

## The prevalence of leukemia-associated antigen MPP11 m-RNA expression in Egyptian patients with CML

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### **Abstract**

Chronic myeloid leukemia (CML) is a hematopoietic stem cell disease with distinct biological and clinical features. For an effective specific immunotherapy in CML, the use of leukemia-associated antigens (LAAs) with an optimal expression pattern is required. Among these leukemia-associated antigens (LAAs) that induce a humoral immune response in CML patients is M-phase phosphoprotein 11 (MPP11). M-phase phosphoprotein 11 (MPP11) gene is one of the leukemia-associated antigens (LAA) identified in patients with myeloid leukemias. It plays a putative oncogenic role with a highly tumor specific expression level. In the present work we aimed at studying the frequency of expression of (MPP11) in Egyptian patients with CML, both in chronic phase and accelerated/blastic phase, as a potential target for cellular immunotherapies.

**Patients and methods:** MPP11 expression was tested in peripheral blood mononuclear cells of 43 CML patients divided into 2 groups, group A: 32 chronic phase CML patients, group B: 11 accelerated/blastic phase patients as well as 15 healthy volunteers. RT-PCR technique was used to detect MPP11 m-RNA.

**Our results** demonstrated that 90.6% of our chronic CML patients showed positive MPP11 expression similar to the accelerated/blastic phase patients. This highlighted the contribution of MPP11 expression with CML disease throughout the disease course.

**Conclusion:** Our work demonstrated a similar high incidence of MPP11 expression in both chronic and accelerated/blastic phase CML patients. This suggests the possible therapeutic value of MPP11 derived peptide vaccination with conventional CML therapy in chronic and accelerated phases, in order to achieve complete molecular remission for our patient.