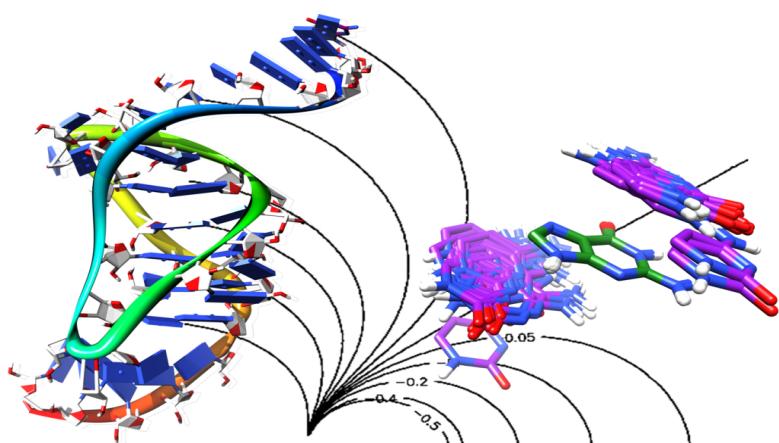


DiBaseRNA: Database and Atlas of Nucleobase Spatial Arrangements in RNA

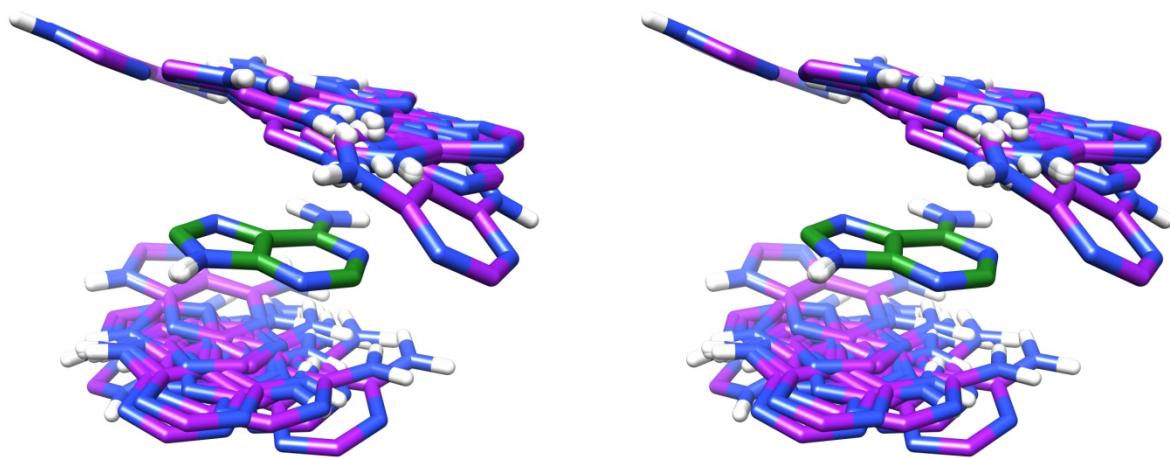


Citations:

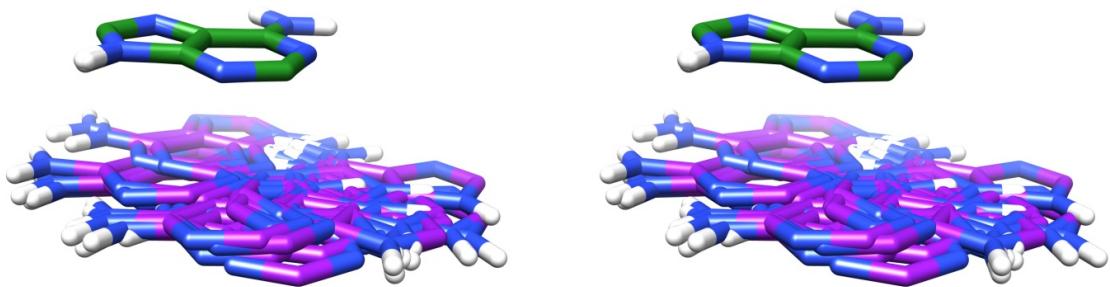
Sahakyan A.B. and Vendruscolo M, "DiBaseRNA: Database and Atlas of Nucleobase Spatial Arrangements in RNA", 2013+. <https://github.com/aleksahak/DiBaseRNA>

Sahakyan A.B. and Vendruscolo M. "Analysis of Ring Current and Electric Field Effects on the Chemical Shifts of RNA Bases", J. Phys. Chem. B, 117, 1989–1998, 2013. <http://dx.doi.org/10.1021/jp3057306>

AA



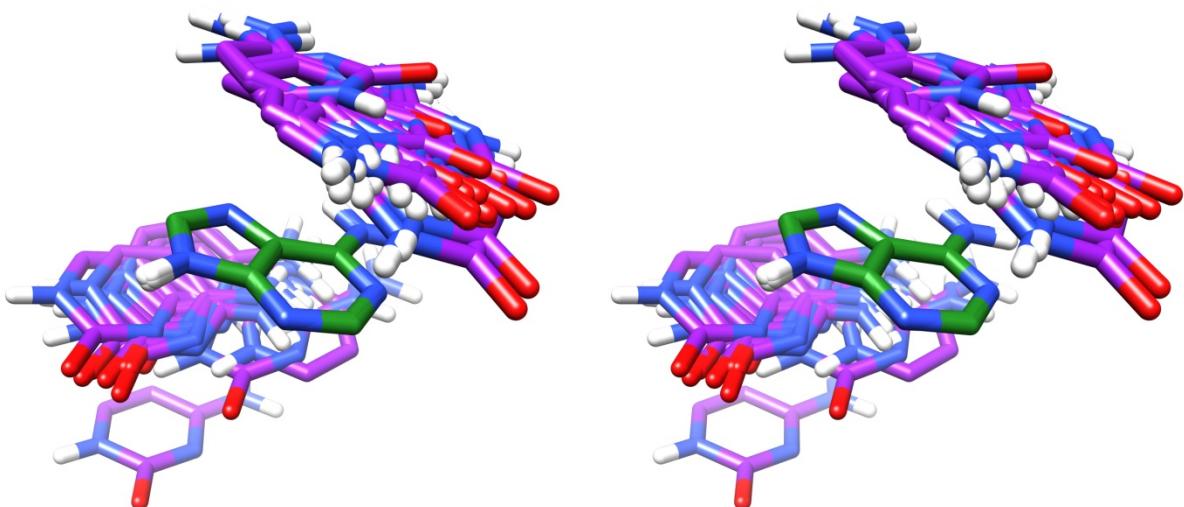
ADJ: superimposed 37 structures of bases in covalently linked adjacent RNA nucleotides.



