



# Homology modeling and molecular docking of human CD5 antigen protein involved in cardiovascular disease



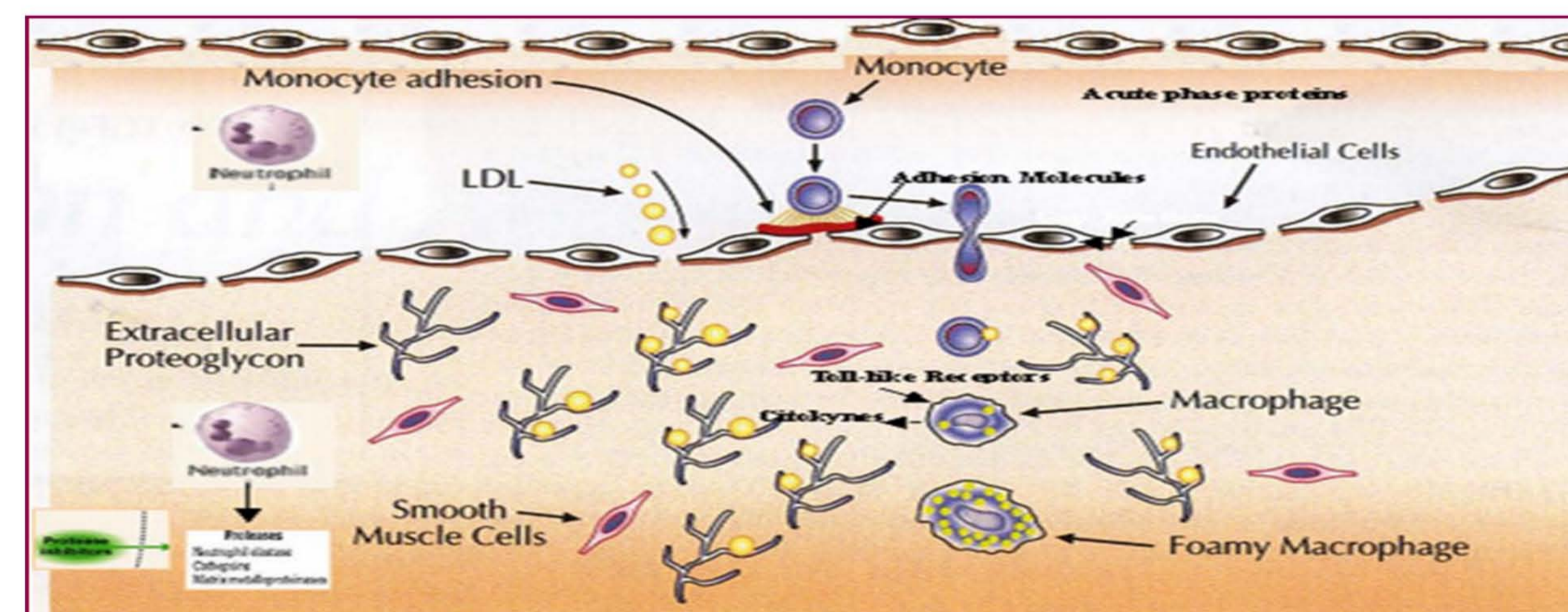
Sravani Varala\*, S. Rajitha Reddy, Amineni Umamaheswari\*\*

Bioinformatics center, Department of Bioinformatics, SVIMS university.

PIN:517507, INDIA\*presenting author, corresponding author \*\*

## Key points :

- CD5L (CD5 antigen -like) is a secreted glycoprotein that belongs to the SRCR (scavenger receptor cysteine rich) that regulate leukocyte function.
- The over expression of CD5L leads to atherosclerosis.
- Antagonist is developed to reduce the atherosclerotic plaque formation.



