

Theoretical studies on RNA recognition by Musashi 1 RNA–binding protein

Nitchakan Darai, Panupong Mahalapbutr, Peter Wolschann, Vannajan Sanghiran Lee, Michael T. Wolfinger, Thanyada Rungrotmongkol

Figures and title from :

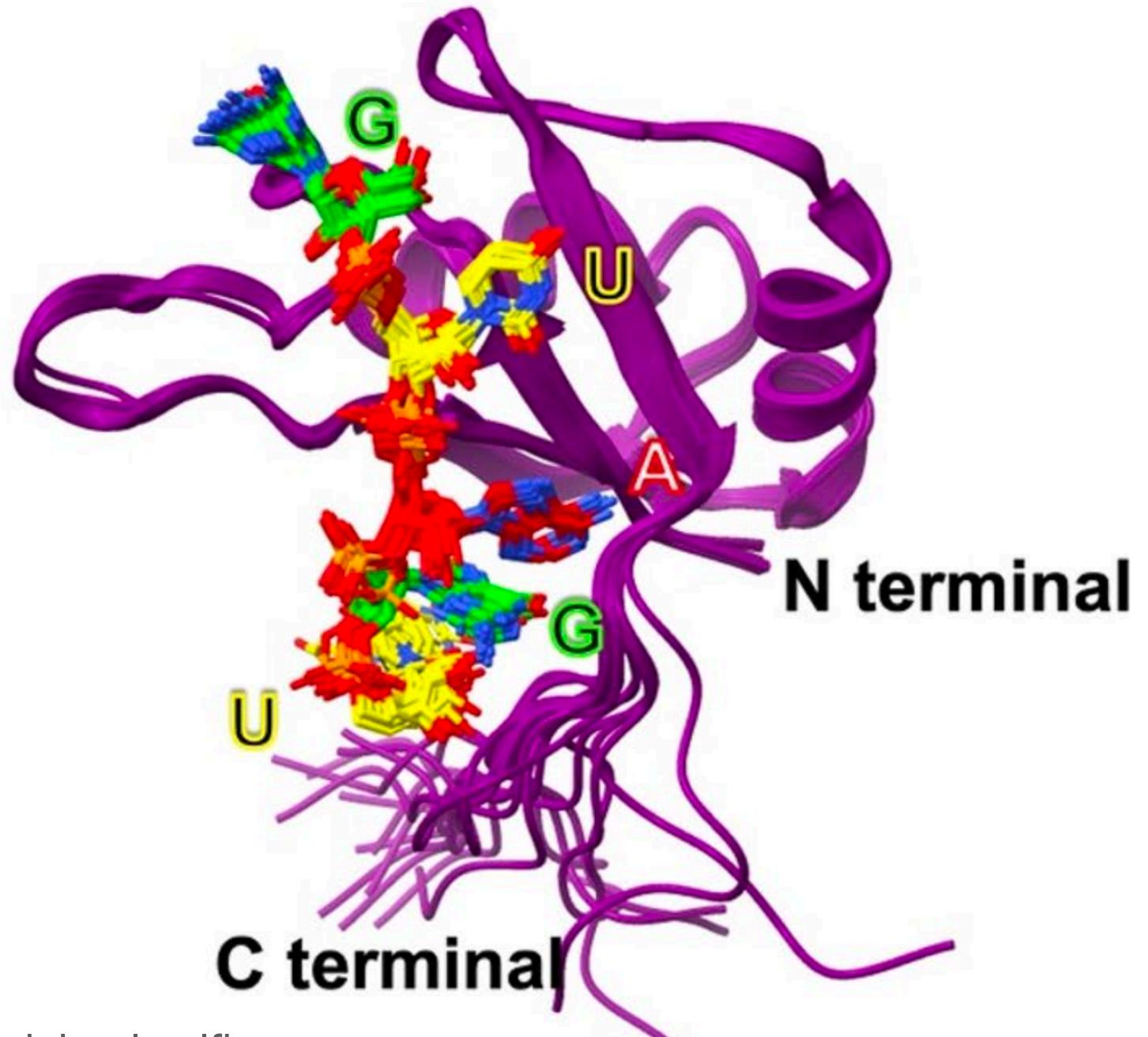
Theoretical studies on RNA recognition by Musashi 1 RNA–binding protein
Darai, N., Mahalapbutr, P., Wolschann, P., Lee, V. S., Wolfinger, M.T., and
Rungrotmongkol, T.

