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Titolo: Novel antigenic determinants of pediatric acute myeloid leukemia potentially useful for the development of targeted immunotherapies

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Abstract

Leukemias account for one third of all pediatric malignancies. Though the outcome of acute myeloid leukemia (AML) patients has significantly improved reaching up to 60% of survival, still a large proportion of patients relapse due to the persistence of malignant cells resistant to chemotherapy. Several efforts have been spent to develop new therapeutic strategies to improve AML cure, including immunotherapy that enables the patients’ immune system to fight their own cancer. Among these, CAR T cell immunotherapy holds great promise for the unprecedented successful outcome in patients. The development of immunotherapy approaches has focused largely on targeting the CD19 antigen, currently included as therapeutic target in several clinical trials and in already marketed products, but very few if no promising data exist for immunotherapy approaches, including CAR-T cell ones, in AML. This invention describes some novel antigenic determinants widely shared by AML cells to be exploited for the development of effective and specific immunotherapy approaches for pediatric AML.