## MATERIALS AND METHODS

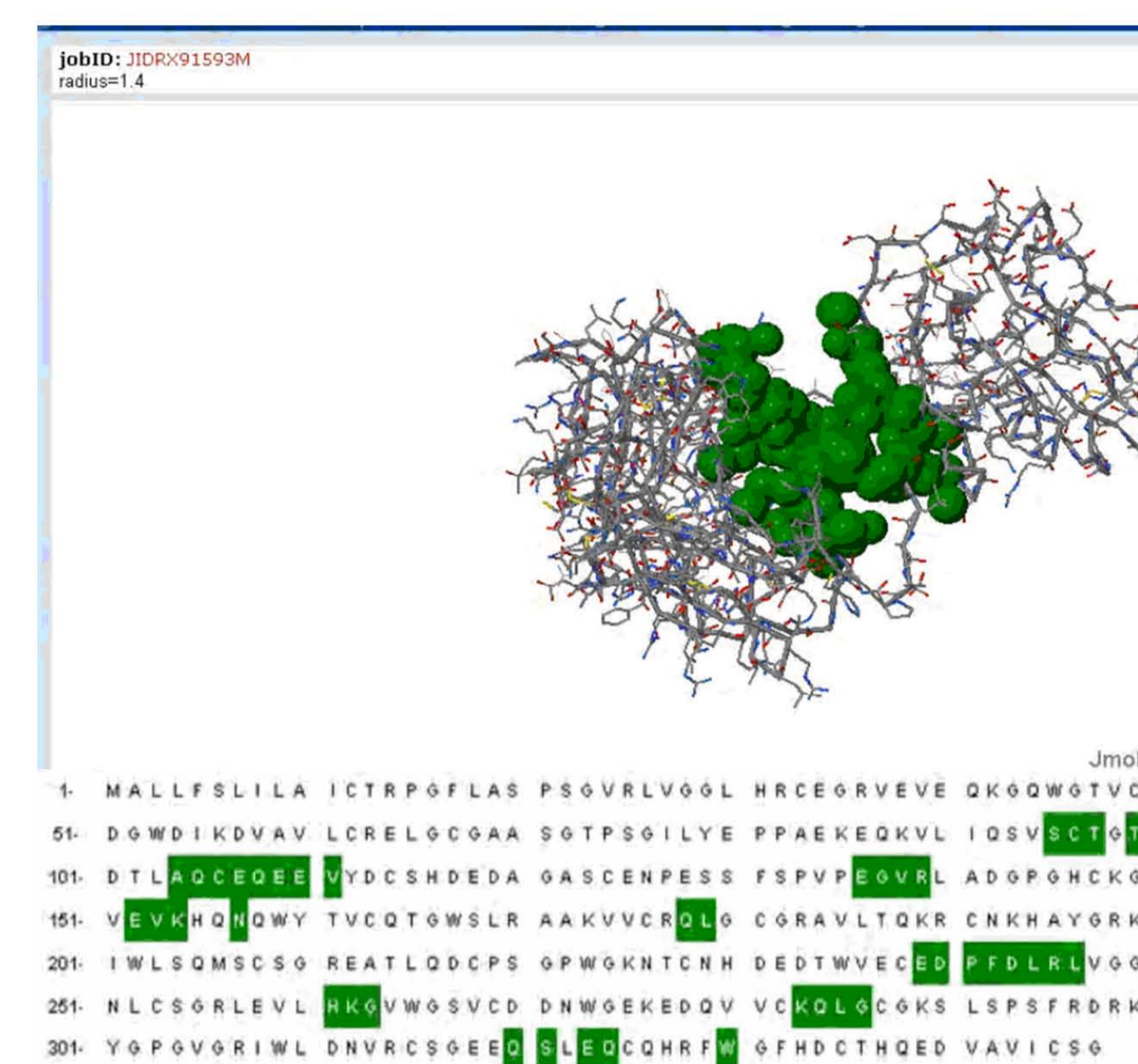
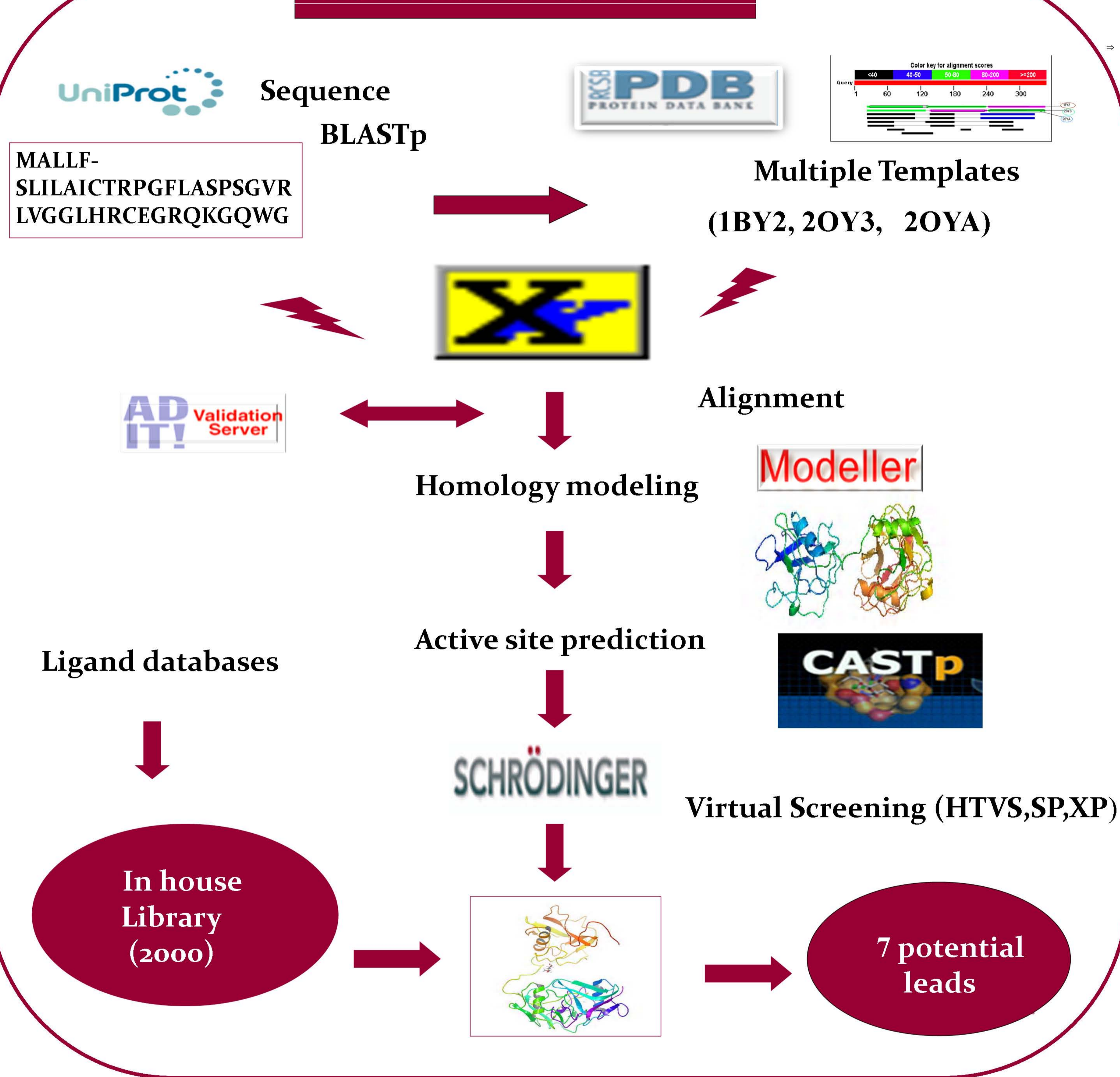


