細胞膜學 三學分 (每週四 R6, R7, R8) 授課 吳文桂

課程說明

細胞膜的雙極性特性提供了細胞以及胞器分隔的場所，此外，細胞膜更是參與了訊號傳遞、蛋白作用、分子運輸等重要的生理功能。本課程探討細胞膜的生化角色，包含物化特性、脂質合成、訊號調控功能、細胞膜運輸及分子辨識等。

指定用書

Biochemistry of lipids, lipoproteins and membranes (2008)
By Dennis E. Vance and Jean E. Vance, 5th Edition, Elsevier
Membrane Structural Biology, (2014)
by Mary Luckey, Cambridge Univ. Press 2nd edition
Molecular biology of The Cell (2014)
by Bruce Alberts, et al., Garland Science, , 6th Edition

教學大綱

1. 2/26, Introduction.
2. 3/5, Physical properties and functions of lipids in membranes.
3. 3/12, Lipid assembly into cell membranes.
4. 3/19, Methods for membrane studying.
5. 3/26, Membrane curvature and organelle transport.
6. 4/2, Spring break.
7. 4/9, Midterm I.
8. 4/16, Phospholipases and cell signalling.
9. 4/23, Lipid raft and sphingolipids.
10. 4/30, The eicosanoids pathways and lipid binding domain.
11. 5/7 Membrane protein glycosylation and insertion
12. 5/14, Midterm II.
13. 5/21, Protein-lipid interaction.
14. 5/28, Membrane protein structure and function I.
15. 6/4, Membrane protein structure and function II.
16. 6/11, Membrane protein insertion and folding.
17. 6/18, Final term.