

## **1. GENERAL INFO**

### **Personal information**

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### **Short Biography/ Major Achievements**

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J. Miguel Oliveira, 47 years old (M), Biochemist has concluded his PhD (Materials Science and Technology - Tissue Engineering and Hybrid Materials) in June 2009. Over the years, Dr. Miguel Oliveira has made outstanding contributions to the field of natural-based biomaterials for use in tissue engineering and regenerative medicine (TERM). The research contributions of Dr. Oliveira in the biomaterials field are impressive, covering natural origin polymers (e.g., chitin, chitosan, silk fibroin, gellan gum, ulvan, carragenan, and hyaluronic acid) and ceramics that in many cases he originally proposed for a range of biomedical applications, including drug delivery carriers for stem cells' differentiation, hydrogels for cell encapsulation and use in cartilage, bone, peripheral nerve and intervertebral disc regeneration and for controlling the segmental vascularization in different tissues (e.g., meniscus and osteochondral tissue). In particular, his extensive and innovative work with gellan gum- and silk-based hydrogel materials has identified an exciting class of enzymatically cross-linked hydrogels with tunable properties, including its processability, biodegradability, and biological performance as compared to the existing materials. It is truly remarkable the range of processing routes proposed in developing a whole range of multi-scale structures spanning from micro-/nano-particles (e.g., dendrimers), micro-/nano-fibers, membranes, beads, scaffolds, conduits and hydrogels. He really moved these hierarchical materials into a range of new possibilities of application; being listed among the TOP 50 worldwide experts in Tissue engineering (Expertscape: <https://expertscape.com/ex/tissue+engineering>). Dr. Oliveira has been internationally recognized in the field, being listed in the Top 2% of researchers most-cited worldwide in 2021-2023. He's also listed as Top Scientists in Materials Science by Research.com: <https://research.com/u/joaquim-m-oliveira> (D-index: 47). In 2023, he was listed in the TOP1% (Yearly) most cited researchers.

Dr. Oliveira is the Principal Investigator with Habilitation (Permanent staff) at the 3B's Research Group, member of the PT Government Associate Laboratory ICVS/3B's (<https://3bs.uminho.pt/people/94>) and Institute 3Bs (I3Bs), University of Minho (Portugal). He is the Vice President of I3Bs (2018-current) and President Elect of the Scientific Council of I3Bs.

He is the Director of Pre-Clinical Research at the FIFA MEDICAL CENTER (Estádio do Dragão, Porto, PT since Feb. 2013) and Director of Basic Science of the new D. Henrique Research Centre (Porto - PT).

Dr. Oliveira is a Lecturer in Doctoral Program in Tissue Engineering, Regenerative Medicine and Stem Cells (TERM&SC; <https://termcsc.3bs.uminho.pt/content/about-programme>) at UM, PT (since 2014). In addition, he was member of the National

Ethics Committee for Clinical Trials from Serviço Nacional de Saúde (SNS) (PORTUGAL) (Jan. 2021- Aug. 2024). In Nov. 2023, Dr. Oliveira has been appointed Fellow Biomaterials Science and Engineering (FBSE) for the excellent professional standing and high achievements in the field of biomaterials science and engineering.

Dr. Oliveira is a committed mentor having directly mentored PhDs, graduate, undergraduate, and high school students, technicians and visiting scholars. Currently, he **supervises or co-supervises 2 PhD students, 5 Junior Researchers, 1 Assistant Researcher, and 1 Principal Investigator** within the field of biomaterials for application in TERM and Nanomedicine and in particular, for cancer research.

He is involved in the **preparation and coordination (PI and co-PI)** of several PT and EC funded projects at UMINHO (e.g., Infrastructure, Equipment's, Promotion of Series of Events in TERM field and Human resources) **totalizing more than 55 MEuros**.

**As result of his proficiency**, Dr. Oliveira has published more than 580 scientific contributions in scientific journals with referee (some in high impact factor journals), being **19** of those papers produced under invitation. Dr. Miguel Oliveira is inventor of **23** patents and published **12 books (+ 2 in preparation), 19 special issues/topical collections** in scientific journals, **136 book chapters** in books with international circulation, on international encyclopaedias, and science dissemination, being 3 of them listed in the 83 Best Biomaterials Books of All Time As featured on CNN, Forbes and Inc – BookAuthority identifies and rates the best books in the world, based on recommendations by thought leaders and experts (<https://bookauthority.org/books/best-biomaterials-books>). He has great experience in intellectual property rights and patent exploitation. He has participated in **more than 700** communications in national/international conferences. Due to his expertise, he participated as invited/keynote speaker in more than **100** plenary sessions. He made great contributions in the osteochondral field, namely by proposing bilayered scaffolds, work that has been highly cited by its peers. Dr. Miguel Oliveira (as of January/February 2025) has an **h-index of 76, i10 of 281 and received more than 21000 citations (Google Scholar)**.

Dr. Oliveira is an entrepreneur and has also been the responsible for developing and licensing a patent on Gellan gum-based polysaccharides (Mimsys® G) to Stematters, the first product commercialized by this spin-off of 3B's. Under the EU funded Biohybrid project, he made important contributions on the development of the chitosan-based medical device (ReAxon®, Medovent, Germany) for peripheral nerve regeneration, which received the CE mark. One of the technologies developed by Dr. Oliveira, "the meniscus implant" is in the permanent collection of the National Museum of Sports, Palácio Foz, Lisbon - Portugal.

As a result of his academic activities, Dr. Oliveira has been distinguished by the Portuguese Foundation for Science and Technology (FCT) with two prestigious Grants under the most prestigious program available, the "Investigador FCT 2012 and 2015" (Starting and Development grants), aimed at PhD holders with a curriculum of exceptional merit and experience. He has been awarded **27 prizes/honors**, being the most prestigious one, The Jean Leary Award 2015 (Young Scientists and Group Leaders under 40 years old) attributed by the European Society for Biomaterials for its Outstanding Contributions within the field of Biomaterials.

Dr. Oliveira is a very committed member of several International Societies (e.g., TERMIS and ESB) and Journals. He has a strong Editorial experience and is one of the founding Editors-in-chief of the new Journal entitled ***In vitro Models*** (Springer) launched in mid-2021. He is also the one of Editors-in-chief of the Book Series on Biomaterials, Bioengineering, and Sustainability (Springer). He is member of the advisory board of several Journals, and referee in several international journals in the Biological Engineering field.