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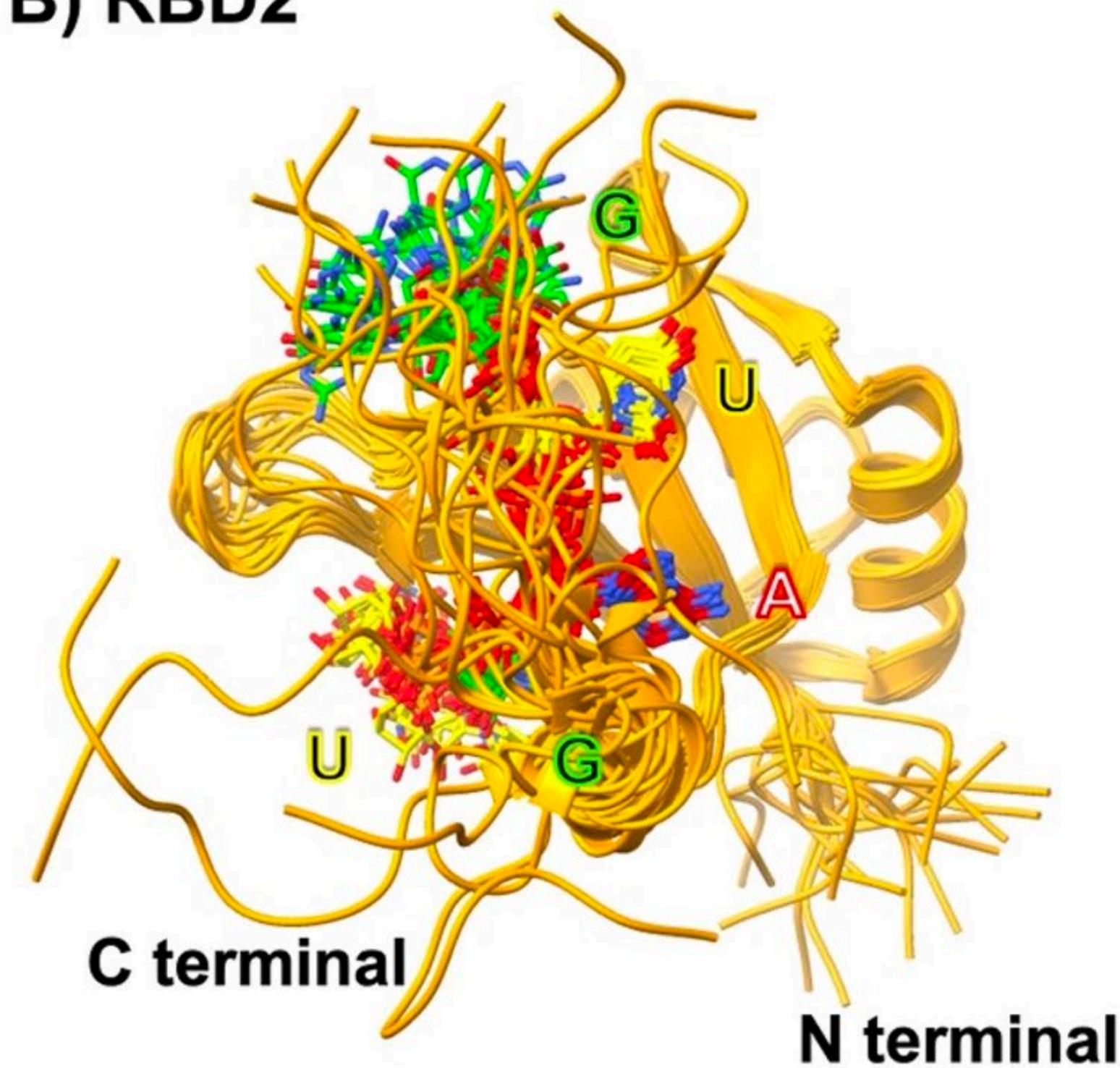
doi: 10.1038/s41598-022-16252-w

