

ATPBOne

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Research Areas



Basic Research



Data-Sharing Enabler



Product Development

Data

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

http://cordis.europa.eu/result/rcn/54980_en.html

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