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MCPIP1 expression is positively correlated with an immunosuppressive microenvironment and is associated with aggressive clinicopathological features in glioma patients.

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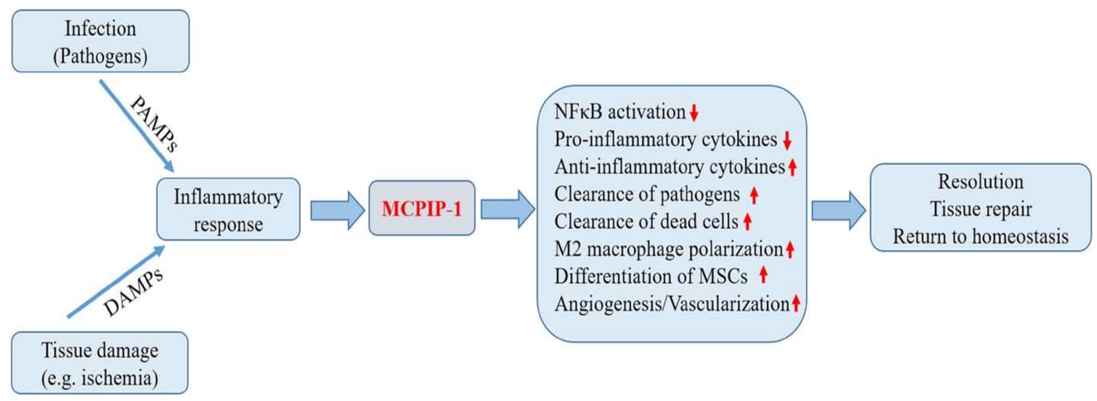
INTRODUCTION

Glioma is the most common primary brain tumor. Recently, studies have shown that failure of PD1/PDL-1 immunotherapy may be linked to upregulation of various inhibitory immune checkpoints in glioma patients. This highlights the importance of deciphering novel biomarkers for additive or synergistic impact on glioblastoma patients to guide and improve immune-mediated therapy concepts. MCPIP1 known also as Regnase 1 an inflammation-related endoribonuclease, expressed in macrophages, T and B cells could be a good target for immunotherapy.



AIM OF THE STUDY

Explore the expression, the clinical and immunological significance of the MCPIP1, an emerging immune checkpoint, in human gliomas by exploiting transcriptomic bases.

MATERIALS & METHODS

International dataset transcriptome of glioma patients

667 Glioma cases

GraphPad

GraphPad Prism 6.0 Software

R Software

Statistical Analysis

RESULTS

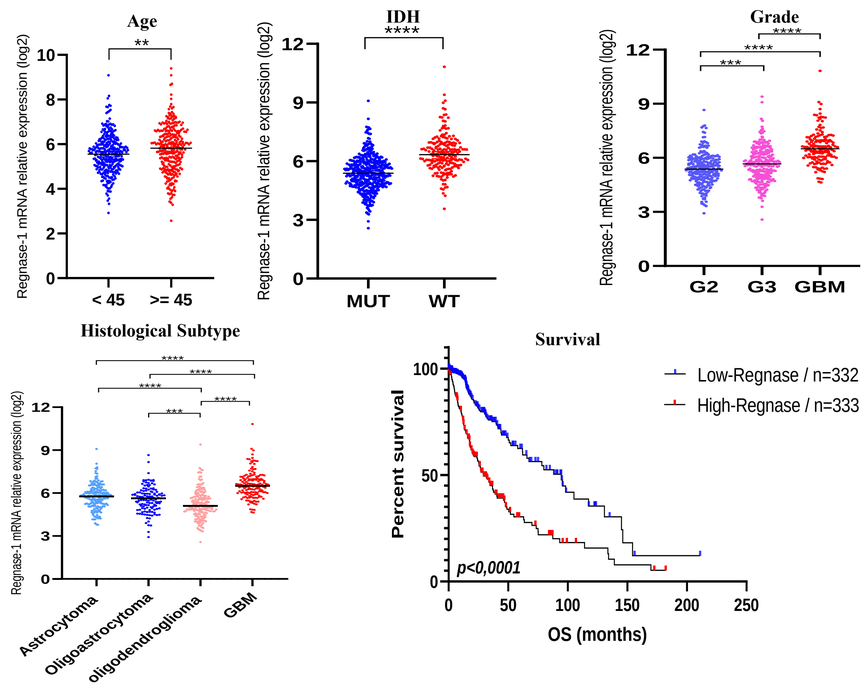


Figure 1: MCPIP1 expression is significantly associated with aggressive clinicopathological parameters of glioma

