

The Role of U2AF1 Mutation in Malignant Diseases and Related Therapeutic Strategies

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February 9, 2023

Abstract

The U2 small nuclear RNA auxiliary factor1(U2AF1)belongs to the splicing factor SR family. This spliceosome involves in intron removal from messenger RNAs (mRNAs) and exon-exon binding. Nevertheless, the mutation of U2AF1 is associated with myelodysplastic syndrome (MDS), bone marrow cancer, and solid tumors, including lung cancer, pancreatic carcinoma, and other malignant tumors. Besides, the expression and mutation of U2AF1 will promote the occurrence or prognosis of relevant diseases. Hence, targeted therapies are required in the treatment of relevant diseases. Unfortunately, it remains unclear about the role of U2AF1 in different diseases. Therefore, we summarized the pathogenic mechanism of U2AF1 in different malignant diseases and related targeted agents.

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Figure 1

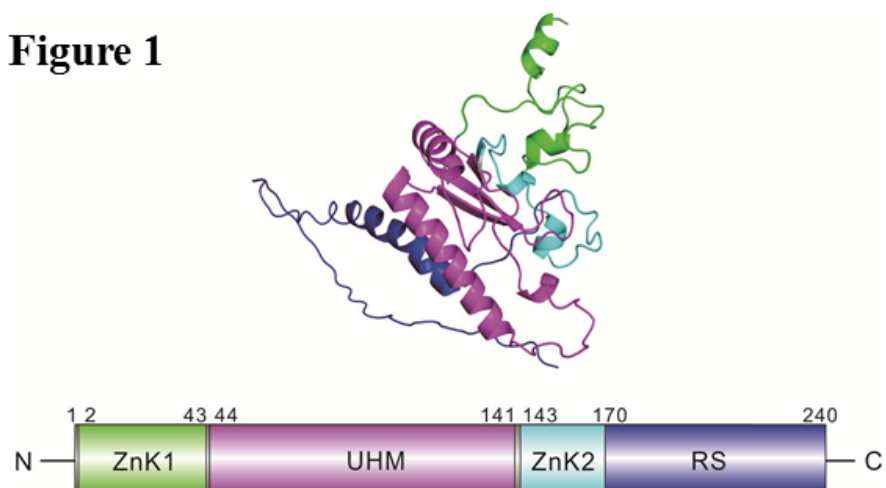


Figure 2

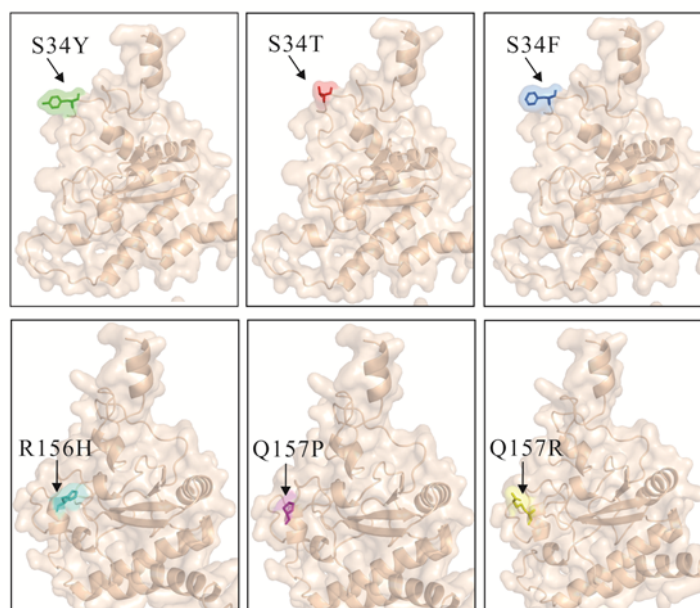


Figure 3

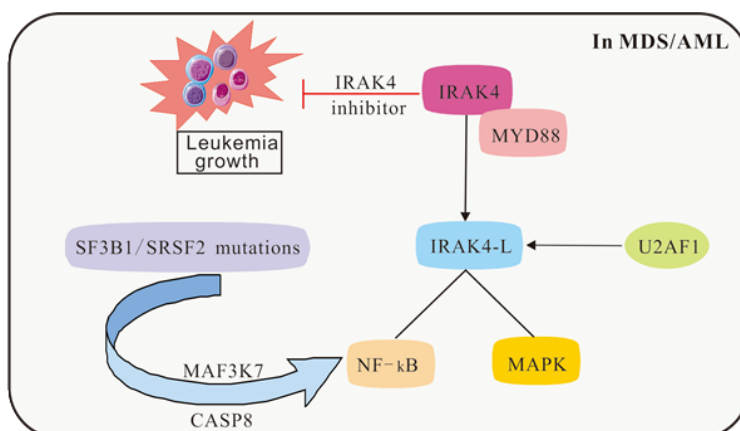


Figure 4

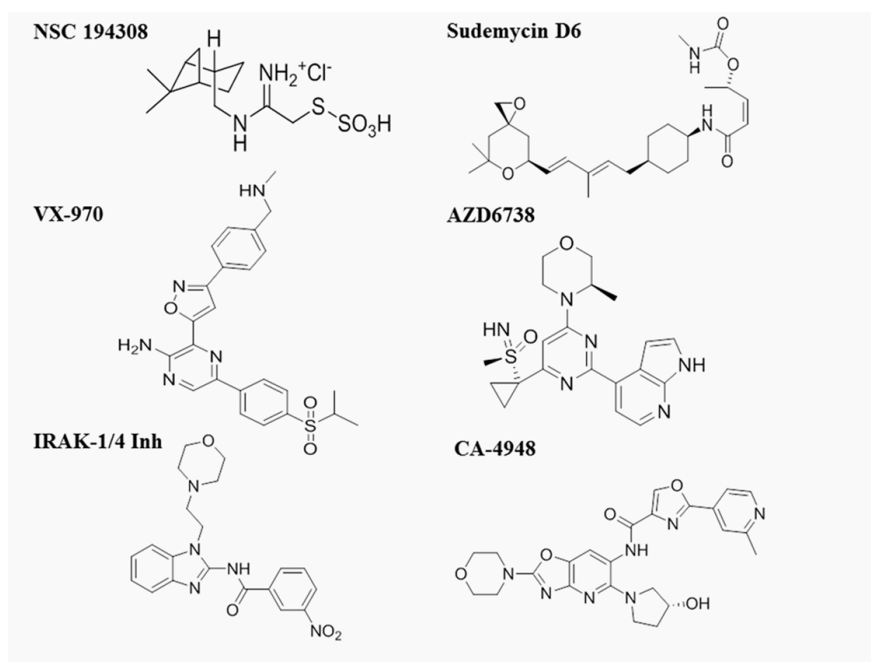
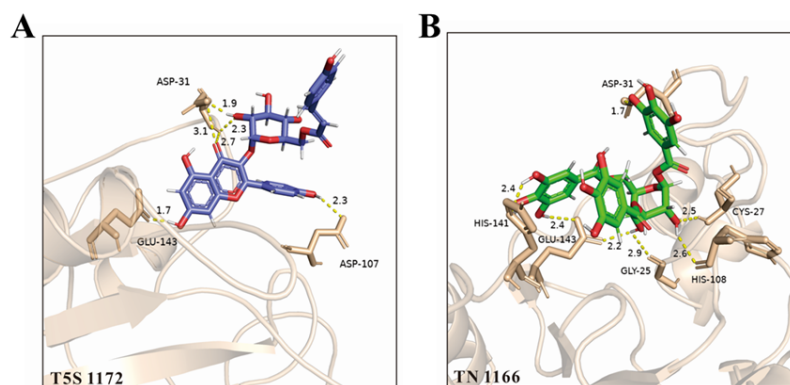


Figure 5



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Table1 Roel of U2AF1 in malignant diseases.docx available at <https://authorea.com/users/584602/articles/623740-the-role-of-u2af1-mutation-in-malignant-diseases-and-related-therapeutic-strategies>

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Table 2 Clinical trials about U2AF1 treatment shown in this review.docx available at <https://authorea.com/users/584602/articles/623740-the-role-of-u2af1-mutation-in-malignant-diseases-and-related-therapeutic-strategies>