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## Shining light (and neutrons) on RNAs

The structures of RNAs and RNA-containing complexes regulate many biological processes. Despite their functional importance, RNA:RNA complexes represent a small fraction of experimentally-determined structures. We employed a joint small-angle X-ray and neutron scattering (SAXS/SANS) approach to structurally interrogate conformational changes in a model RNA:RNA complex. Using a combination of isotope labeling and contrast matching (CM), we were able to probe the bound state structure of an RNA within a selectively deuterated RNA:RNA complex, expanding the utility of SANS for complex structure elucidation. This work demonstrates that *in silico* modeling, SAXS, and CM-SANS can be used in concert to directly analyze conformational changes within RNAs when in complex, enhancing our understanding of RNA structure in functional assemblies.

### Topical Area

Biology and life sciences

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