

# Visualization of Nucleic Acid Conformations

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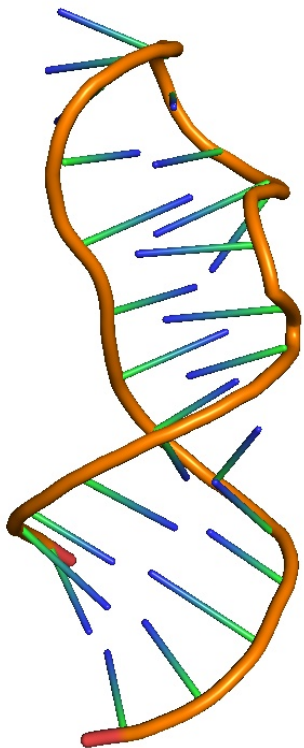


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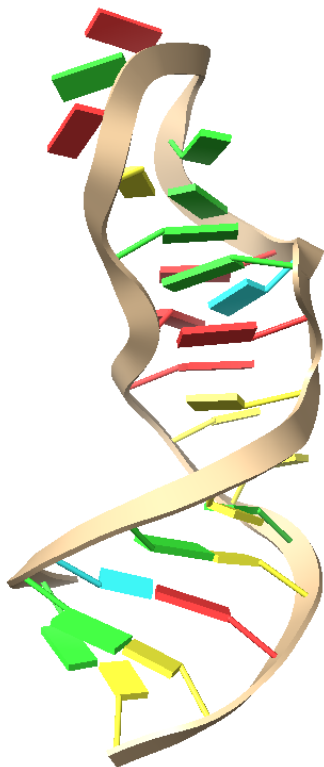


3DBioInfo community

Goal: Finding a simple visual representation of nucleic acid conformations.  
Conformation is a feature of the sugar-phosphate backbone (at dinucleotide level).



