with a duration of 3 years

**Financing**

The project was funded with EUR 3 million through the EU Seventh Framework Programme (FP7)

**Impact/Accomplishment**

The results have been highly interesting and encouraging. In the consortium, we have obtained a very detailed insight into the basic mechanisms of purinergic signaling in bone, as well as a better understanding of the regulation of bone metabolism including the formation of new bone, degradation of old bone tissue, as well as the mineralisation of bone matrix. The project has provided mechanistic insight into basic mechanisms of bone turnover as well as into osteoporosis pathophysiology.

**Links/Social Media Feed**

Homepage  

**Points of Contact**

Jesper Thyge JOHANSEN, (Head of Department)
Sponsors & Partners

Copenhagen University Hospital
University College of London
University of Maastricht
University of Ferrara
University of Liverpool
University of Sheffield
Universite Libre de Bruxelles

Updated: 06/20/2017