

# **RasMol Assignment**

**Introduction to Bioinformatics**

**BTX-431**

**Submitted To :**

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**Submitted By :**

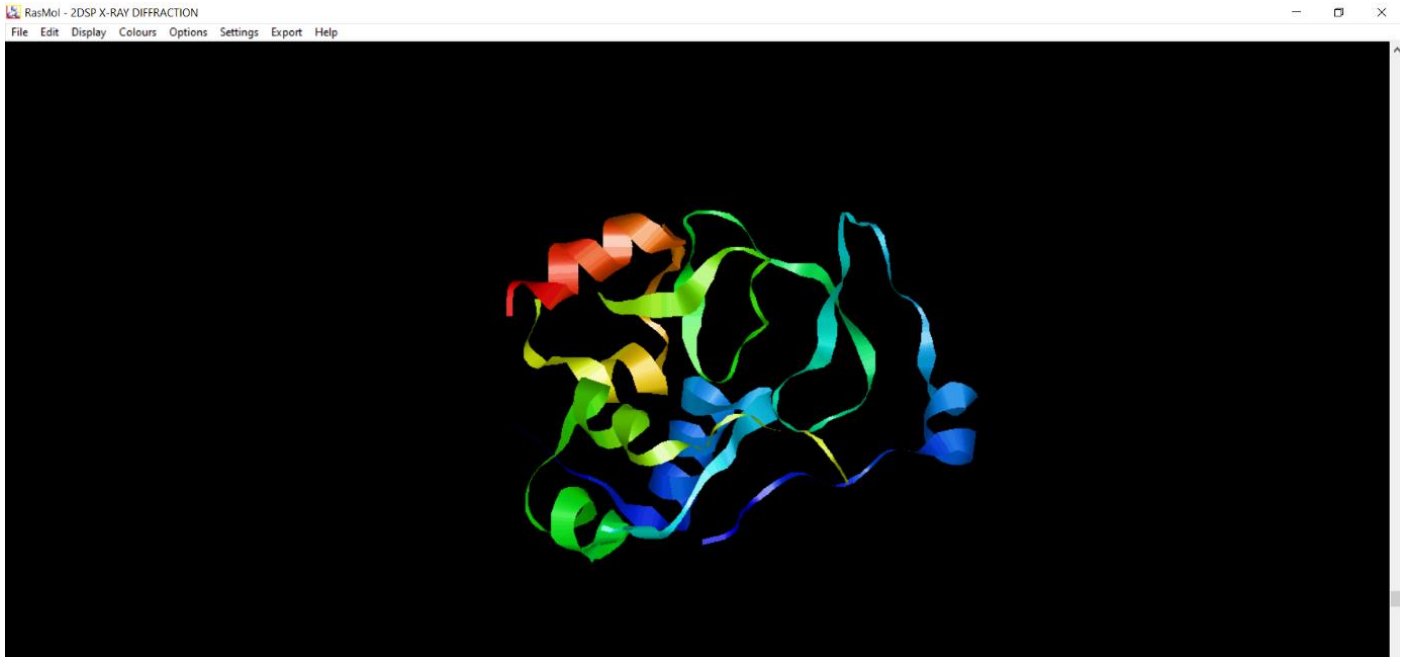
**Ankit Goyal**

**Roll No. : 17103011**

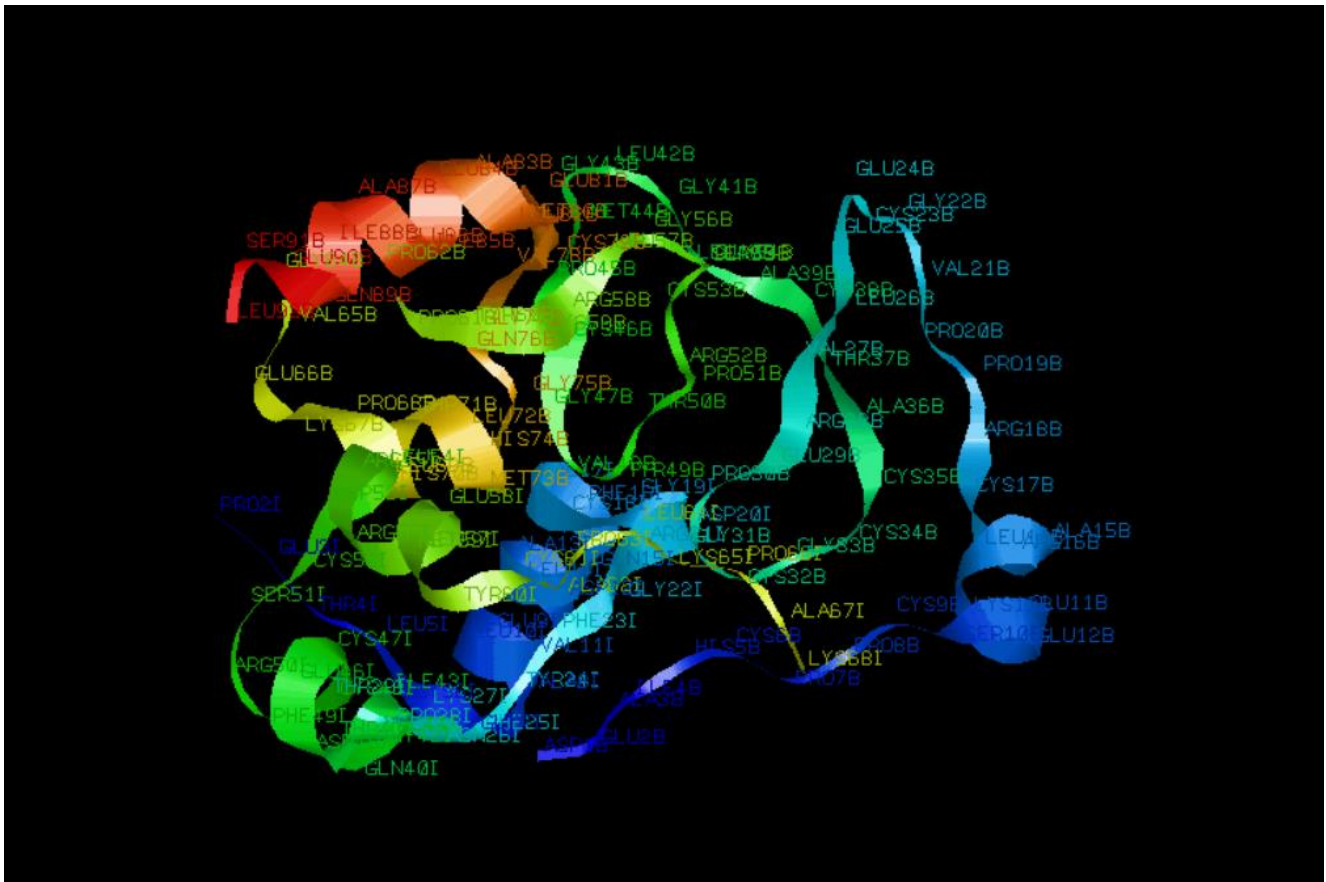
