

Ioan Valentin Matei, M.D., Ph.D.

Assistant researcher

Center for Gene and Cellular Therapies in the Treatment of Cancer “OncoGen” Timisoara

E-mail: ioanvmatei@yahoo.com



Areas of scientific interest

- **Mesenchymal stem cells and regenerative medicine**

I have studied the differentiation CD117-positive mesenchymal stem cells into pancreatic β -like cells capable of insulin synthesis, to reduce the deleterious effects of glucotoxicity induced by chronic exposure to high glucose conditions, and ultimately to obtain cells that can be used in transplantation applications. The project constituted the basis of my Ph.D. thesis, which was successfully defended in December 2016, as part of the Department of Oral Health at the Nippon Dental University Graduate School of Life Dentistry, Tokyo. I am assessing various sources of mesenchymal stem cells with regards to their CD117-positive populations, in order to fully characterize and deploy them for obtaining insulin-producing cells.

- **Anti-cancer cell therapies**

The main research topic is the development of chimeric antigen receptor-targeted oncoimmunotherapy with natural killer cells (CAR-NK). The purpose is to obtain novel CARs designed for expression by NK cells, exhibiting specificity towards particular tumoral markers, in order to obtain clinically applicable targeted oncoimmunological therapies, as an efficient, safe and cost-effective alternative to classic oncological treatments, as well as the treatment of non-curable cancer types. The project takes place at the Center for Gene and Cellular Therapies in the Treatment of Cancer (OncoGen), Emergency Clinical County Hospital “Pius Brinzeu” Timisoara.

Relevant publications

1. **Matei IV**, Ii H, Yaegaki K. (2016) *Hydrogen sulfide enhances pancreatic β -cell differentiation from human tooth under normal and glucotoxic conditions*. Regen med 10.2217/rme-2016-0142
2. Ionescu-Tirgoviste C, **Matei IV**, Ivanus B, Falcan AM. (2012) *Contributions of evolutionary biology to the understanding of cancer*. Proc Rom Acad Series B. 14(3), 183-190.
3. Gligor R, Zdremtan D, Pilat L, **Matei I**, Ionescu-Tirgoviste C, Crisnic I. (2012) *Correlations of visfatin with the lipidic metabolism in diabetic and obese patients*. Proc Rom Acad Series B. 14(1), 37-43.
4. Ionescu-Tirgoviste C, **Matei IV**, Gubceac E, Militaru M, Gutu D, Lixandru D. (2011) *A cytomorphometric analysis of adipocytes from the omental and abdominal subcutaneous adipose tissue*. Proc Rom Acad Series B. 13(3), 212-236.