The screenshot shows a scientific report from 'scientific reports' (www.nature.com/scientificreports/). The title of the article is 'Theoretical studies on RNA recognition by Musashi 1 RNA-binding protein'. The authors listed are Nitchakan Darai¹, Panupong Mahalapbutr², Peter Wolschann³, Vannajan Sanghiran Lee⁴, Michael T. Wolfinger^{3,4,5}, and Thanyada Rungrotmongkol^{1,6,7}. The abstract discusses the Musashi (MSI) family of RNA-binding proteins, which regulate translation and proliferation. It highlights the two homologs MSI1 and MSI2, each containing two RBDs (RBD1 and RBD2) that bind single-stranded RNA motifs with a central UAG triucleotide. The study used molecular dynamics simulations to investigate RNA-pentamer binding energy calculations, suggesting that predicted MSI protein structures are similar to experimentally determined ones. The article is marked as 'OPEN' and includes a 'Check for updates' button.

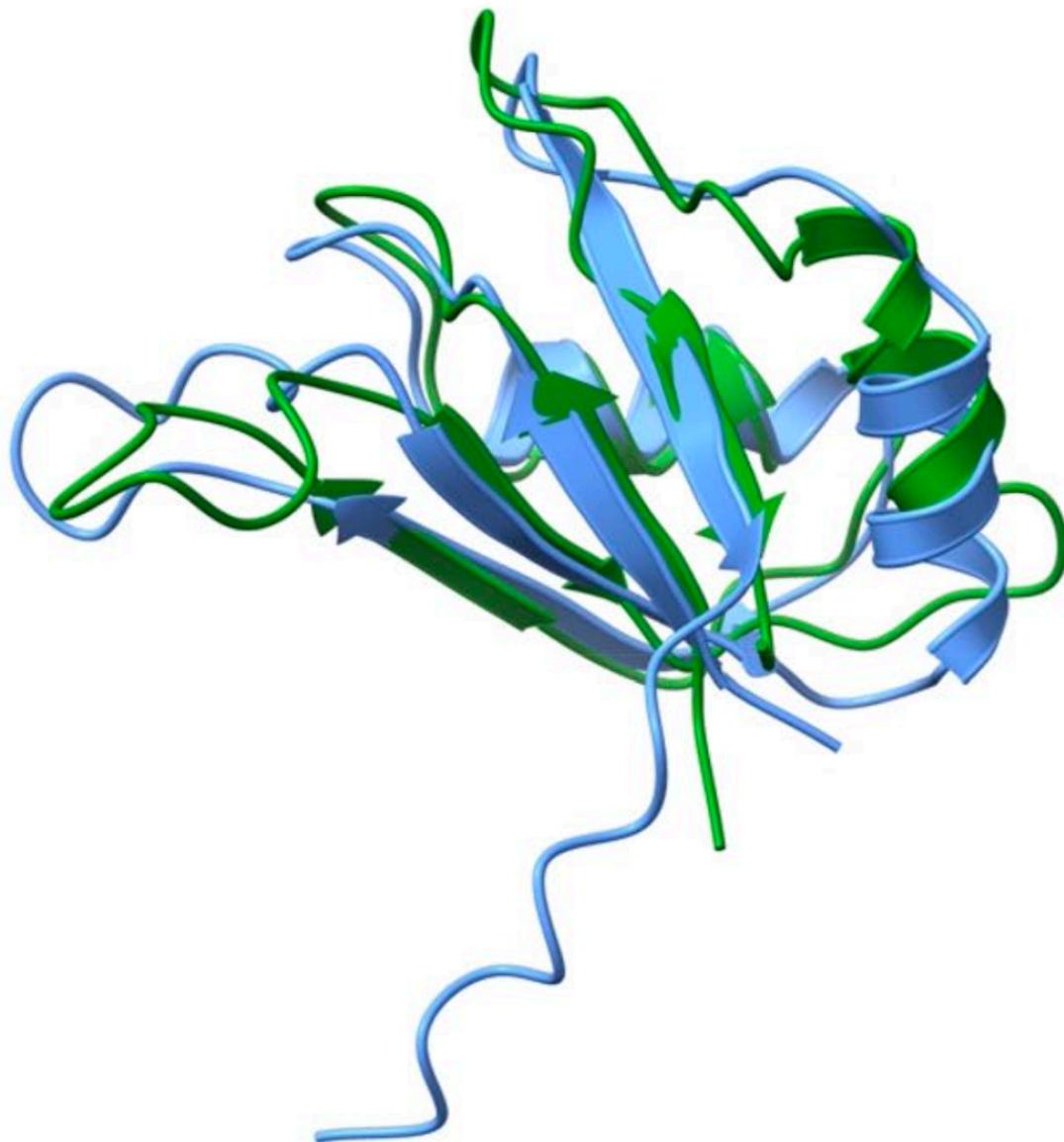
A) RBD1



B) RBD2



A) RBD1



B) RBD2



Apo form (1UAW)