Fig 3 Active site prediction

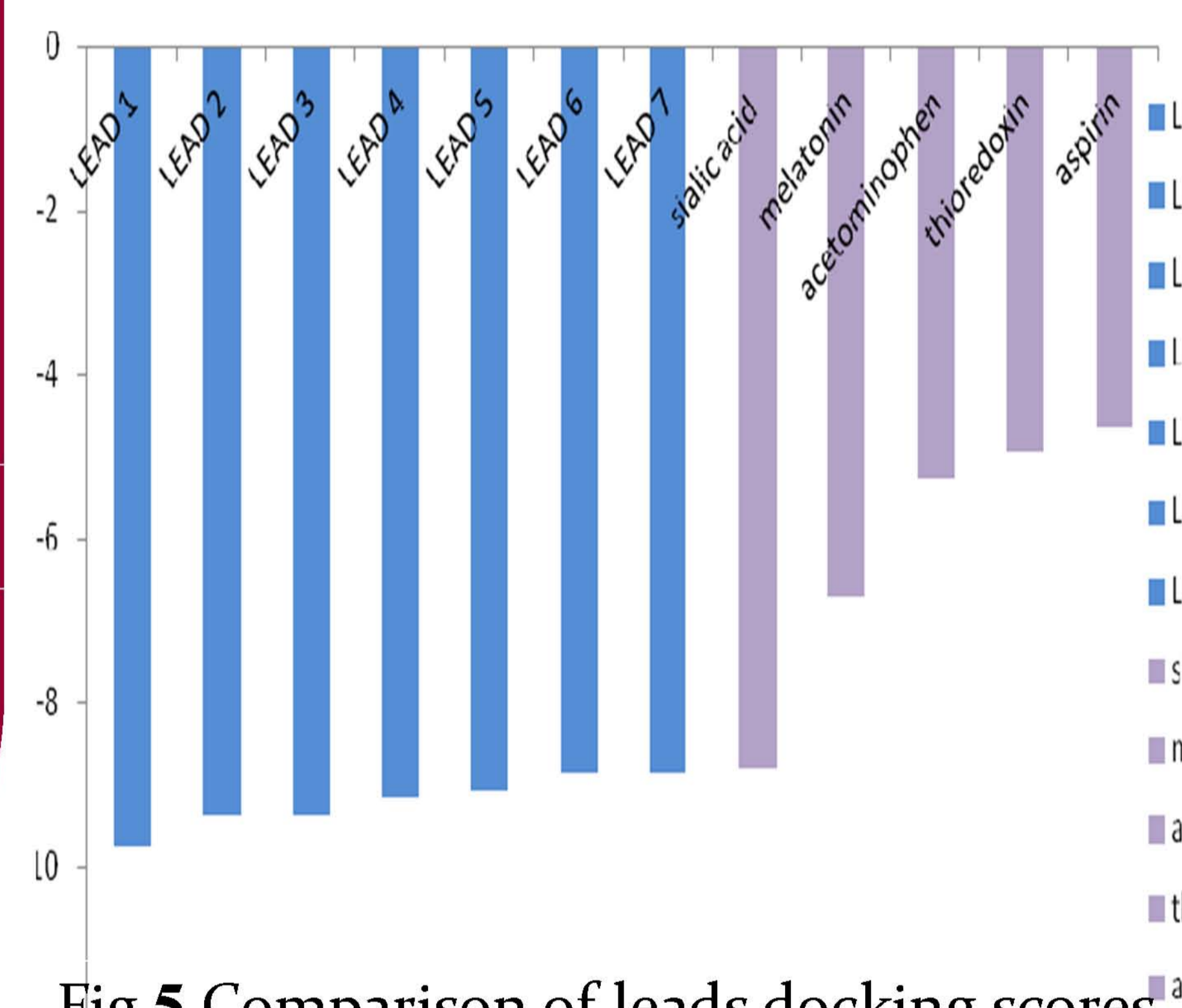


Fig 5 Comparison of leads docking scores with published inhibitors

