

**28 Aprile 2021, 11:30 – Online seminar**

## **Nanocarriers for Nanomedicine**

Stefano Leporatti  
CNR-NANOTEC, Lecce

The development of nano-carriers as therapeutic and diagnostic tools represents one of the most dynamic technological frontiers in the treatment of different pathological conditions such as cancer or neurological diseases. Nanomedicine could therefore represent the future of nanotechnology in fighting unexpected diseases or to overcome pandemic outbreaks. In this seminar I will make an overview of our recent progress in nano-carriers design as nano-delivery tools to target neuronal and neoplastic cells. Possible uses and future perspectives of such nano-vehicles in current medical praxis will be envisaged.

### **References**

- N. A.N. Hanafy, M. Elkemary and S. Leporatti "Micelles Structure Development as a Strategy to Improve Smart Cancer Therapy" *Cancers* 2018, 10, 238; doi:10.3390/cancers10070238.
- A-M. Safer, S. Leporatti, J. Jose, M. S. Soliman "Conjugation of EGCG and Chitosan NPs as a novel Nano-Drug Delivery System" *International Journal of Nanomedicine* 2019;14 8033–8046.
- Francesca Persano and Stefano Leporatti "Current Overview of inorganic nanoparticles for the treatment of central nervous system (CNS) diseases" *Current Nanomaterials* 2020, 5(2): 92 - 110, DOI:10.2174/2468187310999200430093239.
- S Leporatti, M. Cascione, V. De Matteis, R. Rinaldi "Design of Nano-Clays for Drug Delivery and Bio-Imaging: Can Toxicity be an Issue?" *Nanomedicine-Future Medicine* 15, 25, 2020 (Published Online: 3 Sep 2020). <https://doi.org/10.2217/nnm-2020-0283>.
- F Persano, S Batasheva, GI Fakhrullina, G Gigli, S Leporatti, RF Fakhrullin "Recent Advances in the Design of Inorganic and Nano-Clays Particles for the Treatment of Brain Disorders" *Journal of Materials Chemistry B* (2021) , 9(12) 2726. <https://doi.org/10.1039/D0TB02957B>.

**Short Bio:** Stefano Leporatti received his Master Degree in Physics at Univ. of Genoa and obtained in 1999 his PhD in Solid State Physics at Max Planck Institute of Colloids and Interface Science with Prof. Dr. Helmuth Mohwald. He conducted advanced research there and worked later as Application Engineer @ Digital Instruments/Veeco Metrology Group, Mannheim (Germany). From 2001 to 2006, he has been Research Scientist at the Institute of Medical Physics & Biophysics, Universität Leipzig (Germany). From 2006 to 2008 he has been Senior Researcher at the National Nanotechnology Laboratory of CNR-INFN in Lecce (NanoBioMolecular Division of Prof. R. Rinaldi) and, since 2008, he was there NanoCarriers and BioMechanics Group Leader. From 2015 he joined newly established CNR NANOTEC Institute of Nanotechnology in Lecce as Senior Researcher (since end 2018 as permanent Research Staff). Since October 2020 is CNR Research Director @ CNR NANOTEC in Lecce.

**For info: [alessandrasabina.lanotte@cnr.it](mailto:alessandrasabina.lanotte@cnr.it)**