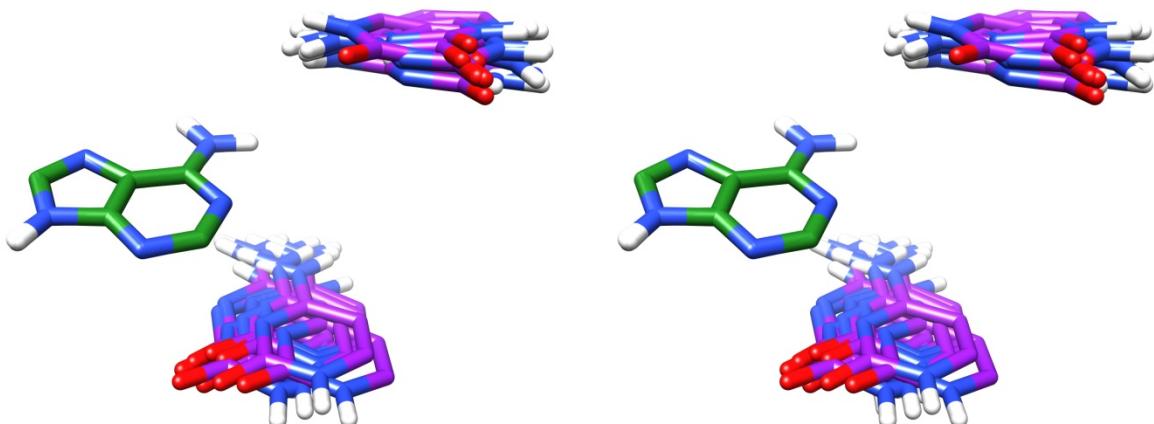
SPT: superimposed 21 structures of bases in only spatially close but not hydrogen bonded nucleotides.

Figure 1: Inter-ring arrangement patterns of adenine-adenine di-bases in the DiBaseRNA database. Their adjacent (ADJ) and spatial (SPT) states are shown.

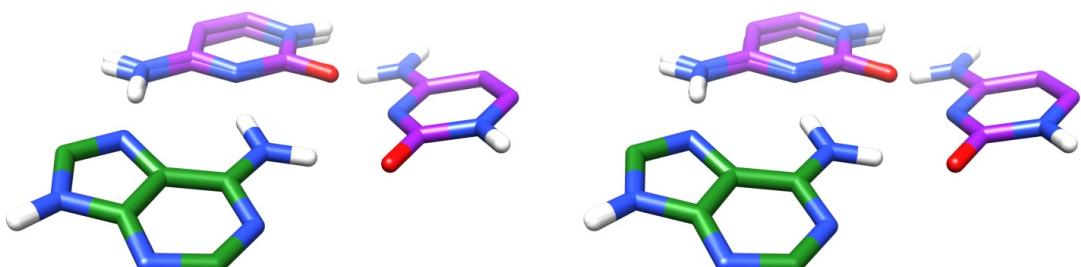
AC



ADJ: superimposed 39 structures of bases in covalently linked adjacent RNA nucleotides.



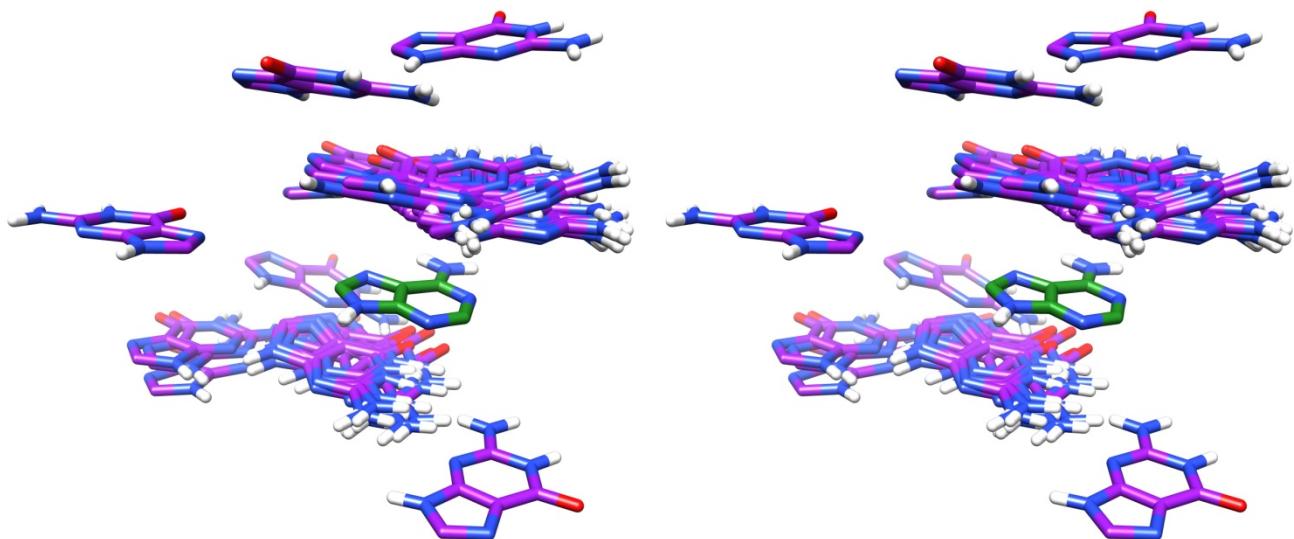
SPT: superimposed 21 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



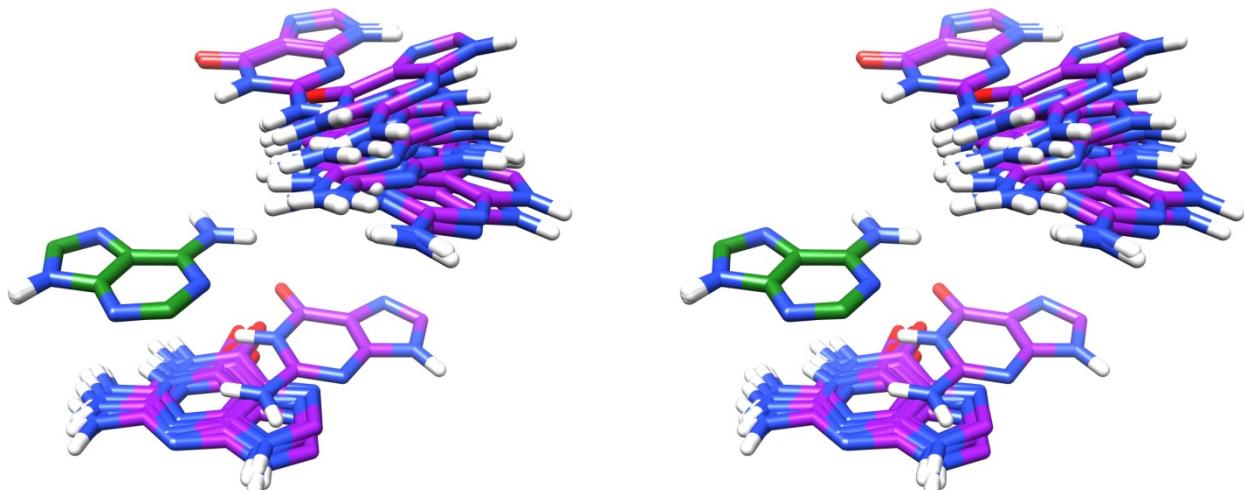
HBD: superimposed 3 structures of bases in hydrogen bonded RNA nucleotides.