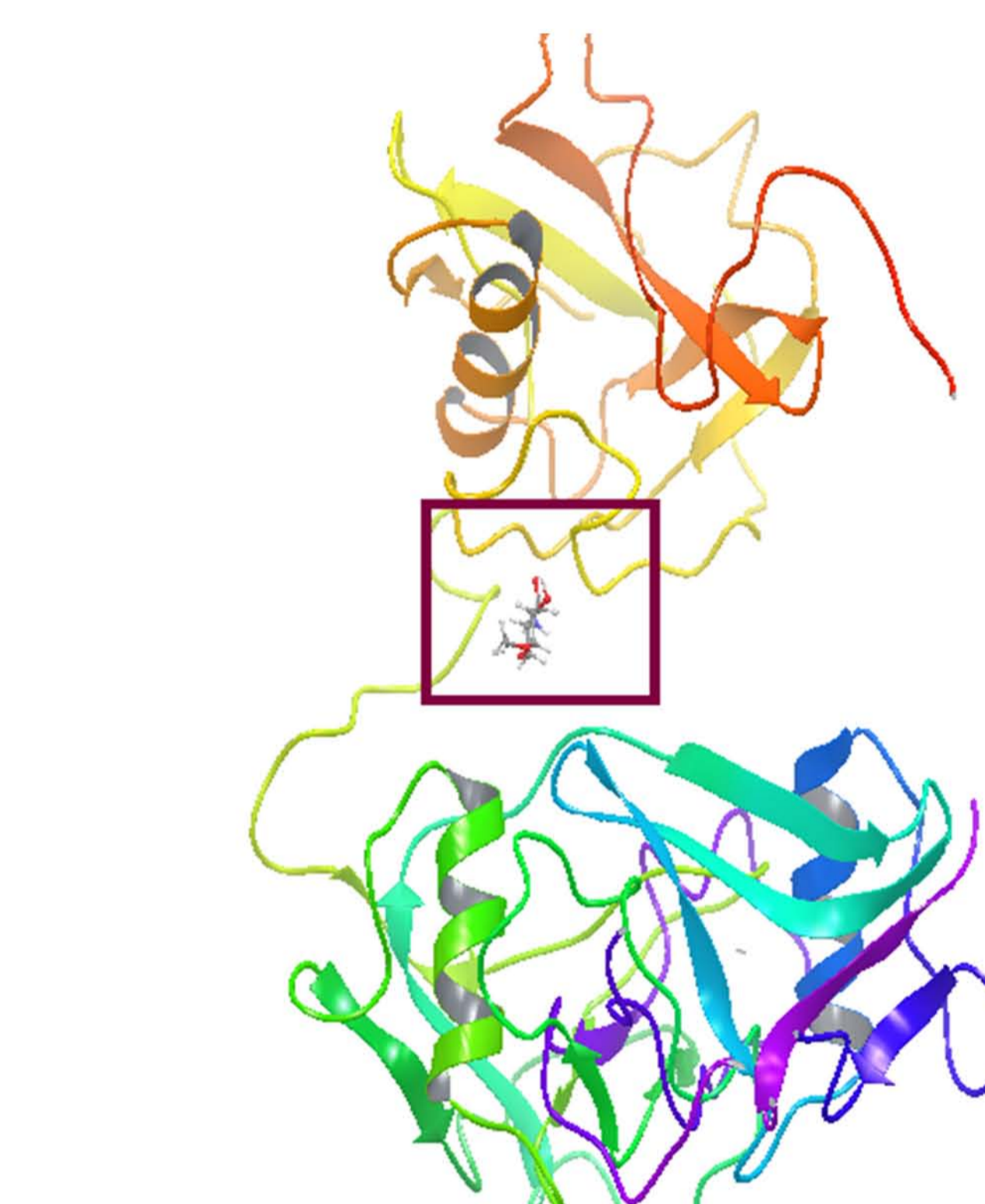


Fig 4 Docking complex of CD5 protein with lead 1

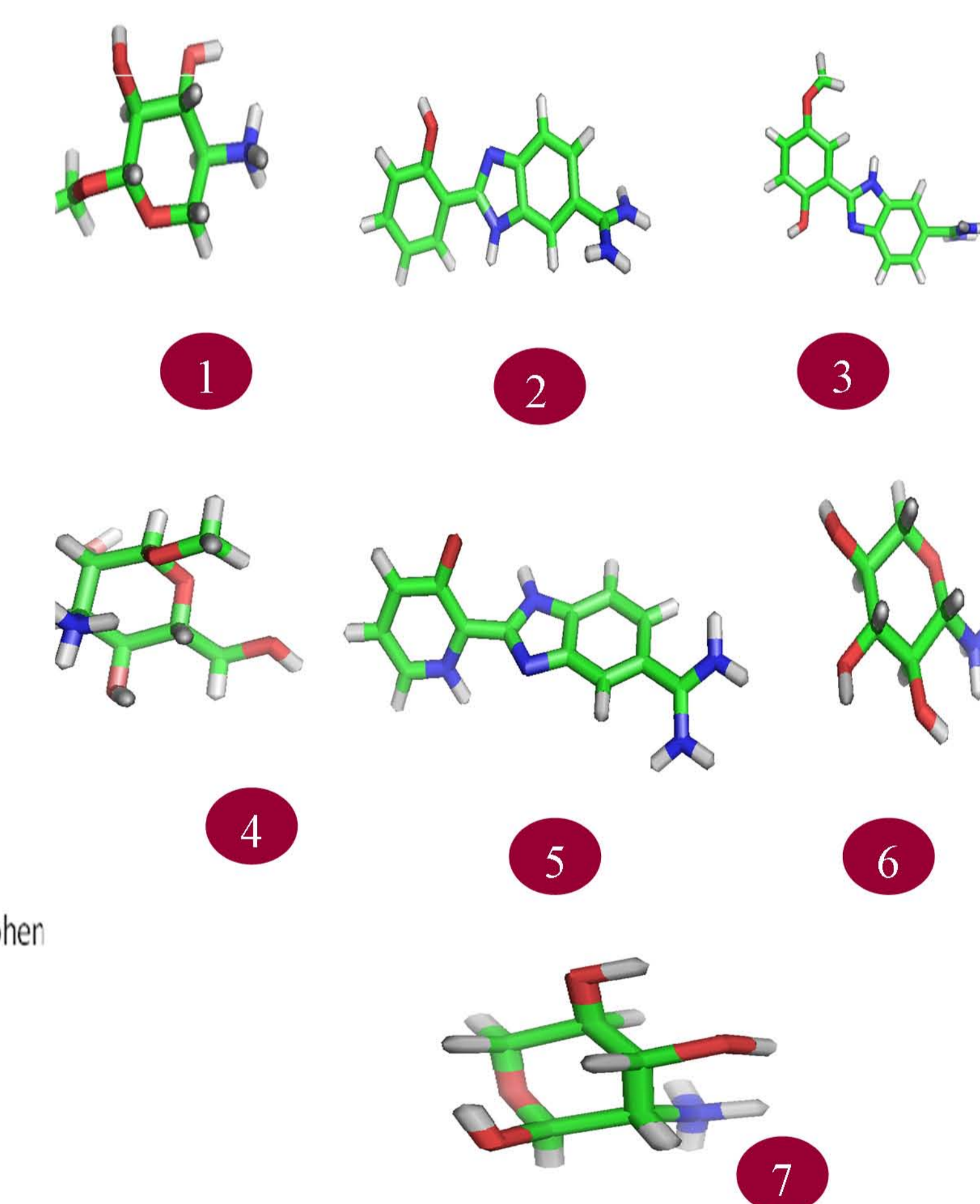


Fig 6 structure of predicted leads

