COST Action BM1007

Mast cells and basophils – targets for innovative therapies

2011 | 2015

Objectives

- Identification and characterization of novel disease-related cell specific targets that will result in the development of innovative therapeutic strategies for the treatment of chronic inflammatory and autoimmune diseases by focusing on basic, clinical and translational science in mast cell and basophil research across Europe.

Main Achievements

**Scientific outputs obtained due to networking:**

- 5 joint publications in peer-review scientific journals, 3 joint presentations in other Action meetings; research topic in “*Frontiers in Moleculare Innate Immunity*” entitled: Deciphering new molecular mechanisms of mast cell activation (4 publications)


- Inhibitory Function of CD300a expressed on basophils in anaphylaxis (Sabato et al, 2012 Cytometry B Clin Cytom)

- Mast cells as regulators of skin inflammation and immunity (Harvima et al. 2011 Acta Derm Venereol)

- Experimentally induced psoriatic lesion associates with IL-6 in mast cells and appearance of dermal cells expressing IL-33 and IL-6 receptor. (Suttle et al. 2012 Clin Exp Immunol, in press)

**Capacity building due to networking:**

- Interdisciplinary networking of partners from academia, research, SMEs & industry, i.e. innovative knowledge on biological functions of mast cells and basophils

- Technology transfer, training, and mobility of Early Stage Researchers through Short Term Scientific Missions

Contact details

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Participating countries

A, BE, CH, CZ, DK, ES, F, FI, GR, IE, IL, IT, MK, NL, RO, SE, TR, UK,
Working Group activities

WG1: “Physiological and pathophysiological importance of mast cells and basophils in health and disease”
- Assessment, harmonization and validation of methodologies in mast cell and basophil research
- Identification of strategies to find novel functions of these two cells in vivo in animal models of diseases.
- Systematic classification of physiological and pathophysiological relevance of mediators, growth factors, specific chemokines, receptors, activators, inhibitors, ion channels.
- Description of the function of signal transduction pathways initiated by known or newly defined activators/receptors.

WG 2: “Methodological approaches for the investigation of mast cell and basophil biology”
- Assessment, harmonization and validation of methodologies in mast cell and basophil research
- Creation and dissemination of standardized state-of-the art models, methods, tools and techniques

WG 3 “Identification of biological and pharmaceutical mast cell and basophil related targets”
- Analysis of novel findings in mast cell and basophil biology for the relevance in humans
- Evaluation of potential pharmacological properties of newly discovered targets.

WG 4 “Therapeutic potential of mast cell and basophil targeting strategies”
- Generation of translational strategies and preclinical evaluation of novel pharmacological targets and assessment of socio-economic impacts for novel therapeutic interventions

Industry participation

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