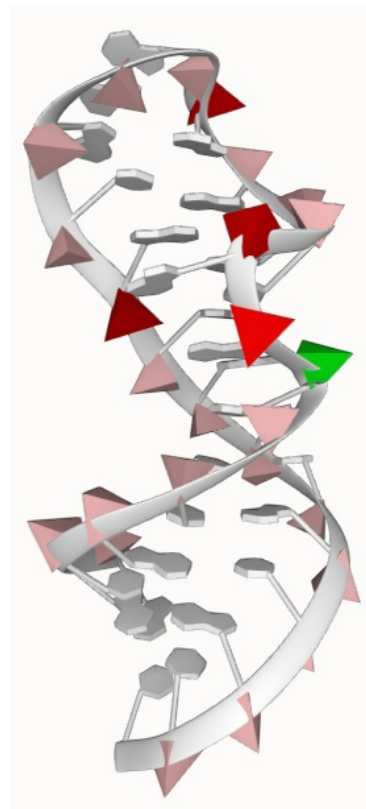
PyMOL



ChimeraX

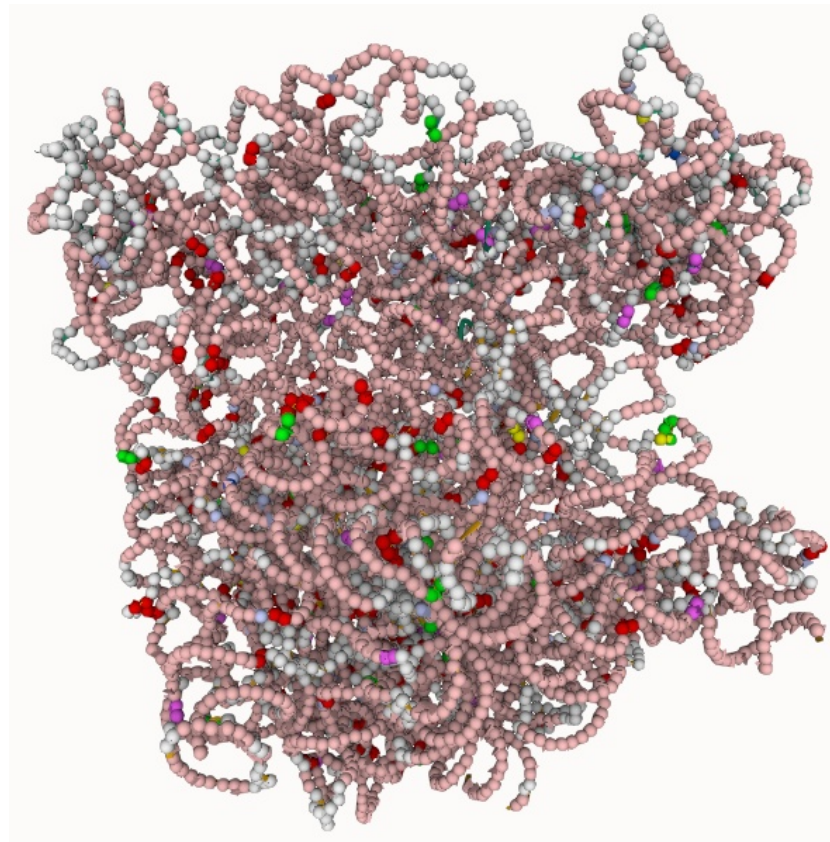
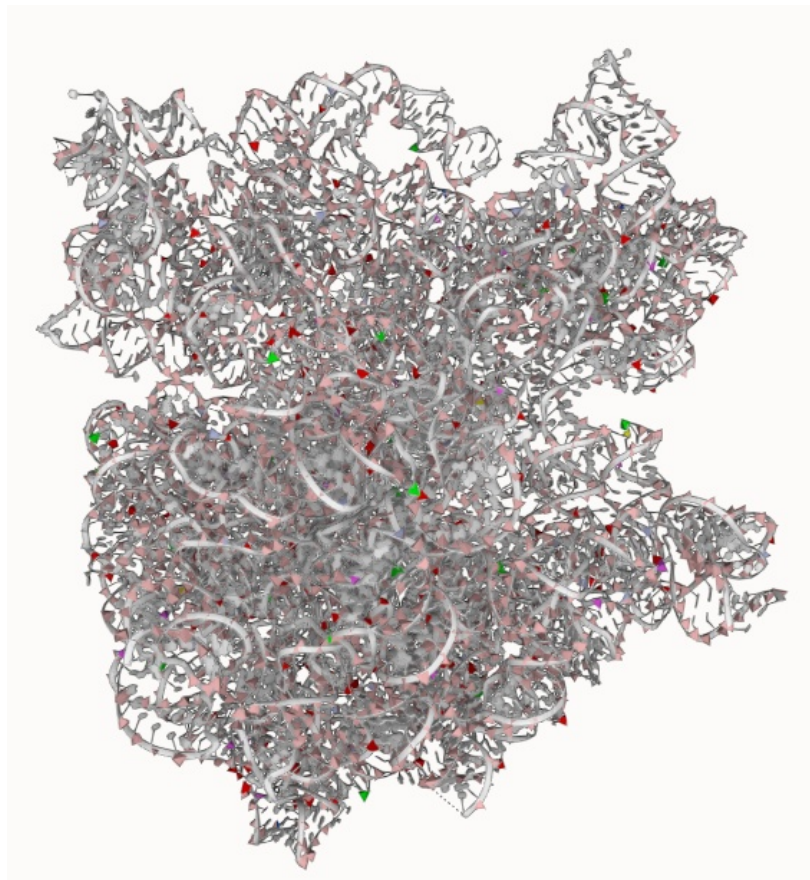


Mol\*



[dnatco.datmos.org](http://dnatco.datmos.org)