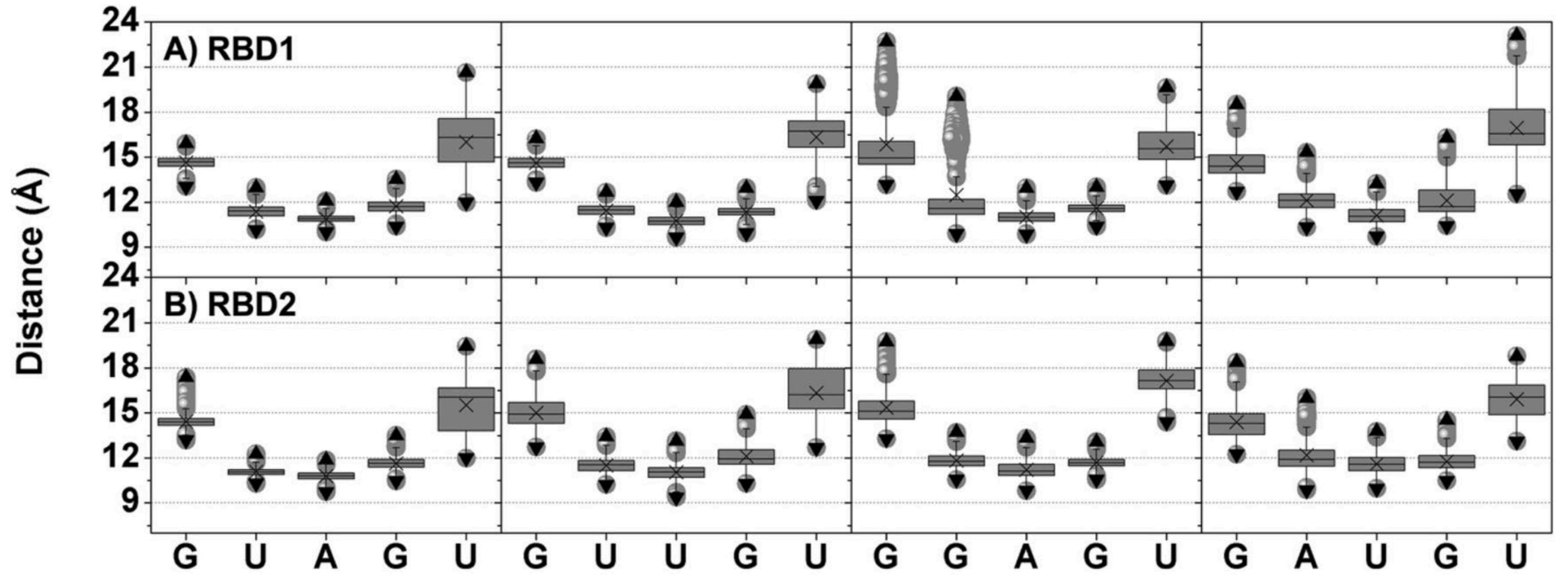
Predicted