

WORKSHOP

Bioinformatics for Life Sciences & Drug Design Workshop 2023

On 13-17th March, Faculty of Pharmacy UiTM organised a workshop on Bioinformatics for Life Sciences and Drug Design. Bioinformatics is a trans-disciplinary field involving computer technology (software, hardware, programming languages), physics, chemistry, and biology. Bioinformatics has been used in the discovery of new drugs, understanding genetic mutations, cancer, and various diseases. With the increasing availability of biological information in online databases, the skills to use these



databases and bioinformatics tools become increasingly critical for those who want to pursue research in related fields. Therefore, this workshop served as a platform for researchers to explore and apply their research studies. It was an opportunity for them to gain a better understanding of 3D structure of proteins and how to generate images for publication using Pymol software, Swiss-Model, Alpha-Fold, and Robetta software and to screen chemical molecules using the "molecular docking" technique using AutoDock Vina software. The workshop also covered the basics of "molecular dynamics simulation" and its applications in various fields, especially in pharmaceutical and medical biotechnology.



The workshop was conducted by Dr. Firdaus Samsudin, Dr. Siti Azma Yusof and Dr. Shirley Siu who are established and experienced researchers in the areas of protein structure modelling, receptor-ligand docking, and molecular dynamics simulation. The 5-Day workshop consisted of three main modules, and participants were able to choose the workshop package based on their interests. Overall, the workshop has received positive feedback from the participants. It is hoped that the exchange of knowledge and expertise at this meeting will enable new and wider grounds for future collaboration in bioinformatics and drug design research among the participants.

Dr. Siti Azma Yusof, Ms. Zakiah Mohd Noordin, Dr. Gurmeet Kaur Surindar Singh
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