

**Title:**

Advanced biocomposites based on new monomer systems reinforced with nanoparticles and glass fibers to be used in dentistry

**Acronim:** MULTISTOM

**Contract number :** 56 / 5/ 2006

**Framework programe :** CEEEX – MATNANTECH (<http://www.mct.ro>)

Duration: July, 2006-September, 2008-05-23

Partners:

- „Babes Bolyai” University- „Raluca Ripan” Chemistry Research University, Cluj Napoca as Coordinator.

- „Iuliu Hatieganu” Medicine and Pharmacy University, Cluj Napoca

- Technical University, Cluj Napoca.

- Organical Auxiliary Products Institute, Medias.

- „Petru Poni” Macromolecular Chemistry Institute, Iasi.

- SC Remed Prodimpex SRL, Bucharest.

**Objectives:**

The objectives of the project is to exceed the currently used dentistry composite resins based on methacrylic systems; that means the contraction at polymerization, excessive water absorption, insufficient resistance for ageing, unsatisfactory adhesion.

Project proposal is to elaborate new nanocomposite materials based on new analogical monomers Bis-GMA type and monomers having liquid crystals properties and, in the same time, new hybrid stuffs with micro and nanometrical sizes and glass fibers which give to composite material superior properties and make possible augmentation of applicability branch for composites used in dentistry .

**Envisaged results:**

During this project it will be realized composites for direct reconstruction and for intermediately reconstruction based on monomeric systems, on the synthesized nanostuffs, the glass fibers and biocomposites too, and it will be evaluated the biocompatibility for the new materials .

The project includes intellectual property rights – patent for new elements, publishable results disseminating using scientific communications and articles and getting up a thematic workshop.

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