structure

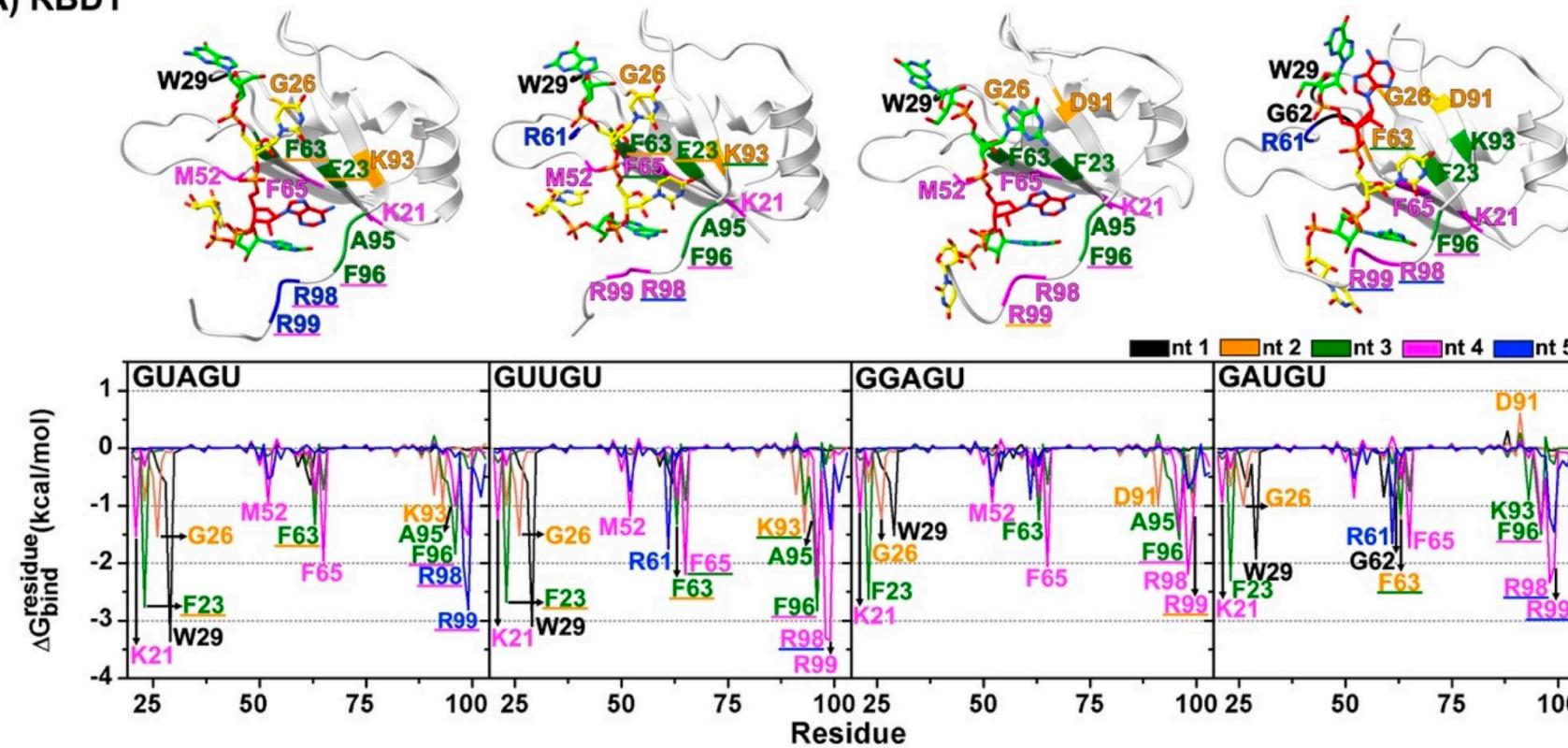