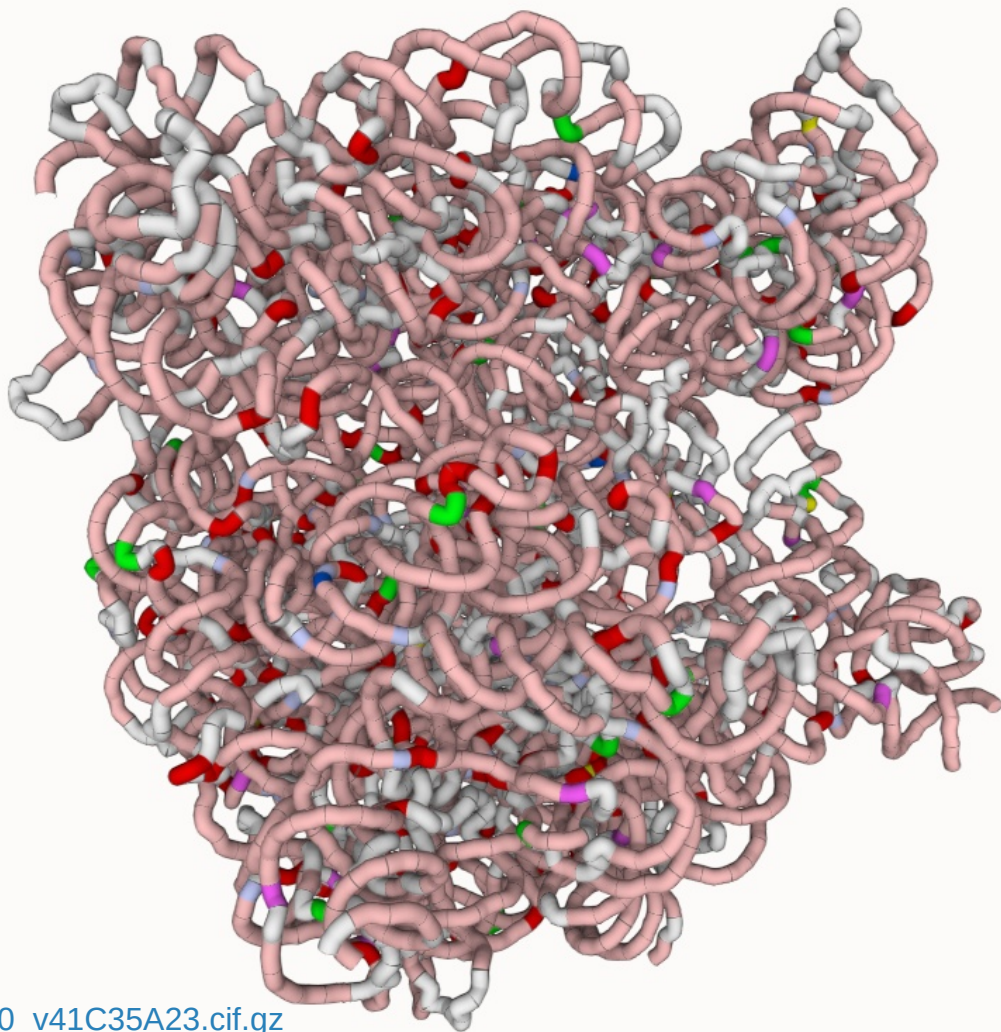
Pyramids are rich in information (conformer + quality), but they need the underlying cartoon visible and do not really work for larger molecules. How about beads?





## Next level: “NtC tube”?

- Building on beads idea
- Using also C5' and O3' atoms
- Continuous strand
- Thickness can be adjusted
- Alternative to cartoon
- Helix irregularities more obvious
- Same coloring scheme
- Phosphate or Step borders can be visualized (rings)
- Add confal or rmsd color scale?
- Optimal thickness default?
- It will be in upstream Mol\* but you need NtC annotated mmCIF file from dnatco.



[https://dnatco.datmos.org/ntc\\_viewer](https://dnatco.datmos.org/ntc_viewer)

[https://dnatco.datmos.org/v4.1/RCSB/cif\\_dnatco\\_updated/7k00\\_v41C35A23.cif.gz](https://dnatco.datmos.org/v4.1/RCSB/cif_dnatco_updated/7k00_v41C35A23.cif.gz)