Figure 2: Inter-ring arrangement patterns of adenine-cytosine di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

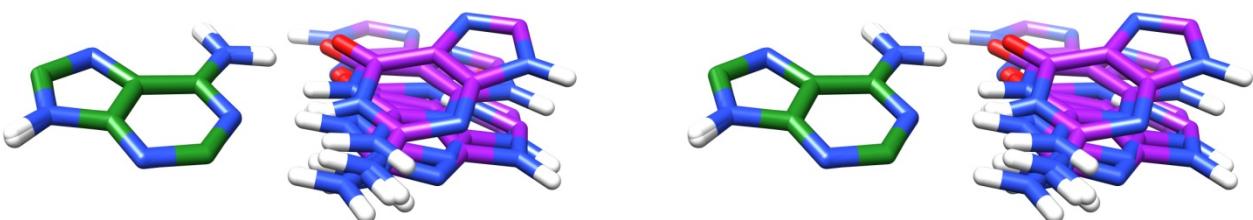
AG



ADJ: superimposed 64 structures of bases in covalently linked adjacent RNA nucleotides.



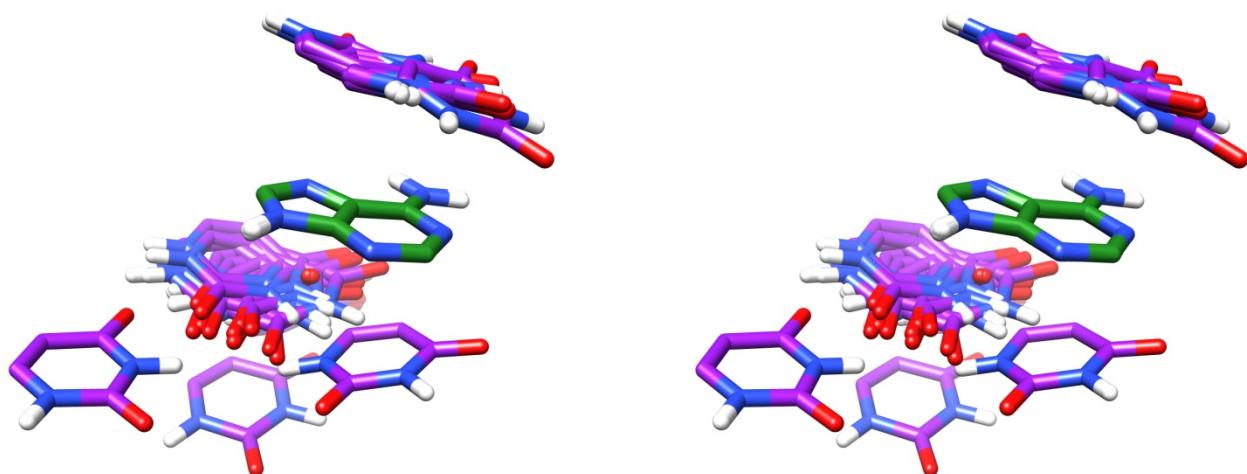
SPT: superimposed 24 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



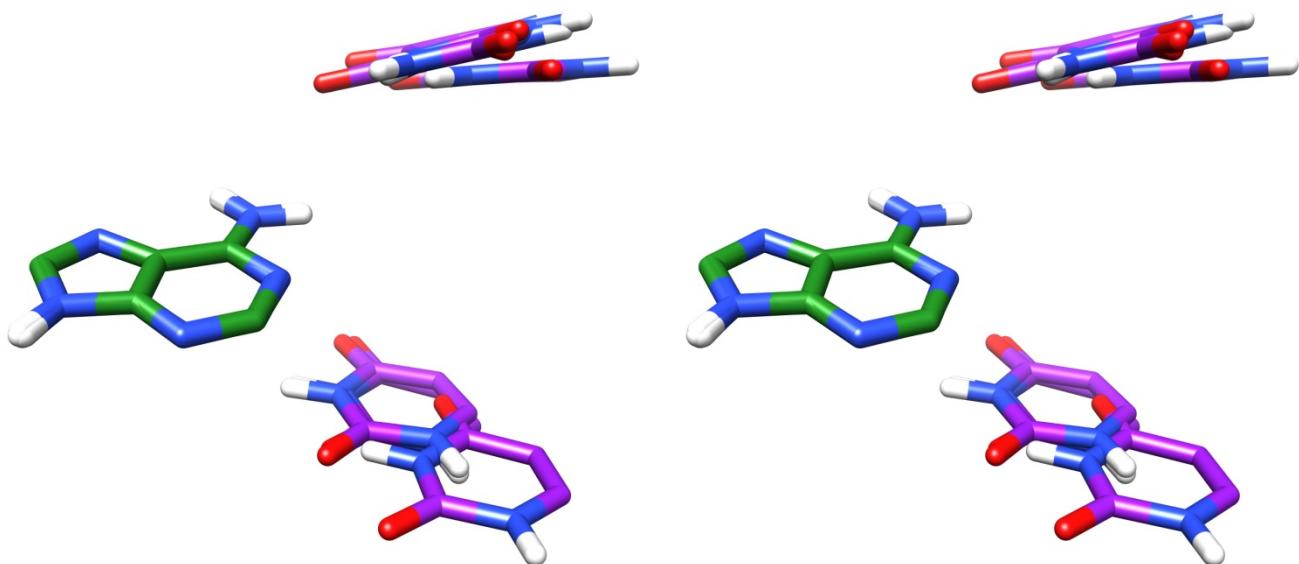
HBD: superimposed 6 structures of bases in hydrogen bonded RNA nucleotides.