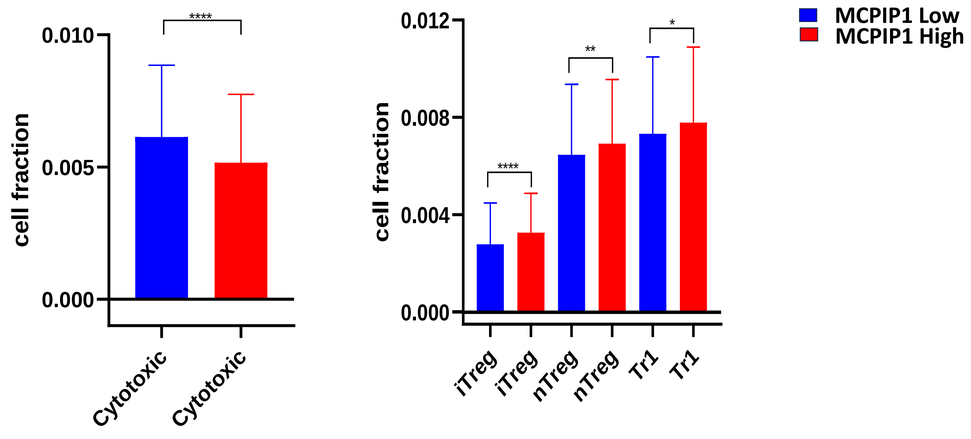


Figure 2: MCPIP1 expression is associated with protumoral cell infiltration and immunospressive microenvironment

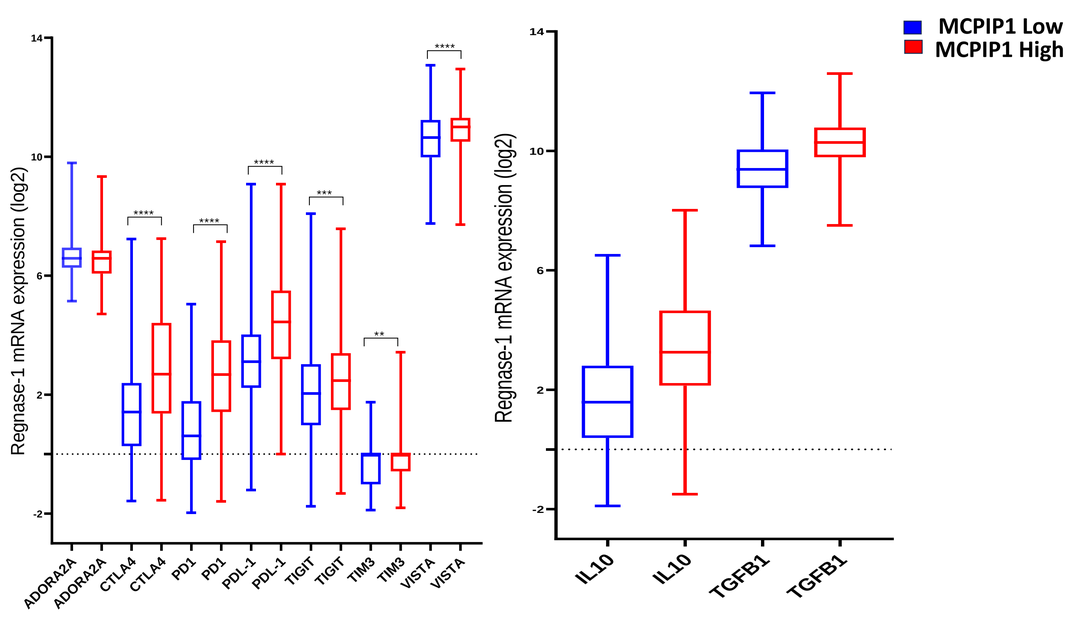


Figure 3: High expression of MCPIP1 is associated with an inhibitory immune microenvironment

CONCLUSION

MCPIP1 is significantly associated with aggressive clinicopathological parameters of glioma. Its overexpression is positively associated with an inhibitory immune microenvironment as it is also associated with protumoral cell infiltration. Overall, our preliminary results suggest that MCPIP1 could act as a potential immunosuppression-mediated molecule in the glioma microenvironment in several ways.