S04-01

Understanding the regulation of enteric glia status

W. Boesmans[1,2]

[1] *Biomedical Research Institute (BIOMED), Hasselt University, Diepenbeek, Belgium*
[2] *Department of Pathology, GROW-School for Oncology and Reproduction, Maastricht University Medical Centre, Maastricht, Netherlands*

Enteric glia come in many shapes and forms, and participate in various intestinal processes. The functional versatility and phenotypic heterogeneity of enteric glia are echoed by a high degree of cellular plasticity. This is illustrated by their role as neuronal precursors in the adult gut and their reactivity in conditions associated with enteric nervous system dysfunction and gastrointestinal disease. Yet, the biology of enteric glia is incompletely understood. Several of the unanswered questions relate to understanding the mechanisms regulating their niche-specific phenotypes and putative functional diversity. Using a combination of *in vitro*, *ex vivo* and *in vivo* model systems we investigate the molecular foundations controlling enteric glial cell status, and focus on the role of microRNAs in tuning enteric glia phenotype and function. We study the dynamics of enteric glia in gastrointestinal homeostasis and examine how they are involved in the pathogenesis of gastrointestinal disorders including colorectal cancer, neurodegenerative conditions and neurodevelopmental disease.