Figure 3: Inter-ring arrangement patterns of adenine-guanine di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

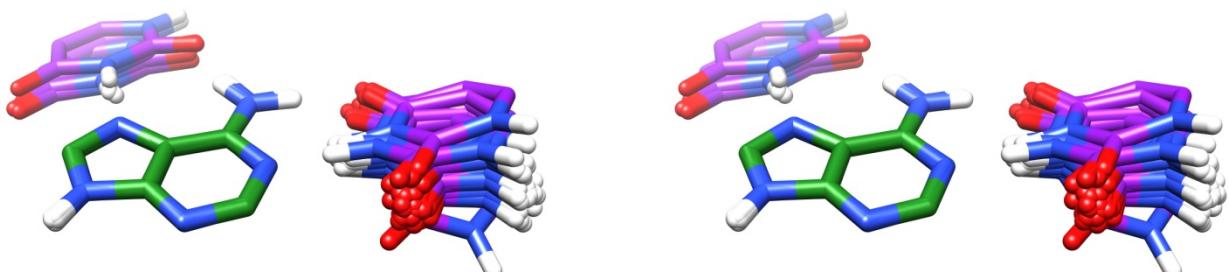
AU



ADJ: superimposed 24 structures of bases in covalently linked adjacent RNA nucleotides.



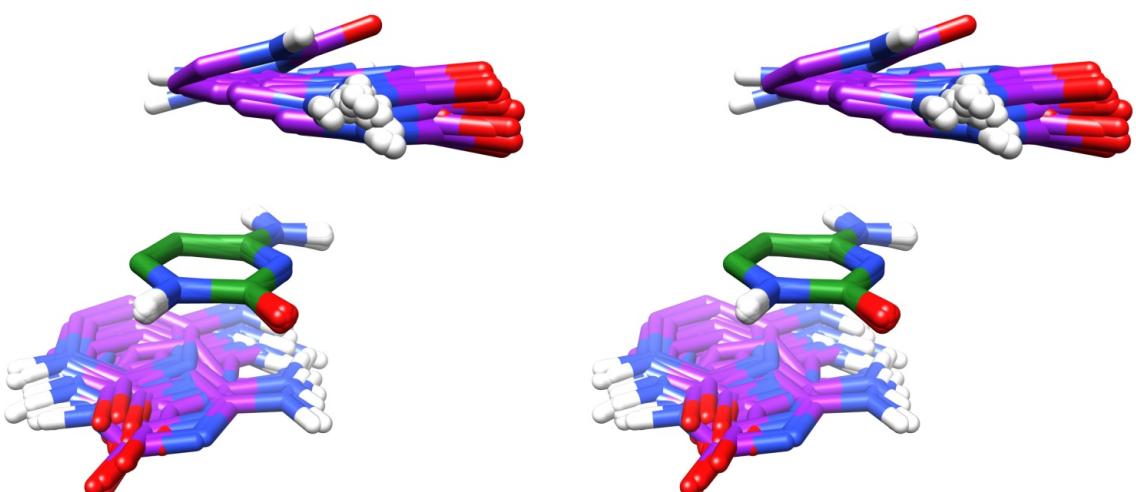
SPT: superimposed 7 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



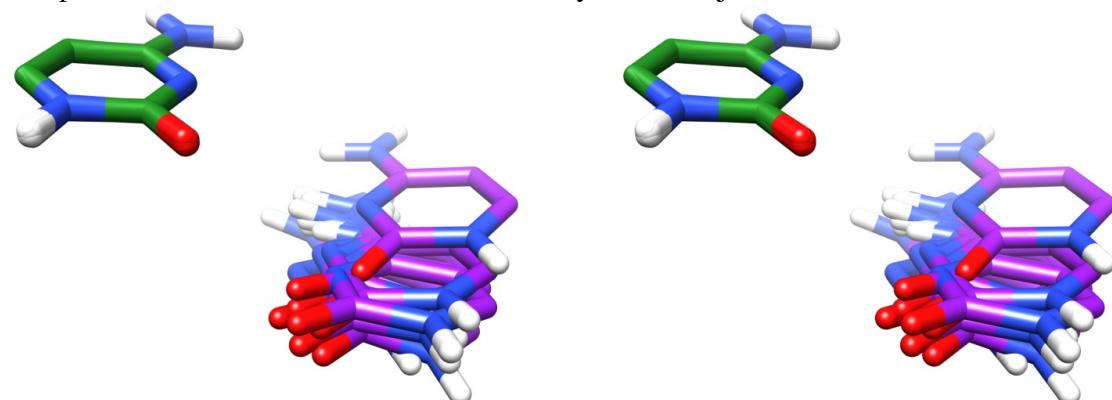
HBD: superimposed 38 structures of bases in hydrogen bonded RNA nucleotides.

Figure 4: Inter-ring arrangement patterns of adenine-uracil di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

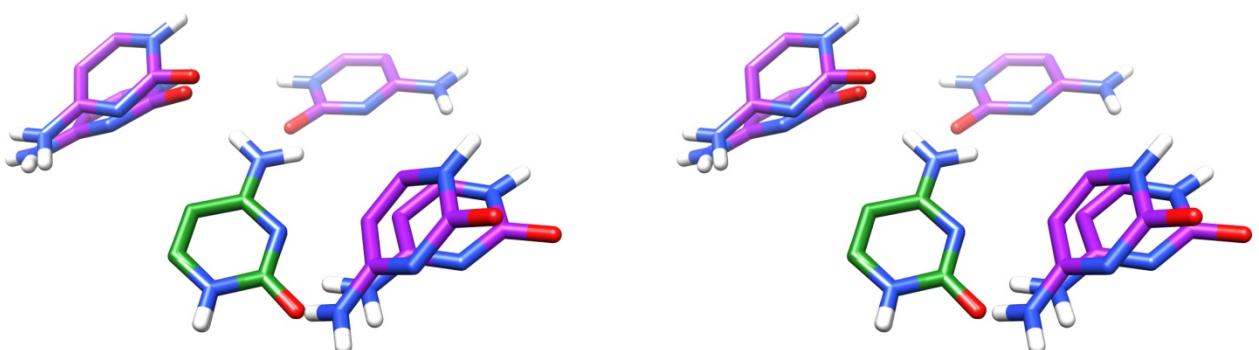
CC



ADJ: superimposed 72 structures of bases in covalently linked adjacent RNA nucleotides.



