Thematic area of my work; Nanochemistry and biotechnology

Synthesis of the Derivatives Having Different Functional Groups of *p-tert-butyl*-Calix [4] arene, *p-tert-butyl*-Calix [4,6,8] arene Their Nanofibers Production and Biocompatibility properties.

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The calixarene structure, similar to ring basket, in addition to their unlimited preparation of derivatives have provide opportunity to their use in various fields of research. They have been utilized such as ion-selective electrode, column packing material, sensor, chiral and achiral catalyst, membrane, enzyme-mimic, ion and molecular transport, new features have been gained for calixarenes by immobilization of them on magnetite nanoparticles and preparation of nanofibers of them by electrospinning. Innovative application areas will arise after the synthesis of new calixarenes nanofibers. Non-polymeric nanofibers system will be obtained from the newly synthesized organic p-tert-butylcalix[4]arene derivatives with different functional groups by electrospinning with suitable solvent, voltage (KV), distance (L) and flow rate (mL/min). Calixarenes is widely used in Supramolecular chemistry. Due to having a cyclic structure, calixarenes which can be functionalized easily with polar and apolar groups are good carrier for cations, anions and neutral molecules. Calixarenes can be used in many areas because of the easy-functionalized and having large surface area. In recent years, usage of the nanofibers obtained by electrospine method is getting increased[1-3]. In this paper, calixaren nanofibers has been prepared for cell growth experiments [4,5]. The new nanofiber system was developed by spin coating with three different calixaren. The results of the experiment biocompatibility shall be monitored by SEM, SEM-EDX and Confocal microscope.

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