

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

This report is submitted for approval by the STSM applicant to the STSM coordinator

Action number: CA17103

STSM title: Direct targets of the RNA-binding protein PTBP1 necessary for proper development of B lymphocytes

STSM start and end date: 24/01/2019 to 02/02/2019

Grantee name: Elisa Monzón-Casanova

PURPOSE OF THE STSM:

B cells are the cells of our immune system that secrete antibodies after activation and differentiation. Therefore, B cells are a crucial component of our immune system to fight infections. Polypyrimidine Tract Binding Proteins (PTBPs) are RNA-binding proteins that control alternative splicing and mRNA stability. Using cell-specific conditional knockout mouse models we have identified an essential role of PTBP proteins in B cell development. During my STSM, Dr. Kathi Zarnack (Buchmann Institute, Frankfurt) and I developed computational approaches to define alternatively spliced exons directly regulated by PTBPs which are important for the development of B cells. The results obtained during this STSM will help to characterise these regulatory interactions in detail. Understanding these interactions will help the design of future antisense oligonucleotides (AONs).