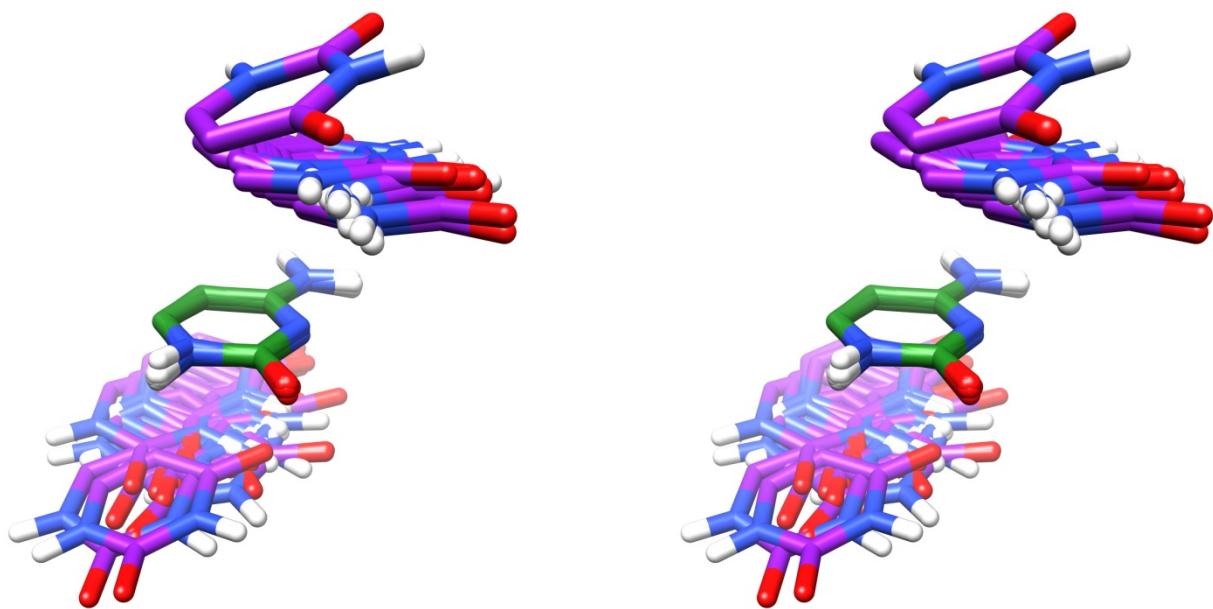
SPT: superimposed 10 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



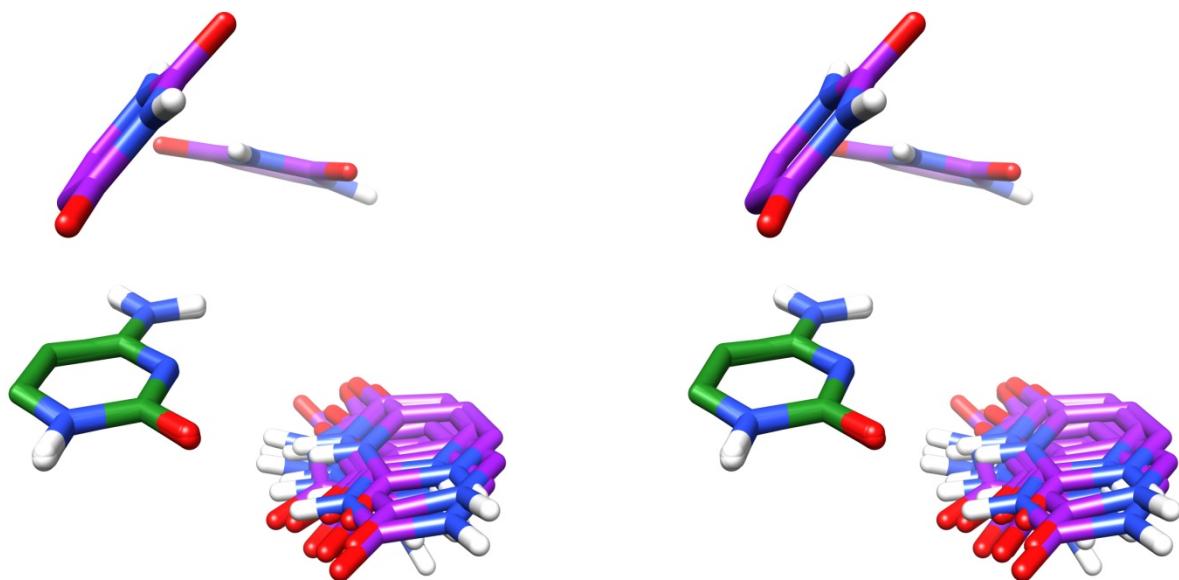
HBD: superimposed 5 structures of bases in hydrogen bonded RNA nucleotides.

Figure 5: Inter-ring arrangement patterns of cytosine-cytosine di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

CU



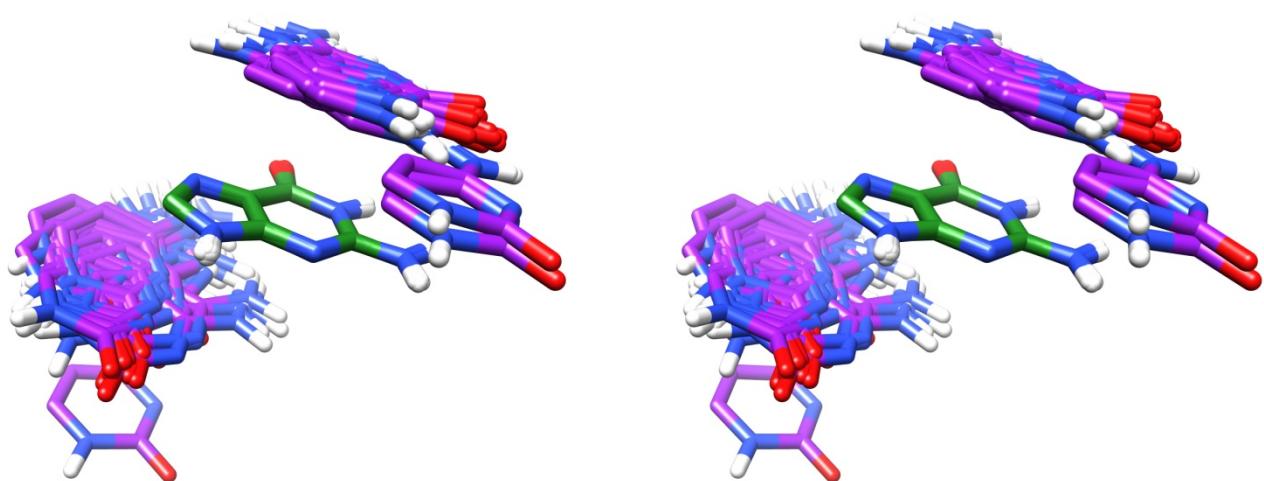
ADJ: superimposed 39 structures of bases in covalently linked adjacent RNA nucleotides.



