

Receptor Preparation for Docking

<https://spoken-tutorial.org>

National Mission on Education through ICT

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Learning Objectives



Learning Objectives

- ▶ **Open the receptor pdb file on the ADT display panel**



Learning Objectives

- ▶ **Open the receptor pdb file on the ADT display panel**
- ▶ **Delete the water molecules from the receptor structure**



Learning Objectives

- ▶ Open the receptor pdb file on the ADT display panel
- ▶ Delete the water molecules from the receptor structure
- ▶ Add hydrogens to the receptor structure



Learning Objectives



Learning Objectives

- ▶ **Remove the ligand molecule crystallized along with the receptor**



Learning Objectives

- ▶ **Remove the ligand molecule crystallized along with the receptor**
- ▶ **Save the current session**



System Requirement



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- ▶ **Ubuntu Linux OS v20.04**



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- ▶ **Ubuntu Linux OS v20.04**
- ▶ **AutoDockTools v1.5.7**



Pre-requisites



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Learner should be familiar with,



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Learner should be familiar with,

- ▶ **topics in basic bioinformatics**



Pre-requisites

Learner should be familiar with,

- ▶ **topics in basic bioinformatics**
- ▶ **basic operations on AutoDock Tools interface**



Code Files

- ▶ The input files required for this tutorial are available in the **Code files link**



Code Files

- ▶ **The input files required for this tutorial are available in the Code files link**
- ▶ **Please download and extract the files**



Code Files

- ▶ **The input files required for this tutorial are available in the Code files link**
- ▶ **Please download and extract the files**
- ▶ **Make a copy of all the files and then use them for practising**



Summary

- ▶ **Opened the receptor pdb file on the ADT display panel**
- ▶ **Deleted the water molecules from the receptor structure**
- ▶ **Added hydrogens to the receptor structure**



Summary

- ▶ **Removed the ligand molecule crystallized along with the receptor**
- ▶ **Saved the current session**



Assignment



Assignment

As an assignment,

1. Practice the same steps with the example (1DWD) given in the Examples folder in the Downloads page
2. <https://autodock.scripps.edu/download-autodock4/>



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project



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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ Conducts workshops using spoken tutorials
- ▶ Gives certificates to those who pass an online test
- ▶ For more details, please write to contact@spoken-tutorial.org



Answers for THIS Spoken Tutorial

- ▶ **Questions in THIS Spoken Tutorial?**
- ▶ **Visit <https://forums.spoken-tutorial.org>**
- ▶ **Choose the minute and second where you have the question**
- ▶ **Explain your question briefly**
- ▶ **The Spoken Tutorial project will ensure an answer**

You will have to register to ask questions



Acknowledgements

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