

09920LS 110302 Introduction to Life Science

生命科學導論

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Time: R7、R8、R9 (15:20-18:10)

Room: LSII R105 生命科學二館 105 教室

Week	Date	Topic	Instructor	Note
1	2/24	Regulation Tsing Hua Story Magic Biotech(I): From DNA to cloning	Pan, R.L.	
2	3/03	Magic Biotech (II) : Cloning、Molecular farm	Pan, R.L.	
3	3/10	Sweet story: Glycolysis、Diabetics	Pan, R.L.	
4	3/17	Examination I		
5	3/24	Infectious diseases: the past, present and future	Chang, H.Y.	
6	3/31	Molecular diagnosis of human diseases: the future trend	Chang, H.Y.	
7	4/07	Class suspended (Meichu game)		
8	4/14	How to build organs?	Chang, H.Y.	
9	4/21	Genomics and drug discovery	Chang, H.Y.	
10	4/28	Examination II		
11	5/05	Current progress in structural biology and biophysics	Hsu, S.T.	Offered in English
12	5/12	Current progress in chemical biology	Hsu, S.T.	Offered in English
13	5/19	Engineering Aspects of the Cell	Wagner, O.I.	Offered in English
14	5/26	Protein folding, misfolding and diseases	Hsu, S.T.	Offered in English
15	6/02	Biological Machine, Cell Mechanics and Nanotechnology	Wagner, O.I.	Offered in English
16	6/09	Non-biological Machines and Bio-Nanotechnology	Wagner, O.I.	Offered in English
17	6/16	Examination III		
18	6/23	Class suspended		

參考資料 (References)

PART I Prof. Pan, R.L.

清華的故事

“Medicine’s 10 Greatest Discoveries”(By Meyer Friedman and Gerald W.

Friedman “怪才、偶然,與醫學大發現”，商周出版社，趙三賢譯)
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科學人(2004),29 13, 中國化石重寫動物演化史

生技魔幻的故事

科學人(2007), 69, 76-82, 台灣如何成為蝴蝶蘭王國
科學人(2003), 14, 44-49, 專訪華生
科學人(2002), 4, 41-48, 神奇的 DNA 晶片
科學人(2004), 27, 76-84, 遺傳密碼的演化
科學人(2006), 52, 64-71, 用 DNA 做電腦
科學人(2006), 53, 31-37, DNA 元件，組裝未來生命
科學人(2010), 102, 73-77, DNA 也能當藥物
科學人(2007), 68, 88-94, 人類扮演上帝-基因轉殖
科學人(2009), 90, 36-43, 以草煉油
科學人(2009), 90, 44-47, 把稻稈變能源
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科學人(2006), 47, 20, 黃禹錫造假事件
科學人(2006), 54, 48-54, CSI 真實現場
科學人(2008), 75, 29-31, 光合作用，發現外星生命的新指標
科學人(2002), 1, 36-44, 第一個複製人
科學人(2008), 82, 90-92, 照亮細胞的綠色螢光蛋白
科學人(2007), 68, 80-87, 播下基因革命的種子
科學人(2004), 31, 38-45, 一粒米養活全世界
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科學人 試刊紀念版 台灣基因改造作物的現況
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科學人(2006), 47, 14, 自給自足胰島素
科學人(2010), 95, 20-21, 糖尿病的三角關係

PART II Prof. Chang, H.Y.

PART III Prof. Hsu, S.T.

Structural biology and biophysics

Sali et al., From words to literature in structural proteomics (2003) *Nature*, 422:216

Robinson et al., The molecular sociology of the cell (2007) *Nature*, 450:973

Grzesiek & Sass, From biomolecular structure to functional understanding: new NMR developments narrow the gap (2009) *Current Opinion of Structural Biology*, 19:585

Chemical Biology

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Protein folding, misfolding and diseases

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Dobson, Protein folding and misfolding (2003) *Nature*, 426:884

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PART IV Prof. Wagner, O.I.

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