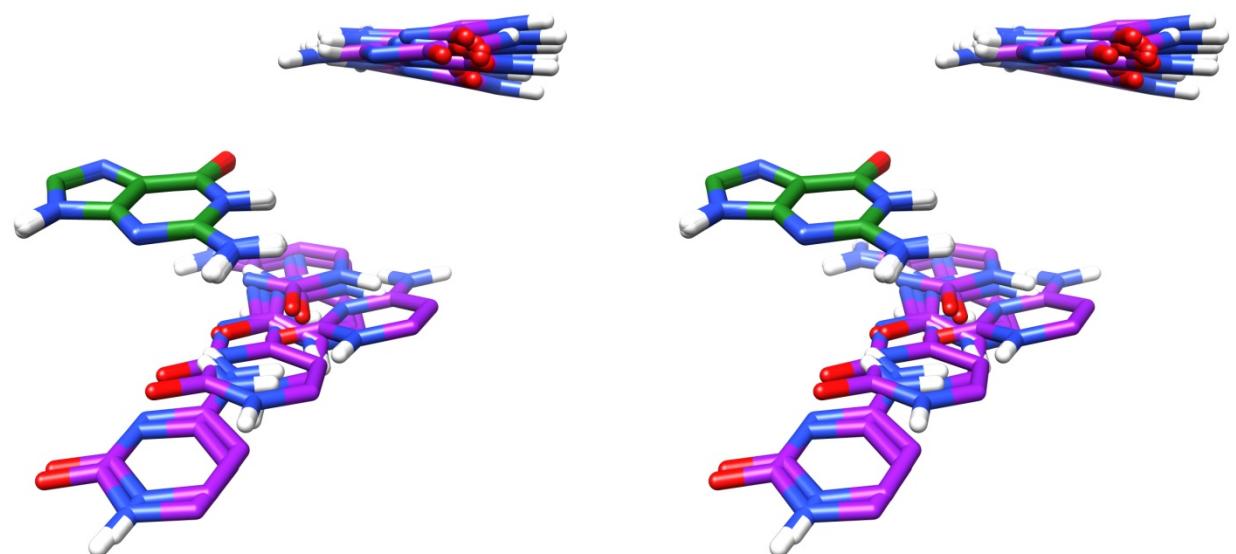
SPT: superimposed 13 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.

Figure 6: Inter-ring arrangement patterns of cytosine-uracil di-bases in the DiBaseRNA database. Their adjacent (ADJ) and spatial (SPT) states are shown.

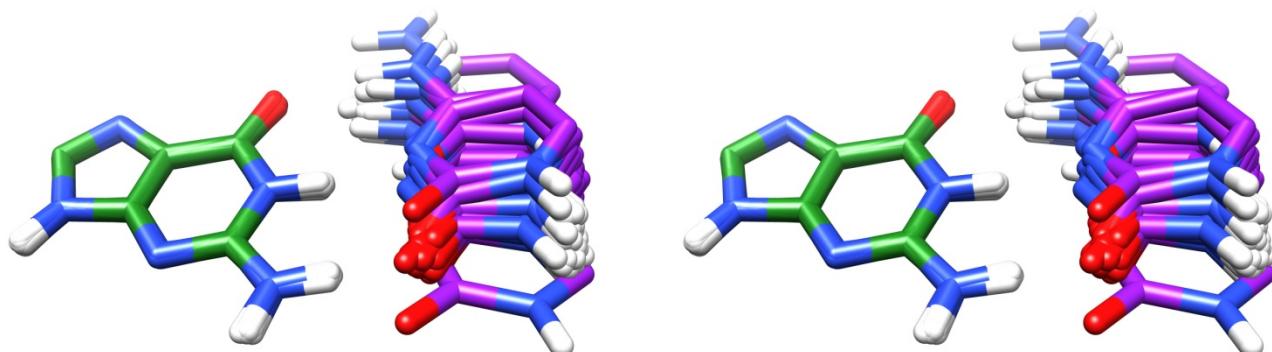
GC



ADJ: superimposed 79 structures of bases in covalently linked adjacent RNA nucleotides.



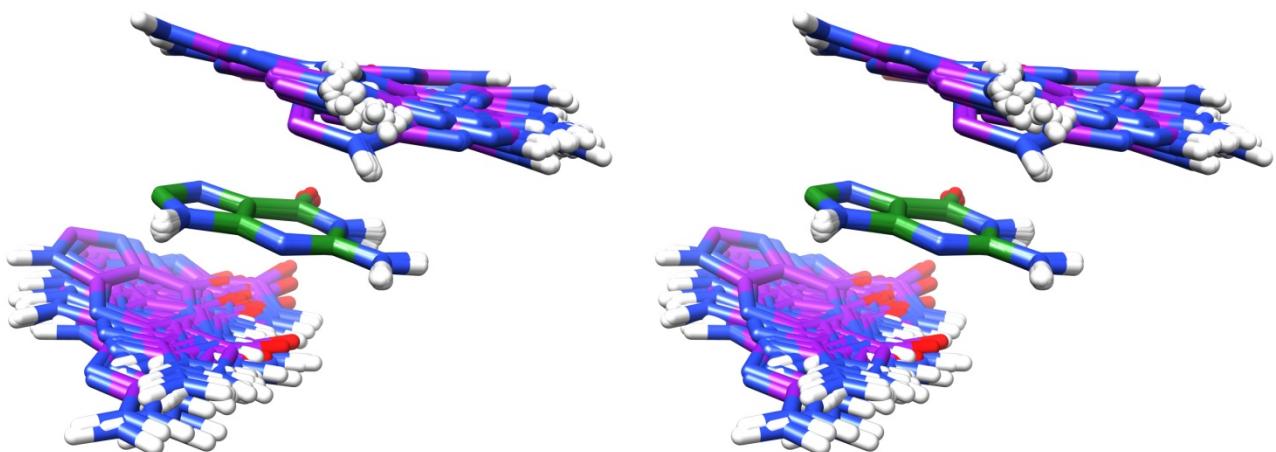
SPT: superimposed 20 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



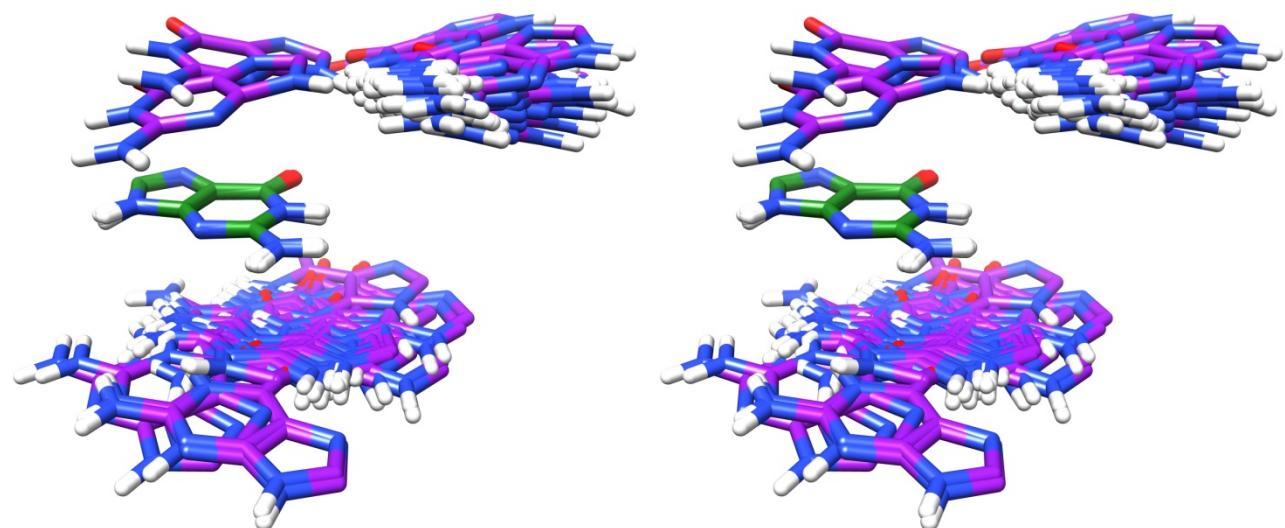
HBD: superimposed 95 structures of bases in hydrogen bonded RNA nucleotides.

