

# 生物科技管理與產業分析

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

114 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：台大生物科技館（台北市長興街 81 號 2 樓 214 室）

學期成績評量方式：期中課堂表現占 50%、期末學期成果占 50%

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 台大生物科技館 214 室
<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兩三篇 papers (of 10+ pages) 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），以及提出一份生醫產品銷售預測與技術評價實作 Excel 檔案（優規加分）；學期末要從期中口頭簡報內容修正彙整研提一份成果報告（簡報 ppt 轉存成 pdf 檔）。</p> <p>學期成績評量方式：期中課堂表現（口頭簡報與表達、生醫產品銷售預測與技術評價實作）占 50%；期末學期成效（成果報告、全期學習態度）占 50%。修課同學在學期末要從期中口頭簡報內容修正彙整研提成果報告(簡報 ppt 轉存成 pdf 檔)，於 6 月 20 日(六)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 25 日	全球生技產業發展趨勢	
3 月 4 日	台灣生技產業發展現況	
3 月 11 日	保健產品市場研究與行銷策略	
3 月 18 日	生醫產品銷售預測	
3 月 25 日	生物科技技術評價原理與方法	
4 月 1 日	生物科技技術評價案例與授權	
4 月 8 日	技術評價實作	
4 月 15 日	期中考*	
4 月 22 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 29 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. 2024 FDA approvals, <i>Nature Reviews Drug Discovery</i> 24, 2025.</p> <p>9. Medicare formulary coverage for top – selling biologics, <i>Nature Biotechnology</i> 27: p1082, 2009.</p>
5 月 6 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 13 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 20 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 27 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>
6 月 3 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 10 日	<b>期末考*</b>	

\*不上課。期末報告請在 6 月 20 日(六)23:59 前 Email: juliesun@ntu.edu.tw 給教師。