

Heterotopic ossification (HO) is a dysregulation of skeletal muscle homeostasis and regeneration that leads to the formation of mature bone in untypical locations. It can limit patient quality of life or physical functioning. The direct molecular mechanism leading to the formation of HO has not yet been described. Importantly, the knowledge about the role of microRNA (miRNA) and long non-coding RNA (lncRNA) in the HO formation is limited. These molecules are very important regulators of gene expression in the cell. Therefore, the identification of miRNA and lncRNA is important for understanding the mechanism of HO formation. The aim of this project is to verify the role of these molecules in the formation of HO. Moreover, these molecules could be used as markers to monitor HO formation and implement appropriate treatment. In addition, these molecules might become a potential target for therapy.