Figure 7: Inter-ring arrangement patterns of guanine-cytosine di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

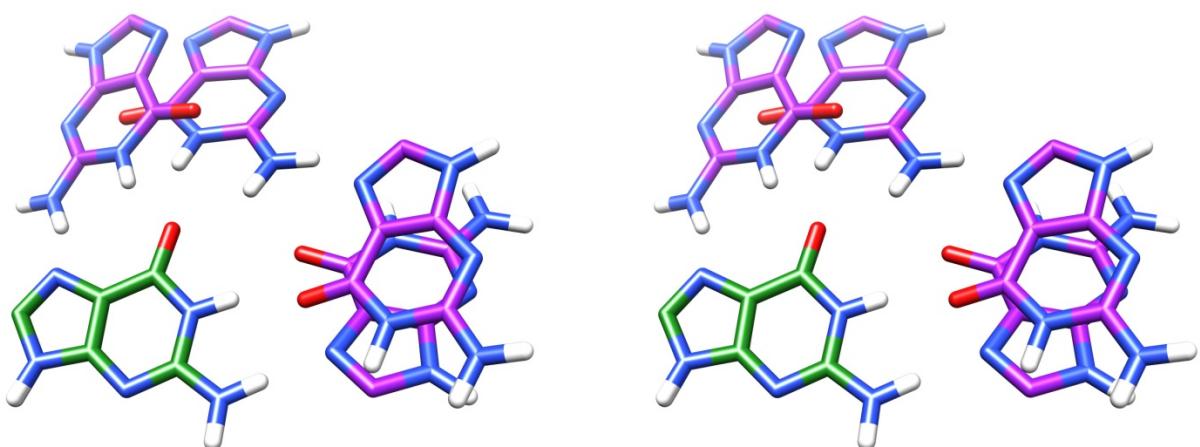
GG



ADJ: superimposed 115 structures of bases in covalently linked adjacent RNA nucleotides.



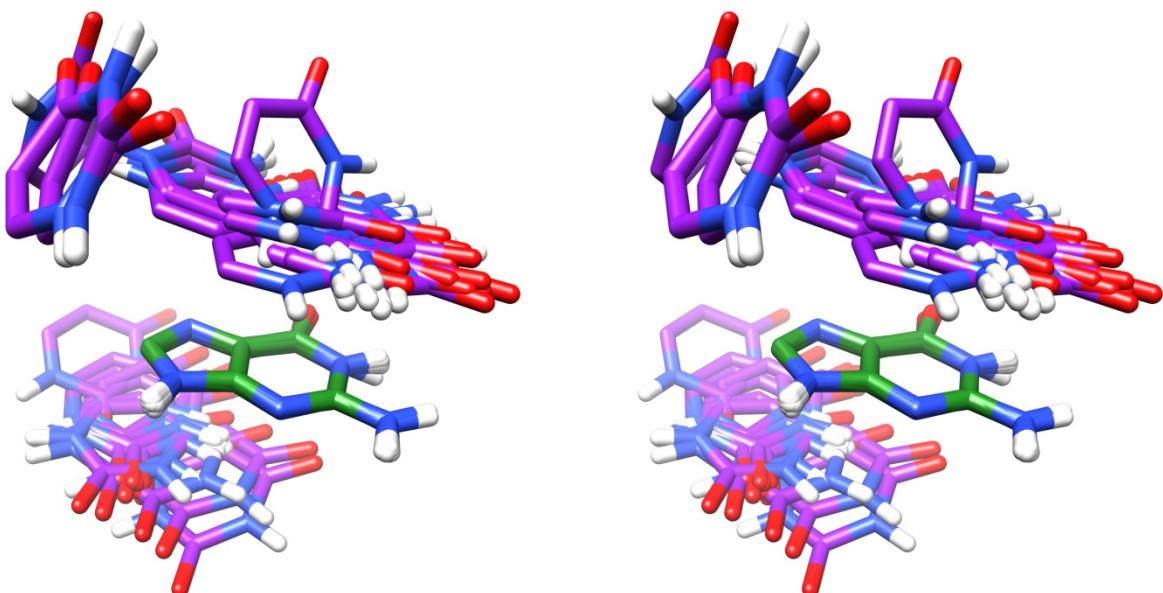
SPT: superimposed 81 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



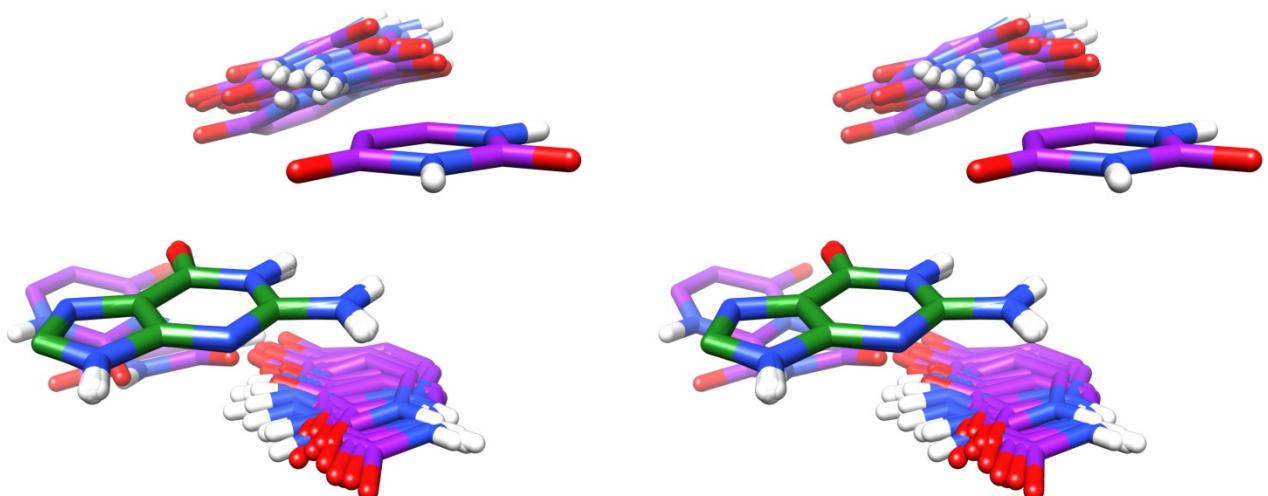
HBD: superimposed 4 structures of bases hydrogen bonded RNA nucleotides.

