生物科技管理專題研討

授課教師：台灣經濟研究院生物科技產業研究中心**孫智麗**主任

101 學年度下學期開課，一學期**兩學分**選修課程，上課時間為**每雙週五下午四個小時，台積 833/18/ F6F7F8F9 選**，學期成績評量方式：期中課堂表現占 50%；期末報告占 50%。

日期時間	主題	內容
2 月 22 日 14:10~16:00 (2 小時)	Introduction	✓ 前瞻生物科技未來發展大趨勢 ✓ 從廠商調查看台灣生技產業發展現況
3 月 15 日 14:10~18:10 (4 小時)	Industry Analysis	1. Lessons from 60 years of pharmaceutical innovation, ***Nature Reviews Drug Discovery*** 8: p959, 2009. 2. The importance of new companies for drug discovery: origins of a decade of new drugs, ***Nature Reviews Drug Discovery*** 9: p867, 2010. 3. Strategic groups in the biopharmaceutical industry: implications for performance, ***Drug Discovery Today*** 14: p726, 2009. 4. Value networks identify innovation in 21st century pharmaceutical research, ***Drug Discovery Today*** 14: p68, 2009. 5. How many patents does a biopharmaceutical company need? ***Nature Biotechnology*** 26: p763, 2008.
3 月 29 日 14:10~18:10 (4 小時)	Market Analysis	6. What's fueling the biotech engine 2010-2011, ***Nature Biotechnology*** 29: p1083, 2011. 7. A decade of change, ***Nature Reviews Drug Discovery*** 11: p17, 2012. 8. 2011 FDA drug approvals, ***Nature Reviews Drug Discovery*** 11: p92, 2012. 9. Weighing the outcomes, ***Nature Biotechnology*** 26: p173, 2008. 10. Medicare formulary coverage for top – selling biologics, ***Nature Biotechnology*** 27: p1082, 2009. 11. Growth of the Asian health-care market: global implications for the pharmaceutical industry, ***Nature Reviews Drug Discovery*** 6: p785, 2007.
4 月 12 日 14:10~18:10 (4 小時)	Financing	12. Pharmaceutical R&D: the road to positive returns, ***Nature Reviews Drug Discovery*** 8: p609, 2009. 13. Portfolio analysis and R&D decision making, ***Nature Reviews Drug Discovery*** 8: p189, 2009. 14. Streamlining your business for success, ***Nature Biotechnology*** 29: p2, 2011. 15. Does R&D pay? ***Drug Discovery Today*** 15:230, 2010. 16. The 'big pharma' dilemma: develop new drugs or promote existing ones? ***Nature Reviews Drug Discovery*** 8: p533, 2009. 17. Biotech's wellspring- a survey of the health of the private sector, ***Nature Biotechnology*** 30: p395, 2012.
4 月 26 日 14:10~18:10 (4 小時)	Business Development	18. Commercialization strategies of young biotechnology firms, ***Research Policy*** 37: p1765, 2008. 19. Biotech acquisitions by big pharma: why and what is next, ***Drug Discovery Today*** 14: p818, 2009. 20. Six secrets to success—how to build a sustainable biotech business, ***Nature Biotechnology*** 27: p595, 2009. 21. The seven deadly sins of business development, ***Nature Biotechnology*** 26: p375, 2008. 22. Making the leap into entrepreneurship, ***Nature Biotechnology*** 28: p11, 2010.
5 月 10 日 14:10~18:10 (4 小時)	R&D Management	23. The case for entrepreneurship in R&D in the pharmaceutical industry, ***Nature Reviews Drug Discovery*** 9:683, 2010. 24. Drug discovery: are productivity metrics inhibiting motivation and creativity? ***Drug Discovery Today*** 13: p997, 2008. 25. Managing freedom: Managing researchers as if they were warriors, ***Drug Discovery Today*** 13: p555, 2008. 26. Project management of life-science research projects: project characteristics, challenges and training needs, ***Drug Discovery Today*** 16: p93, 2011. 27. Assessing the translatability of drug projects: what needs to be scored to

		predict success? ***Nature Reviews Drug Discovery*** 8: p541, 2009.
5 月 24 日 14:10~18:10 (4 小時)	Technology Licensing	28. Leveraging your biotech intellectual property, ***Nature Biotechnology*** 26: p607, 2008. 29. The economics of licensing contracts, ***Nature Biotechnology*** 26: p855, 2008. 30. Licensing: pros and cons for biotech, ***Drug Discovery Today*** 14: p227, 2009. 31. Reaching across the table, ***Nature Biotechnology*** 30: p485, 2012. 32. Disclosing discoveries, ***Nature Biotechnology*** 28: p9, 2010. 33. Coming to terms: Before taking other people's money to finance your venture, it pays to fully educate yourself, ***Nature Biotechnology*** 28: p120, 2010.
6 月 7 日 14:10~18:10 (4 小時)	Technology Valuation	34. The Cost of Biopharmaceutical R&D: Is Biotech Different? ***Managerial and Decision Economics*** 28: p469, 2007. 35. Putting a price on biotechnology, ***Nature Biotechnology*** 19: p5, 2001. ✓ 生物科技研發成果評價方法
6 月 21 日		期末考

歡迎具生物科技相關背景、或對生技產業分析與科技管理及技術評價有興趣者選修。

Class	生物科技管理專題研討			**Instructor**	孫智麗
Course description	選修	**Language**	中文	**Term**	Spring 2013
Course Evaluation					
上課方式與內容為教師導讀本學期課表所列 papers，修課同學在學期中要從以下七個主題中選擇至少一、兩篇 papers 做口頭報告/ powerpoint 簡報（依選課學生分配口頭報告、每個人口頭報告時間不超過 30 分鐘）；學期末要將個人選擇主題所包括的全部 papers 進行中文重點摘譯彙整報告/word 檔（含圖表約 3,000-4,500 字）。**學期成績評量方式：期中課堂表現（口頭簡報、學習態度與成效等）占 50%；期末報告（中文重點摘譯彙整報告）占 50%**。修課同學在學期末要從本學期課表七個主題中選擇一個主題所包括的全部 papers 進行中文重點摘譯彙整報告/word 檔（12 號字、含圖表約 3,000-4,500 字、專有名詞/公司名/技術名/藥名/人名不要翻成中文、檔案不超過 1M）。					