

# 生物科技管理與產業分析

授課教師：台灣經濟研究院 生物科技產業研究中心、智慧財產評價服務中心 孫智麗主任

112 學年度下學期開課，選修課程一學期兩學分

上課時間為每週三下午第 8,9 堂，教室：台大生技所（台北市長興街 81 號 2 樓 R214 演講廳）

學期成績評量方式：期中課堂表現占 60%、期末報告占 40%

歡迎對生技產業分析與科技管理及技術評價有興趣者選修。

<b>Class</b>	生物科技管理與產業分析			<b>Instructor</b>	孫智麗/兼任副教授
<b>Course description</b>	選修	<b>Language</b>	中文	<b>Time &amp; Venue</b>	每週三第 8,9 堂 台大生技所 R214 演講廳
<b>Course Evaluation</b>					
<p>上課方式：先由教師上課講授內容，修課同學從本學期課表以下七個主題中就其中一個主題所列參考文獻中選擇至少一篇或兩篇 papers 在以下日期時間做口頭報告/ 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進行重點摘譯彙整報告/word 檔（含圖表約 3,000 字）。</p> <p>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 60%；期末報告（重點摘譯彙整報告）占 40%。修課同學在學期末要從本學期課表以下七個主題中選擇其中一個主題的至少一篇或兩篇 papers 進行重點摘譯彙整報告/word 檔（12 號字、含圖表約 3,000 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），於 6 月 20 日(四)23:59 前 Email: <a href="mailto:juliesun@ntu.edu.tw">juliesun@ntu.edu.tw</a> 給教師。</p>					

日期時間	主題	內容
2 月 21 日	台灣生技產業發展現況	
3 月 6 日	CDMO 產業發展趨勢分析	
3 月 13 日	精準健康產業發展趨勢分析	
3 月 20 日	保健產品市場研究與行銷策略	
3 月 27 日	生物科技技術評價原理與方法	
4 月 3 日	生物科技技術評價案例與授權	
4 月 10 日	期中考*	
4 月 17 日	Industry Analysis	<ol style="list-style-type: none"> <li>1. Lessons from 60 years of pharmaceutical innovation, <i>Nature Reviews Drug Discovery</i> 8: p959, 2009.</li> <li>2. The importance of new companies for drug discovery: origins of a decade of new drugs, <i>Nature Reviews Drug Discovery</i> 9: p867, 2010.</li> <li>3. Strategic groups in the biopharmaceutical industry: implications for performance, <i>Drug Discovery Today</i> 14: p726, 2009.</li> <li>4. Value networks identify innovation in 21st century pharmaceutical research, <i>Drug Discovery Today</i> 14: p68, 2009.</li> <li>5. A network analysis of COVID-19 mRNA vaccine, <i>Nature Biotechnology</i> 39: p546, 2022.</li> </ol>

4 月 24 日	<b>Market Analysis</b>	<p>6. What's fueling the biotech engine 2012-2013, <i>Nature Biotechnology</i> 32: p32, 2014.</p> <p>7. A decade of change, <i>Nature Reviews Drug Discovery</i> 11: p17, 2012.</p> <p>8. 2023 FDA approvals, <i>Nature Reviews Drug Discovery</i> 23: p88, 2024.</p> <p>9. Medicare formulary coverage for top – selling biologics, <i>Nature Biotechnology</i> 27: p1082, 2009.</p>
5 月 1 日	<b>Financing</b>	<p>10. Precision financing, <i>Nature Biotechnology</i> 41, 27 April 2023.</p> <p>11. 2022 – toughing out the trough, <i>Nature Biotechnology</i> 41: p170-173, 2023.</p> <p>12. Portfolio analysis and R&amp;D decision making, <i>Nature Reviews Drug Discovery</i> 8: p189, 2009.</p> <p>13. Pharmaceutical R&amp;D: the road to positive returns, <i>Nature Reviews Drug Discovery</i> 8: p609, 2009.</p> <p>14. The 'big pharma' dilemma: develop new drugs or promote existing ones? <i>Nature Reviews Drug Discovery</i> 8: p533, 2009.</p> <p>15. Does R&amp;D pay? <i>Drug Discovery Today</i> 15:230, 2010.</p>
5 月 8 日	<b>Business Development</b>	<p>16. Commercialization strategies of young biotechnology firms, <i>Research Policy</i> 37: p1765, 2008.</p> <p>17. Pharma backs off biotech acquisitions, <i>Nature Biotechnology</i> 40: p1546, 2022.</p> <p>18. Six secrets to success—how to build a sustainable biotech business, <i>Nature Biotechnology</i> 27: p595, 2009.</p> <p>19. The seven deadly sins of business development, <i>Nature Biotechnology</i> 26: p375, 2008.</p> <p>20. Making the leap into entrepreneurship, <i>Nature Biotechnology</i> 28: p11, 2010.</p> <p>21. Coming to terms: Before taking other people's money to finance your venture, it pays to fully educate yourself, <i>Nature Biotechnology</i> 28: p120, 2010.</p>
5 月 15 日	<b>R&amp;D Management</b>	<p>22. How were new medicines discovered? <i>Nature Reviews Drug Discovery</i> 10, p507, 2011.</p> <p>23. Assessing the translatability of drug projects: what needs to be scored to predict success? <i>Nature Reviews Drug Discovery</i> 8: p541, 2009.</p> <p>24. The case for entrepreneurship in R&amp;D in the pharmaceutical industry, <i>Nature Reviews Drug Discovery</i> 9:p683, 2010.</p> <p>25. Drug discovery: are productivity metrics inhibiting motivation and creativity? <i>Drug Discovery Today</i> 13: p997, 2008.</p> <p>26. Managing freedom: Managing researchers as if they were warriors, <i>Drug Discovery Today</i> 13: p555, 2008.</p> <p>27. Project management of life-science research projects: project characteristics, challenges and training needs, <i>Drug Discovery Today</i> 16: p93, 2011.</p>
5 月 22 日	<b>Technology Licensing</b>	<p>28. The economics of licensing contracts, <i>Nature Biotechnology</i> 26: p855, 2008.</p> <p>29. Licensing: pros and cons for biotech, <i>Drug Discovery Today</i> 14: p227, 2009.</p> <p>30. Leveraging your biotech intellectual property, <i>Nature Biotechnology</i> 26: p607, 2008.</p> <p>31. Reaching across the table, <i>Nature Biotechnology</i> 30: p485, 2012.</p> <p>32. Disclosing discoveries, <i>Nature Biotechnology</i> 28: p9, 2010.</p>
5 月 29 日	<b>Technology Valuation</b>	<p>33. Determining the value of drug development candidates and technology platforms, <i>Journal of Commercial Biotechnology</i> 11(2), p.155, 2005.</p> <p>34. How to improve R&amp;D productivity: the pharmaceutical industry's grand challenge, <i>Nature Reviews Drug Discovery</i> 9: p203, 2010.</p> <p>35. The Cost of Biopharmaceutical R&amp;D: Is Biotech Different? <i>Managerial and Decision Economics</i> 28: p469, 2007.</p> <p>36. Putting a price on biotechnology, <i>Nature Biotechnology</i> 19: p5, 2001.</p> <p>37. Clinical development success rates for investigational drugs, <i>Nature Biotechnology</i> 32: p40, 2014.</p>
6 月 5 日	<b>期末考*</b>	

\*不上課。期末報告請在 6 月 20 日(四)23:59 前 Email: juliesun@ntu.edu.tw 給教師。