Figure 8: Inter-ring arrangement patterns of guanine-guanine di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

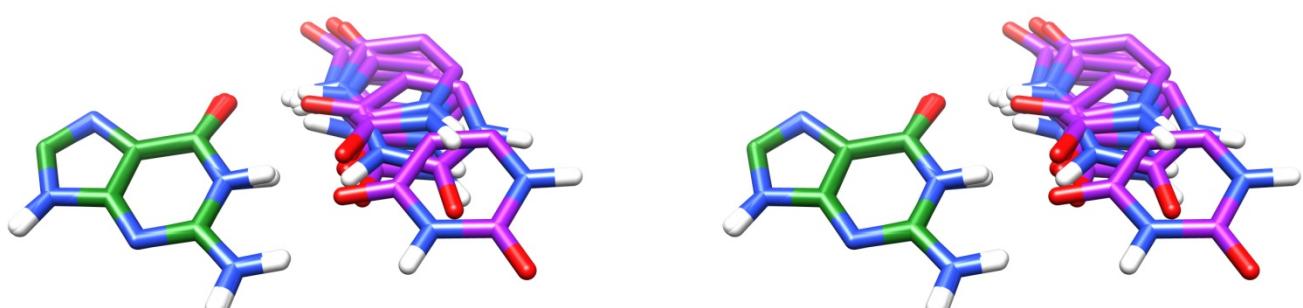
GU



ADJ: superimposed 55 structures of bases in covalently linked adjacent RNA nucleotides.



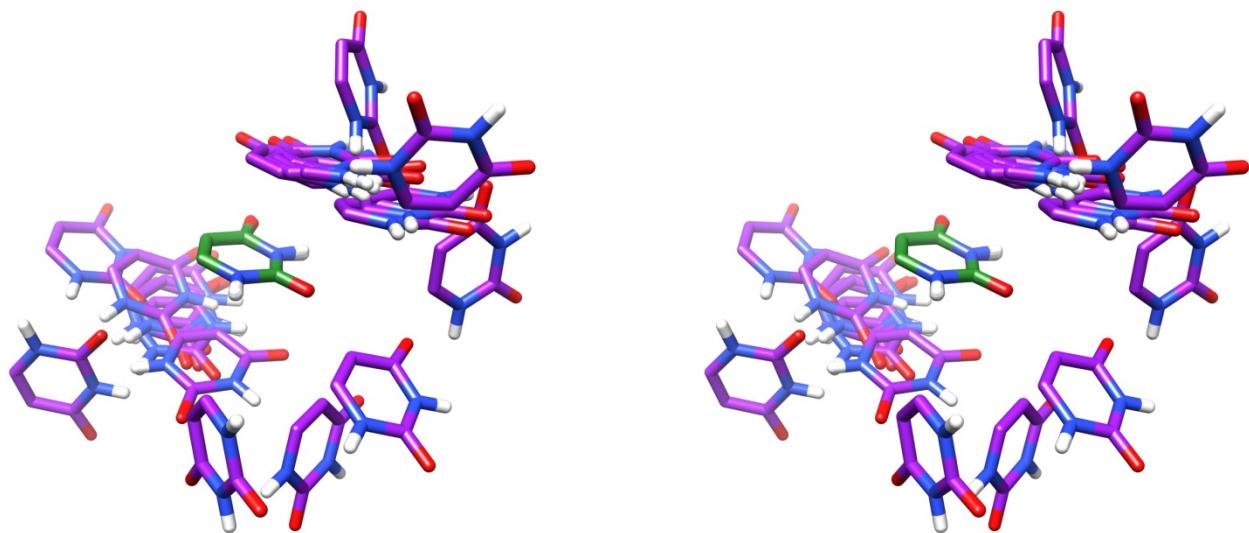
SPT: superimposed 26 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.



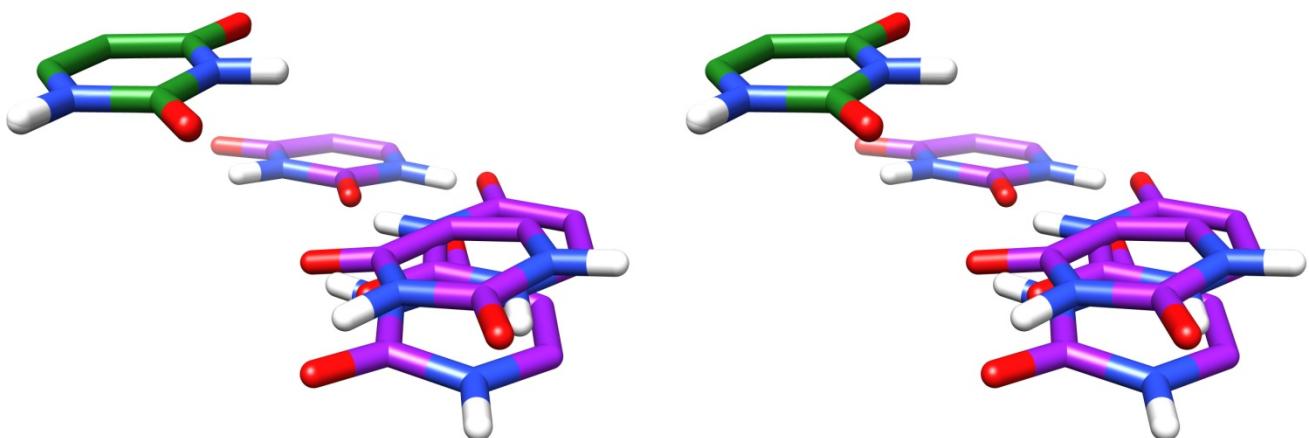
HBD: superimposed 9 structures of bases in hydrogen bonded RNA nucleotides.

Figure 9: Inter-ring arrangement patterns of guanine-uracil di-bases in the DiBaseRNA database. Their adjacent (ADJ), spatial (SPT) and hydrogen bonded (HBD) states are shown.

UU



ADJ: superimposed 23 structures of bases in covalently linked adjacent RNA nucleotides.



SPT: superimposed 4 structures of bases in only spatially close but not hydrogen bonded RNA nucleotides.

Figure 10: Inter-ring arrangement patterns of uracil-uracil di-bases in the DiBaseRNA database. Their adjacent (ADJ) and spatial (SPT) states are shown.