## RESULTS AND DISCUSSION

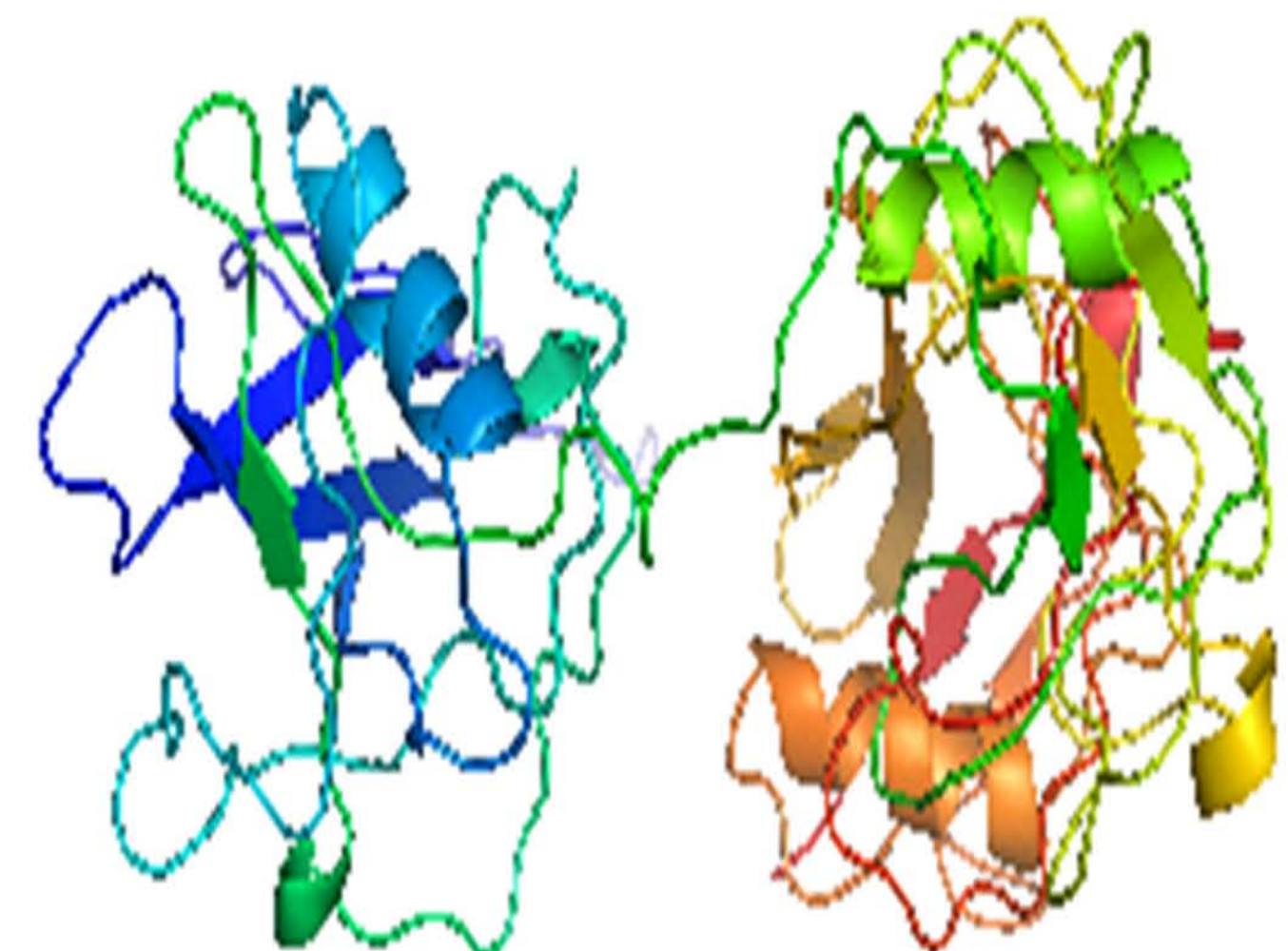


Fig 1: Human CD5 protein

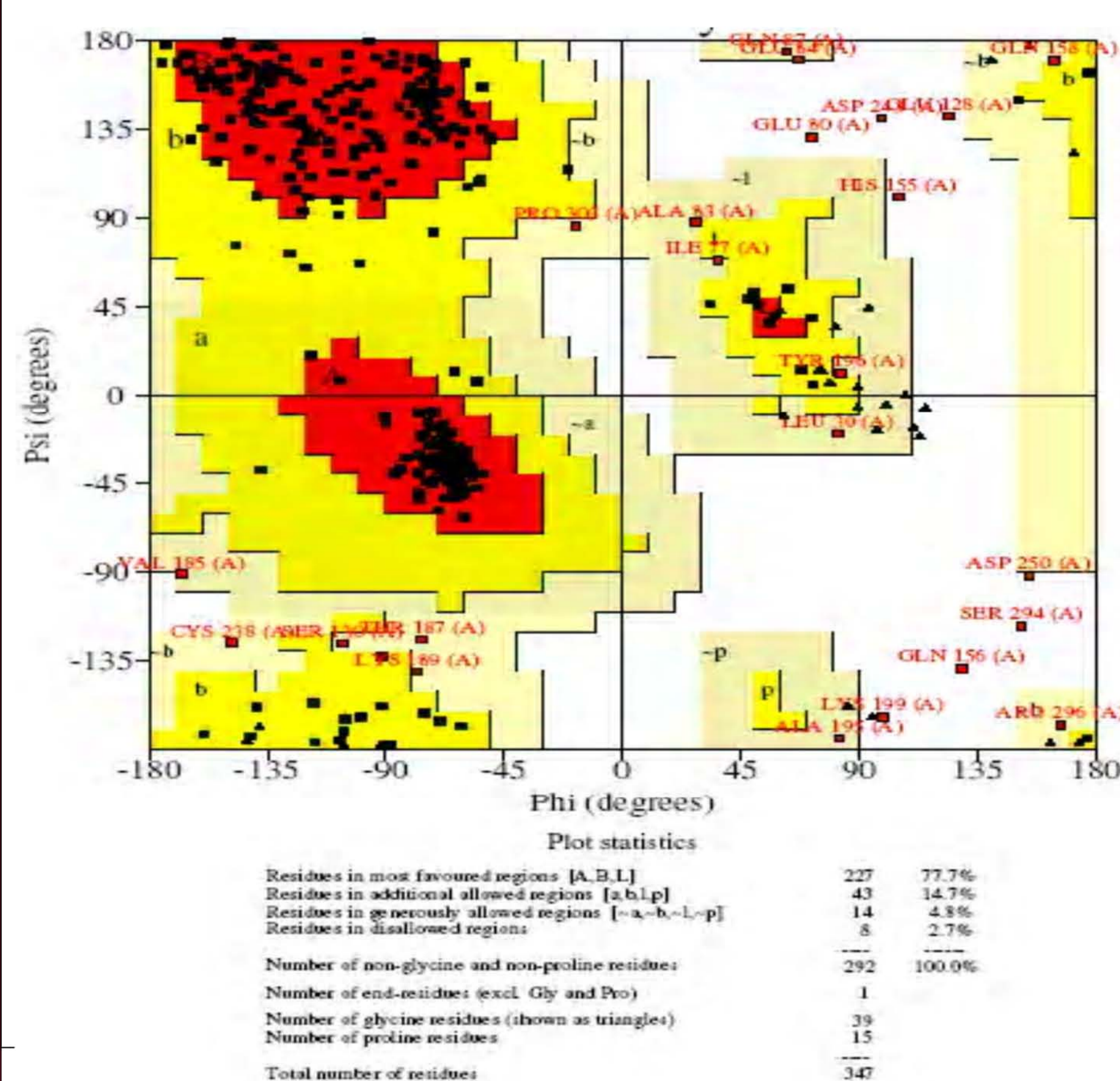


