U1 and U2 base-pairing with hnRNA *in vivo*

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In early 1979 Jim Calvet in my lab used psoralen crosslinking to show that the intramolecular hairpins that had been observed in deproteinized hnRNA really exist in the living cell (1). A few months later I reviewed a paper submitted to NAR demonstrating that psoralen crosslinks could be reversed (2). This was the enabling finding that allowed us to detect U1 and U2 base-pairing with hnRNA in live cells (3,4). (We also captured both U3 snoRNA and 5.8S rRNA base-paired to nucleolar RNA.)

Like my lab's contemporaneous work demonstrating that hnRNP particles exist prior to nuclear isolation and fractionation (5,6), our capture of U1 and U2 base-pairing with hnRNA added the important *in vivo* dimension. Of course, a limitation of our experiments was that the large transcripts to which we demonstrated in vivo U1 and U2 base-pairing were the totality of hnRNA. We considered going ahead with a specific pre-mRNA but by then the splicing field was rocketing ahead. Although we were the first to show that hnRNPs contain pre-mRNAs (7), this evolved as a different field, on the nuclear cell biology frontier.

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