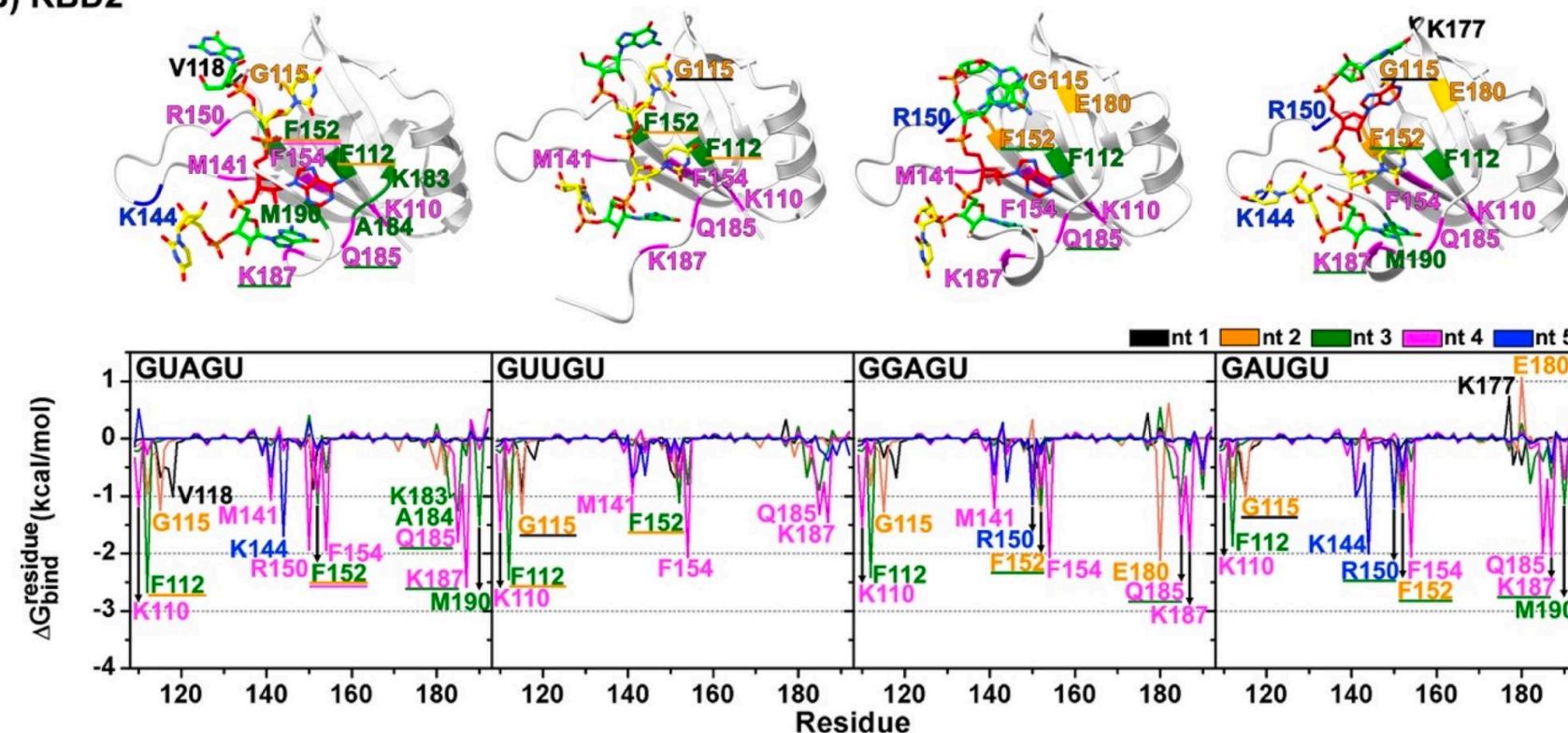


