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Cofactor for a cap-binding complex involved in meiotic silencing

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The presence of an extra DNA segment is often an indication of a virus or transposon on the move. In *Neurospora crassa* (orange bread mold), several surveillance mechanisms are maintained to keep these selfish elements at bay. One of these defense mechanisms is called meiotic silencing by unpaired DNA (MSUD), which silences any gene not having a pairing partner during meiosis. MSUD utilizes common RNA interference factors, such as Dicer and Argonaute, to suppress the expression of its targets. In eukaryotes, an mRNA transcript is typically bound at the 5' cap by the cap-binding complex (CBC), which assists in its nuclear export. Recently, we discovered that CBC mediates MSUD, possibly by helping to bring targeted mRNAs to Argonaute for destruction. Here, we explore the functional and mechanistic roles of ARS2, a CBC cofactor. ARS2 interacts with CBC and contributes to both sexual and asexual cycles.