Fig2 CD5model validation report

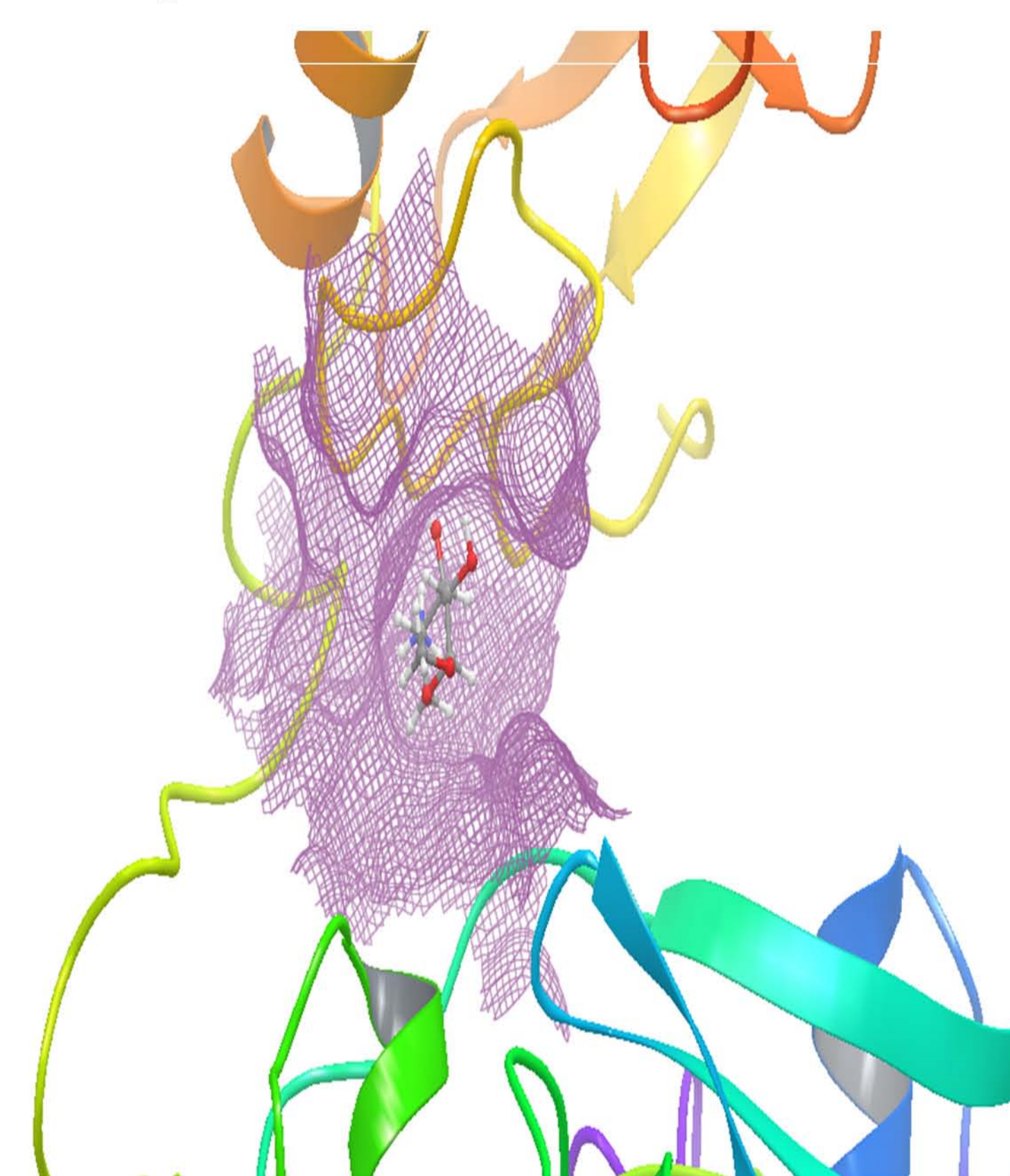


Fig 7 Van der Waal interactions of lead 1 with CD5 protein

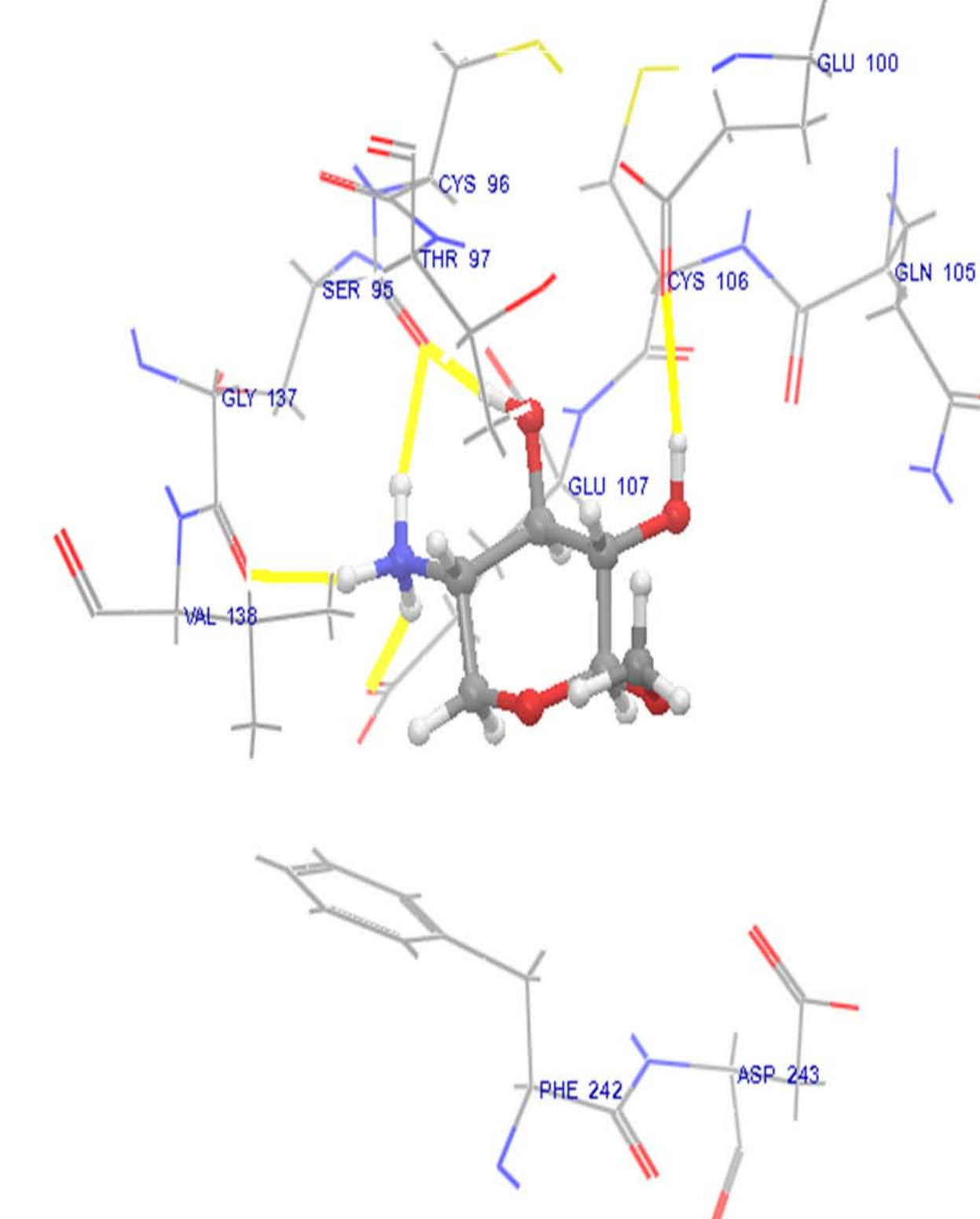


Fig 8 Hydrogen bond network of lead 1 with CD5 protein

## ACKNOWLEDGEMENT

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## CONCLUSION:

As lead 1 is having high binding affinity when compared to existing inhibitors. Hence it acts as a novel inhibitor against protein involved in cardiac diseases.