European Society of Endodontology

Young Investigator Researcher Grants 2017

The European Society of Endodontology (ESE) awards young researcher grants to support young investigators in the early phase of their research career in Endodontology ("young" investigator in the context of this award is defined as an individual who is 'professionally' young in academic terms rather than in chronological age, e.g. pre-doctoral students at all levels (MSc, PhD students and equivalent), and up to 3 years following the award of a PhD (or equivalent).

Award 5,000 Euros to Matthias Widbiller

Career

2008 – 2013: Dental studies at the University of Regensburg
2013: State examination in dentistry at the University of Regensburg
2015: Doctorate at the University of Regensburg titled "Mineralization of three-dimensionally cultivated human dental pulp stem cells on tricalcium silicate cement"
2014 to present: Endodontist and research fellow at the Department of Conservative Dentistry and Periodontology, University Hospital Regensburg

Summary of project

Preservation of pulp vitality is one of the prime goals in treatment of dental diseases, whether it be a trauma or a caries. Especially carious decay with accompanying bacterial infection of dentine challenges pulp and initiates defense mechanisms like formation of tertiary dentine. Thus, modern approaches try to avoid pulp exposition and keep the pulp vital by stepwise excavation of caries or even by incomplete removal of infected dentine. Under a deep carious lesion, pulp cells are confronted with bacterial endotoxins, like lipopolysaccharide (LPS), on the one hand, and with bioactive proteins from the dentine matrix on the other. Here, dentine matrix proteins (DMPs) are released mainly by acidic bacterial products, and play an important role in regeneration of injured pulp tissue. Despite being of high clinical relevance, only little is known about the joint effects of LPS and proteins from the dentine matrix on dental pulp. So, the aim of this project is to acquire new insights in the behavior of human dental pulp stem cells (hDPSCs) exposed to DMPs and LPS, and consequently better understand the mechanisms of pulp defense to caries. Finally, conclusions might also shed light on the biological processes in situations of incomplete caries removal and support conservative concepts of caries excavation.

Award 5,000 Euros to Maxime Ducret

Maxime Ducret:
I'm 28 years old. I am Doctor in Dental Surgery since 2011. I decided to complete my training with a Master in Genetics and Cell Biology (2012) and then a Ph.D in Cell Biology and Tissue engineering (2012-2015) in Lyon 1 University. During these three years in the Laboratory of Tissue Biology and Therapeutic Engineering, I published several papers reporting the characterization of human dental pulp mesenchymal stromal cells isolated and expanded with an original good manufacturing approach. I was recently appointed as a Junior Lecturer to the University Lyon 1 Faculty of Odontology with the mission to develop my own research project about human dental pulp regeneration (RegePulp® project), in collaboration with Pr Jean-Christophe Farges, the Head of the Oral Biology Department.

Thanks to the grants of French and European Societies of Endodontology, my aim is to specifically design an innovative therapeutic strategy to regenerate the human dental pulp from mesenchymal stem/progenitor cells seeded in various types of hydrogels."