COST Action no.TD0802

Dendrimers in biomedical applications

2009 | 2013

Objectives

- The main objective of the Action is to improve existing therapies and to find new drugs based on dendrimers
- develop new synthetic approaches to tailor dendrimers for specific applications and reducing production costs
- prepare novel dendritic structures with enhanced biocompatibility
- characterize new types of dendrimers
- conduct basic biological studies to reveal the properties of dendrimers, their mechanisms of action, and how their effectiveness may be improved

Main Achievements

- progress in dendrimer synthesis by exchanging experience among chemists
- discovering mechanisms of many biological processes and ways in which dendrimers act in organisms
- establishing a dense net of co-operating research groups
- more than 100 published experimental articles
- spinning off in new EC RTD Framework Projects
- increasing significantly the capacity of the Action members to raise research funds
- engaging early stage researchers (numerous STSMs, 2 Training Schools)
- preparing a special issue of Current Medicinal Chemistry (IF 4.6)
Working Group 1

Synthesis of Dendrimers

The main object of WG1 is to establish optimum strategies of dendrimer synthesis that ensures high quality products and cost reduction. Particular emphasis is put on environmentally friendly green technologies.

Working Group 2

Characterization of Dendrimers

This WG deals with the characterization of new compounds by experimental and theoretical methods.

Working Group 3

Biological Properties of Dendrimers

WG3 concentrates on basic biological studies to determine the biocompatibility and toxicity of new dendrimers as well as their effect on biological systems.

Working Group 4

Medical Applications of Dendrimers

This WG is responsible for exploring new therapeutic strategies and the final implementation of results. There is a cooperation with the pharmaceutical industry.

Industry participation

**NanoDrugs**

Prof. Valentin Cena-Callejo, President, Spain
valentin.cena@uclm.es

**Polymer Factory**

Prof. Eva Malmstrom-Jonsson, Sweden
mavem@kth.se
http://www.polymerfactory.com