



Csilla Zambori, DVM, PhD

[csillaza@yahoo.com](mailto:csillaza@yahoo.com)

Assistant Professor, Immunology

## Research

### Decellularization and recellularization of the heart

An important role of cardiac stem cell research is the engraftment of beating cardiac cells into the ischemic region of the heart after a myocardial infarction or more recently for the recellularization *in vitro* of the decellularized heart for the reconstruction of a bioartificial heart. Decellularization is a procedure which involves chemical, physical or enzymatic treatment of an organ or tissue to eliminate all resident cells in order to obtain an extracellular matrix. The aim of this procedure is to obtain an intact extracellular matrix of an organ or tissue which can be used in regenerative medicine, transplantation and/or bioartificial organs. In our experiments we have used and compared different methods of decellularization and we have differentiated stem cells into cardiomyocytes and other cell types in order to establish the best protocol for decellularization and recellularization of the heart.

### Relevant publications

1. Ioana Mihaela Citu, Florin Borcan, **Csilla Zambori**, Bogdan Tita, Virgil Paunescu, Simona Ardelean, Influence of Crosslinking Agent - Chain Extender Ratio on the Properties of Hyperbranched Polyurethane Structures used as Dendritic Drug Carrier, REV. CHIM., 66, Nr. 1, pp. 119 – 123, 2015, Bucharest, ISSN 0034-7752.
2. Ioana Mihaela Citu, Claudia Toma, Cristina Trandafirescu, Diana Antal, **Csilla Zambori**, Camelia Oprean, Florina Bojin, Florin Borcan, Virgil Paunescu, Voichita Lazureanu, Preparation and Characterization of a Polyurethane Nanocarrier Used for Mixtures of Betulin and Fatty Acids, REV. CHIM., 66, Nr. 3, pp. 431 -437, 2015, Bucharest, ISSN 0034-7752.
3. Camelia Oprean, **Csilla Zambori**, Florin Borcan, Codruta Soica, Istvan Zupko, Renata Minorics, Florina Bojin, Rita Ambrus, Delia Muntean, Corina Danciu, Iulia Andreea Pinzaru, Cristina Dehelean, Virgil Paunescu, Gabriela Tanasie - Anti-proliferative and antibacterial *in vitro* evaluation of the polyurethane nanostructures incorporating pentacyclic triterpenes. *Pharmaceutical Biology*, 2016, 9:1-9.

4. **Csilla Zambori**, Attila Alexandru Morvay, Camelia Gurban, Monica Liker, Gabriela Tanasie, Olimpia Colibar, Ciceronis Cumpănășoiu, Cristinel Gigi Șonea, Andra Cristina Șonea, Emil Tîrziu - Biofilm formation of *Staphylococcus*, *Streptococcus*, *Pasteurella* and *Neisseria* strains, Romanian Biotechnological Letters, Vol 20 No.4., pp 10718 – 10726, 2015, Bucharest.
5. **Csilla Zambori**, Attila Alexandru Morvay, Claudia Sala, Monica Licker, Camelia Gurban, Gabriela Tanasie, Emil Tîrziu, Antimicrobial effect of probiotics on bacterial species from dental plaque. The journal of infection in developing countries, Vol. 10, No. 03, pp. 214 – 221, 2016.
6. Camelia Vidita Gurban, Oana Suciuc, Lavinia Vlaia, Laura Smaranda Gotia, Marioara Cornianu, **Csilla Zambori**, Marilena Motoc, Vicentiu Vlaia, Iulian Velea, Marius Pricop, Inflammatory Markers from Crevicular Fluid in Periodontal Disease. REV.CHIM., 67, Nr. 10, pp. 1952 – 1956, 2016, Bucharest.
7. **Csilla Zambori**, Attila Alexandru Morvay, Mirabela Cristea, Emil Tirziu, Virgil Păunescu, Pluripotent stem cells for cardiac repair and recellularization. Lucr. șt. Med. Vet. Vol. XLVIII, pp. 203 – 218, 2015, Timisoara.
8. Attila Alexandru Morvay, **Csilla Zambori**, Valentin Ordodi, Emil Tirziu, Virgil Paunescu, Methods and procedures for heart decellularization. Lucr. șt. Med. Vet. Vol. XLVIII, 2015, Timisoara.

#### **Affiliations**

UMF "Victor Babes" Timisoara

Oncogene Institute -SCJUT Timisoara