**Branch : CSE Final year**

## Structure Analysis using ResMol

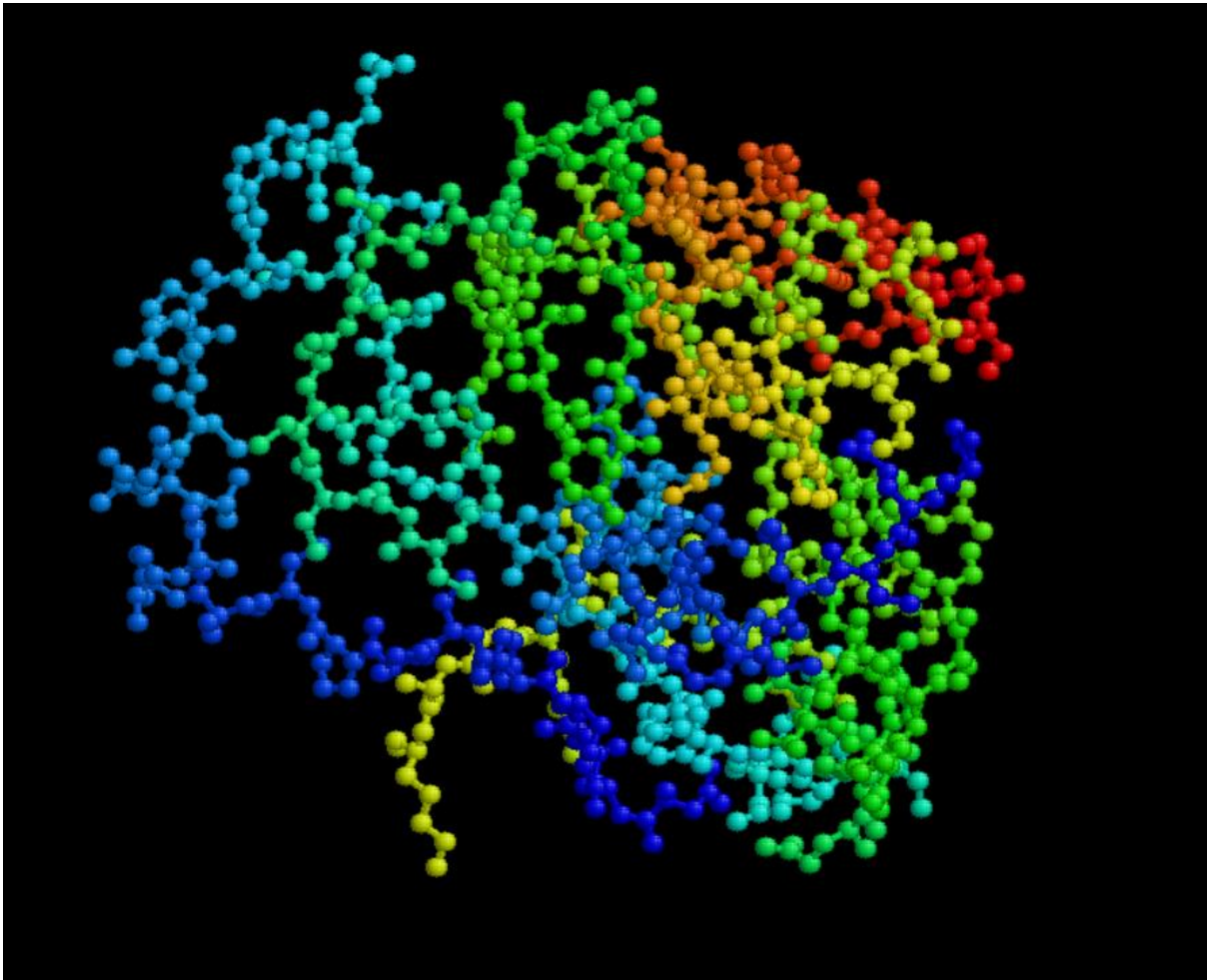
- Insulin:



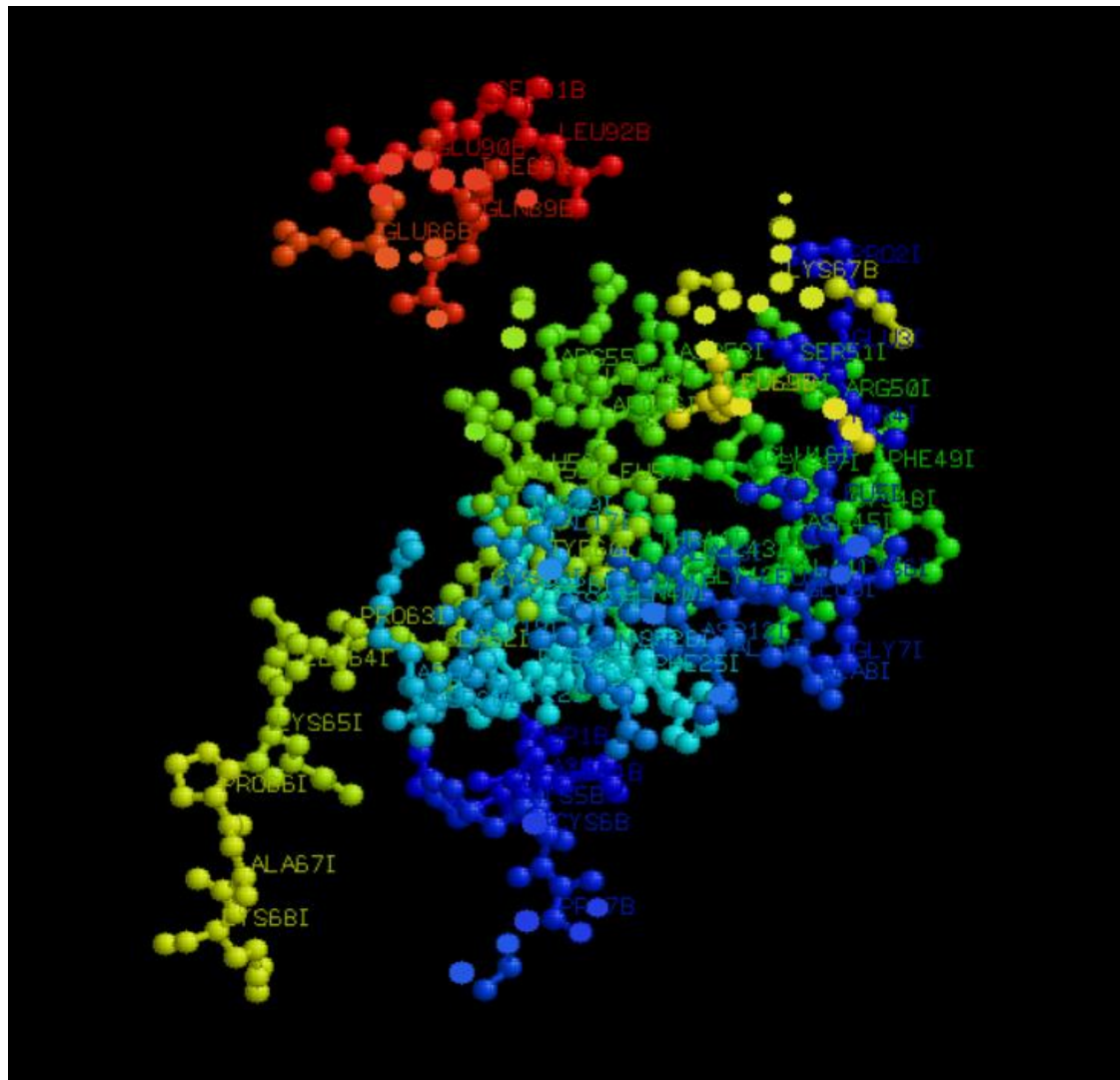
- Labels Mode:



- Ball and stick Form:



- Ball & Stick model with Labels in Slab Mode:



-

# Structure Analysis using PDB

- Locating sequence Position in Protein structure:

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Structure Summary 3D View Annotations Experiment Sequence

## 2DSP

Structural Basis for the Inhibition of Insulin-like Growth Factors by IGF Binding Proteins

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Sequence of 2DSP | Structu... 1: Insulin-like ... A [auth B]

DEAIHCPCSEKLARCPFFVGCCELVRPFGGCCATCALGLMFCGVITFCGSGSLRCYFFRGVEKFLHTLMHGQGVCMELAEIEAIOESL



**Structure**

2DSP | Structural Basis for the Inhibit...

Type Assembly

Asm Id 1: Author And Software ...

Nothing Focused

**Measurements**

**Components** 2DSP

Preset + Add

Polymer Cartoon ...

Water 2 reprs ...

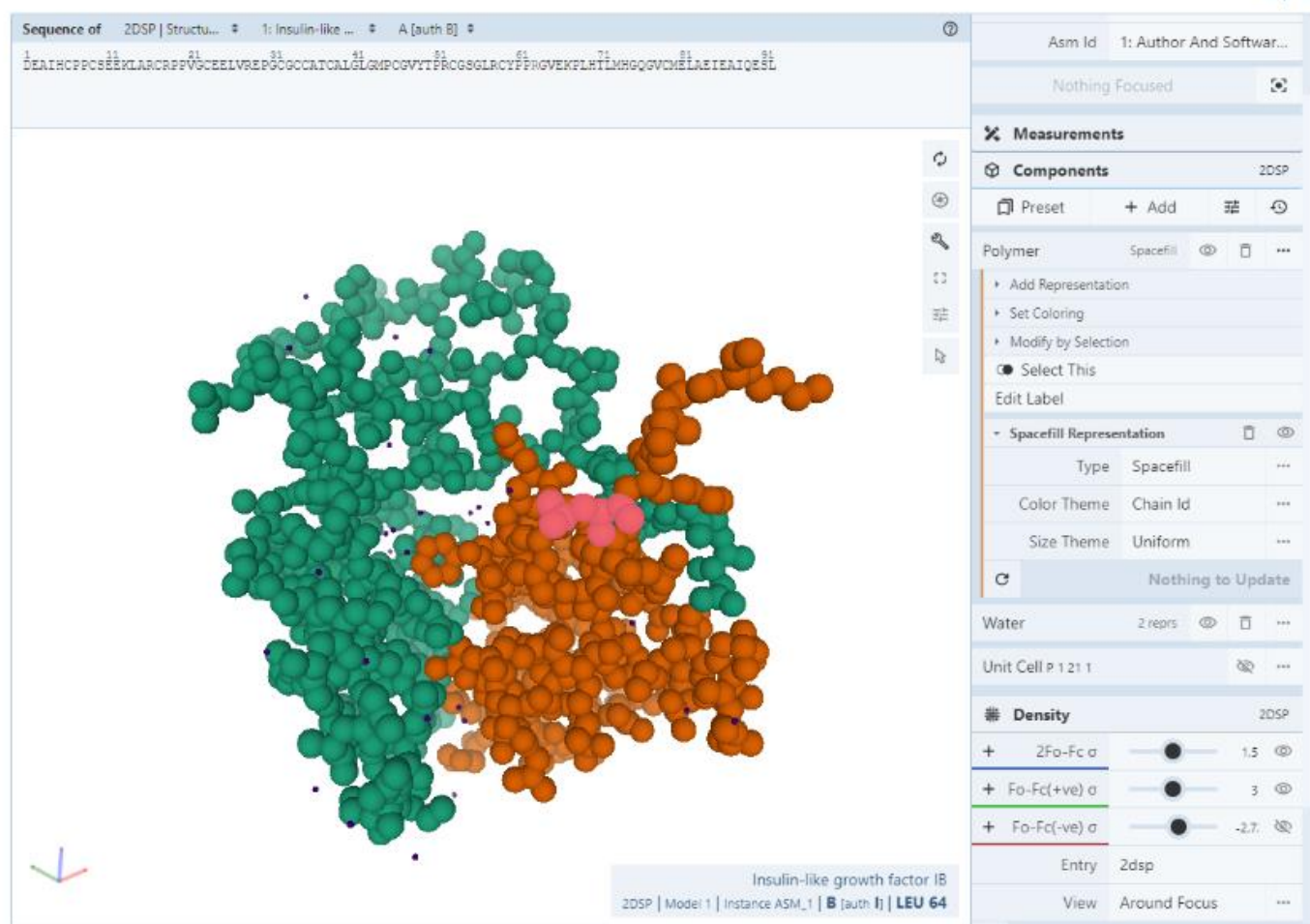
Unit Cell P 1 21 1 ...

