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An interaction between U2AF 65 and CF I(m) links the splicing and 3' end processing machineries

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The protein factor U2 snRNP Auxiliary Factor (U2AF) 65 is an essential component required for splicing and involved in the coupling of splicing and 3' end processing of vertebrate pre-mRNAs. Here we have addressed the mechanisms by which U2AF 65 stimulates pre-mRNA 3' end processing. We identify an arginine/serine-rich region of U2AF 65 that mediates an interaction with an RS-like alternating charge domain of the 59 kDa subunit of the human cleavage factor I (CF I(m)), an essential 3' processing factor that functions at an early step in the recognition of the 3' end processing signal. Tethered functional analysis shows that the U2AF 65/CF I(m) 59 interaction stimulates in vitro 3' end cleavage and polyadenylation. These results therefore uncover a direct role of the U2AF 65/CF I(m) 59 interaction in the functional coordination of splicing and 3' end processing.

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