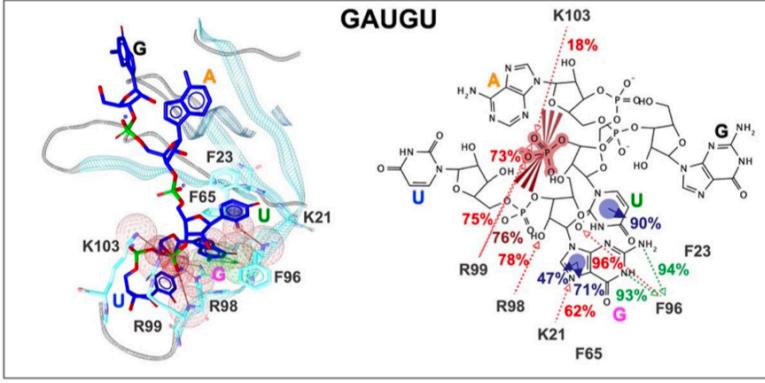
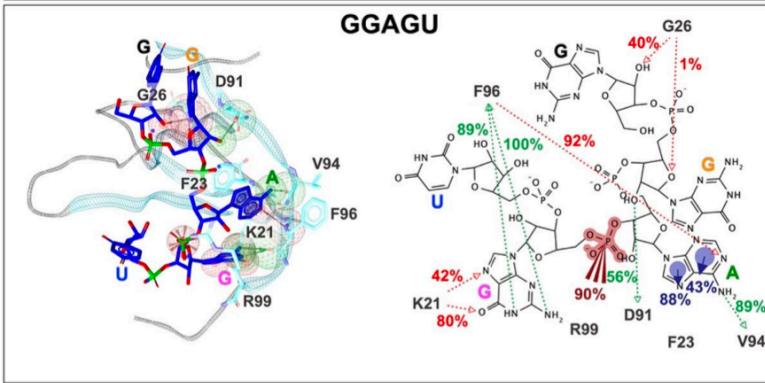
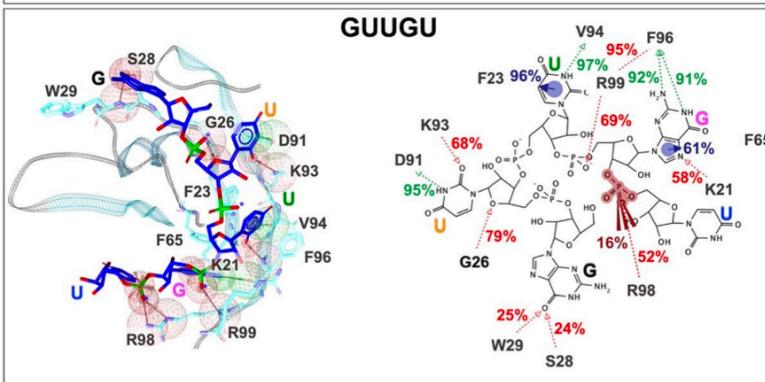
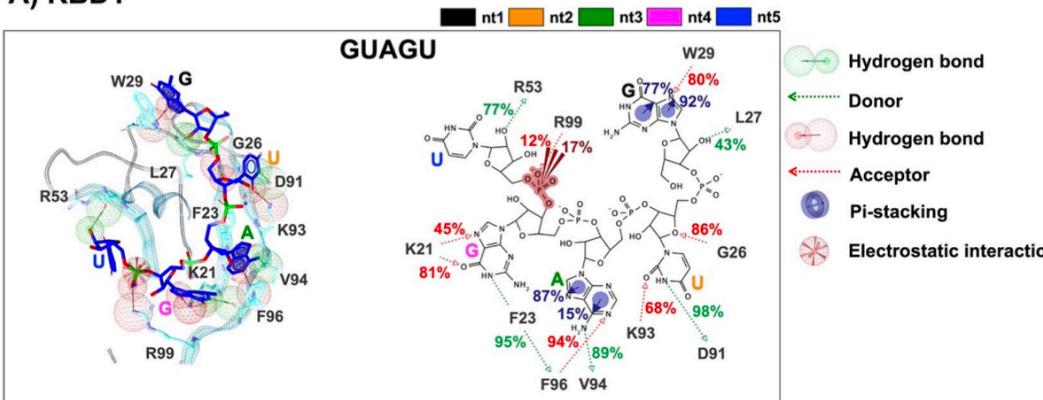
Apo form (5X3Y)



Predicted structure



A) RBD1**B) RBD2**

A) RBD1**B) RBD2**