**Density**

**Assembly Symmetry**

- Spacefill Mode:

## Structural Basis for the Inhibition of Insulin-like Growth Factors by IGF Binding Proteins





- **Ball & Stick Representation:**

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## 2DSP

Structural Basis for the Inhibition of Insulin-like Growth Factors by IGF Binding Proteins

Sequence of 2DSP | Structure 1: Insulin-like ... A [auth B]

DEAHCPCPCSEKELASCRPPVGCCEILVREPQCGCCATCALSLMPQGVYTPRCGSGLCRCYFFRGVEKPLHTLMHGQGVCMELAEIEAIQESL

Structure

2DSP | Structural Basis for the Inhib...

Type Assembly

Asm Id 1: Author And Softwar...

Nothing Focused

Measurements

Components 2DSP

Preset + Add

Polymer Ball & Stick

Add Representation

Set Coloring

Modify by Selection

Select This

Edit Label

Ball & Stick Representation

Type Ball & Stick

Color Theme Chain Id

Size Theme Uniform

Nothing to Update

Water 2 repts

Unit Cell P 1 21 1

Density 2DSP

+ 2Fo-Fc  $\sigma$  1.5

+ Fo-Fc(+ve)  $\sigma$  3

- Adding New Components:

Sequence of
2DSP | Structu...
1: Insulin-like ...
A [auth B]

1  
DEAIHCPPCS<sup>11</sup>EEKLARC<sup>21</sup>PPV<sup>31</sup>GC<sup>41</sup>CEELVRE<sup>51</sup>PG<sup>61</sup>CGCATCAL<sup>71</sup>GL<sup>81</sup>MP<sup>91</sup>CGVYT<sup>101</sup>PR<sup>111</sup>CGSGLRCY<sup>121</sup>PR<sup>131</sup>GV<sup>141</sup>EKPL<sup>151</sup>HT<sup>161</sup>LM<sup>171</sup>HG<sup>181</sup>QGV<sup>191</sup>CM<sup>201</sup>EL<sup>211</sup>AE<sup>221</sup>IE<sup>231</sup>AI<sup>241</sup>Q<sup>251</sup>ES<sup>261</sup>L

Structure
2DSP | Structural Basis for the Inhibit...
Type Assembly
Asm Id 1: Author And Software ...
Nothing Focused
Measurements
Components 2DSP
Preset + Add
Selection Current Selection
Representation < Create Later >
Options
+ Create Component
All Spacefill
Unit Cell P 1 21 1
Density
Assembly Symmetry 2DSP
No Symmetries for Assembly

Insulin-like growth factor IB