Malignant melanoma is a malignant neoplasia driven from melanocytes. Malignant melanoma, the most causing death, is seen in the third place at skin cancer. Malignant melanoma shows intrinsic resistance to chemotherapeutic agents and variability in the course of the disease which are distinct features separating from other solid tumors. These features prevent the development and standardization of non-surgical treatment models of malignant melanoma. Although there is a large number of chemotherapeutic agents used in the treatment of metastatic malignant melanoma, it hasn’t been demonstrated the survival advantage of adjuvant treatment with chemotherapeutic agents. Because of the different clinical course of malignant melanoma, the disease is thought to be closely associated with immune system. Therefore, immunomodulatory therapy models were developed. Mistletoe stimulates the immune system by increasing the number and activity of dendritic cells, thus it has been shown to effect on tumor growth and metastasis of malignant melanoma patient. Outlined in this review are the recent developments in the understanding the role of mistletoe as a complementary therapy for malignant melanoma.