國立臺灣大學生命科學院 97 學年度第 1 學期第 2 次院務會議
會議記錄

日期：97 年 11 月 13 日（星期四）中午 12 時 20 分

地點：生命科學館六樓會議室（R628）

出席：陳所長俊宏、李所長培芬（陳淑華教授代）、曾所長萬年、張所長震東（余榮熾教授代）、何主任(兼副院長)國傑、黃主任青真、潘所長子明、蔡所長懷楨（楊西苑教授代）、葉所長開溫（靳宗洛助理教授代）；李玲玲教授、李心予副教授、阮雪芬副教授（請假）、楊盛行教授（請假）、宋延齡教授（請假）、許瑞祥教授、胡哲明副教授、丘臺生教授、余榮熾教授、鄭石通教授、謝旭亮副教授；張耀文助教；賀銀珠技士；林婕妤(院學生會會長）

主席：羅院長竹芳　　記錄：黎技士錦超

列席：莊副院長榮輝、張秘書倩妮、謝幹事蕙卉

壹、 報告事項：

一、97 年度至目前止本院教師獲獎情形，提會報告。

說明：97 年度本院教師獲獎情形如下，

(一)植研所靳宗洛助理教授研究論文榮登美國國家科學院院刊 (PNAS) Cover Story (2008/10)

(二)生命科學系阮雪芬老師榮膺中華民國第 46 屆十大傑出青年醫學研究類 (2008/10)

(三)微生物與生化學研究所所長潘子明教授榮獲

1.華美食品科技學會專業成就

2.社團法人國家生技醫療產業策進會 (簡稱生策會) 2008 國家新創獎 (2008/10)

(四)動物所羅竹芳教授榮獲教育部第 12 屆國家講座主持人獎生物及醫農科學類科 (2008/9)

(五)植物科學研究所林秋榮教授獲頒美國植物生物學學會(ASPB) 「海外終身通信會員獎」為臺灣目前獲得此榮譽的第一人。 (2008/5)

(六)潘子明教授研究團隊證實紅麴可對抗阿茲海默症研究結果榮登知名期刊《神經科學研究》 (2008/5)

(七)阮雪芬副教授研究團隊首次發現阻斷能量蛋白能有效殺死癌細胞，被美國化學學會選為當週熱門新聞主題於科學今日 Science Daily 等科學網站報導 (2008/4)

二、有關校方於 97.10.16 召開節電方案規劃(第 2 次會議)中，研商節電及電費方案相關事宜，提會報告。

說明：有關本校電費逐年增加，台電又調高電費之下，明年電費將由 96 年度之 3.1 億劇增為 4.5 億，相差 1.4 億該如何因應之討論。本案經莊副院長代表參與該會，所提說明及可能做法請參考附件 1。

三、本校各系所評鑑時程經 97.10.7「國立臺灣大學外部系所評鑑校級評鑑指導委員會」第 1 次會議紀錄決議如附件 2，請參考。

貳、 討論事項：

一、本院「國立臺灣大學生命科學院教師評審委員會設置辦法」部分條文修正草案，提會討論。

說明：本院前經簽奉校方核准自 96 年 8 月 1 日起增置副院長乙職，現擬修訂本院教師評審委員會設置辦法第二條有關當然代表之組成。(請參附件 3)

決議：全體委員無異議通過。

二、訂定本院「國立臺灣大學生命科學院學生參與學術研究績效獎勵要點」(草案)，提會討論。

說明：為鼓勵本院學生積極參與教師研究並發表學術研究成果，特訂立本要點。(請參附件 4)

決議：討論時委員主要對於第四點、第五點提出(1)對大學部、碩士班畢業學生繼續就學本院者應可納入(2)截止時間建議再予酌量下，並再了解校方報帳時程後予以修正時間，以 E-mail 方式送請各位委員確認；於委員確認後，本要點視修正後通過，將提送校方核備（詳見附件 C）。

三、訂定本院「國立臺灣大學生命科學院提昇學術研究授課時數減免實施要點」(草案)，提會討論。

說明：為鼓勵新進教師追求學術卓越研究，特依本校「提昇學術研究激勵辦法制訂準則」及「專任教師每週授課時數計算標準及超授鐘點費核支準則」，訂立本要點。(請參附件 5)

決議：對原草案之標題「國立臺灣大學生命科學院提昇學術研究授課時數減免實施要點」修改為「國立臺灣大學生命科學院新進教師授課時數減免實施要點」後，本要點經修正後通過。

四、生命科學系提「國立臺灣大學生命科學院生命科學系系主任選任辦法」(修正草案)，提會討論。

說明：經 97.10.17　97 學年度第 1 次系務會議討論，修訂該辦法第三條、第四條、第七條、第九條、第十條及第十二~十五條。(請參附件 6)

決議：本草案之內容中，將遴選改為選任(修改如附件A紅字部份為己修改部份)，本案修正通過。

五、生命科學系提「國立臺灣大學生命科學院生命科學系課程委員會組織辦法」(修正草案)，提會討論。

說明：經 97.10.17　97 學年度第 1 次系務會議討論，修訂該辦法第二條、第三條、第七條。(請參附件 7)

決議：全體委員無異議通過。

六、生化科技學系與微生物與生化學研究所提「98 學年度臺灣大學申請增設院系所學位學程計畫書」乙份，提會討論。

說明：因依 96 學年度系所評鑑報告內容，評鑑委員建議系所合一並經系所務規劃委員會及系所務聯席會討論後，提出生化科技學系與微生物與生化學研究所合併案。(請參附件 8)

決議：全體委員無異議通過。

參、 臨時動議：

一、 本院「國立臺灣大學生命科學院與泰國宋卡王子大學理學院合作備忘錄」中、英文版合約草案，提會討論。(請參附件 9)

決議：原文修改如附件 B，本案經修正後通過。

肆、 散會。(14 時 10 分)

本校於 97.10.16 召開節電方案規劃，研商節電及電費方案之討論說明如下：

(資料來源：本院莊副院長提供)

事由：本校電費逐年增加，台電又調高電費，明年電費將由 96 年度之 3.1 億劇增爲 4.5 億，相差 1.4 億該如何因應？

說明：

(1) 全校電費每年增長約 6.8%，去年已經達 3.1 億元 (今年未完已達 3.3 億)。
(2) 台電今年十月開始漲價，尖峰時段之調幅達 35% (其他時段調幅更高)。
(3) 雙重壓力之下，本校節電措施勢在必行，且必須落實至各單位使用者。
(4) 各一級單位已經成立節能小組。
(5) 各單項耗電量中，以空調佔 40-50% 最多。

可能做法：

(1) 改善館舍之節能效益：生科館投資 1,843 萬元，每年可節約 417 萬元。
(2) 學校將逐步將管理費自主，以後自付電費 (目前還不會大幅改變)。
(3) 以虛擬電表隨時公佈各館舍耗電量，甚至細分至每一系所、實驗室。
(4) 校方洽台電分散契約容量，可大幅降低超額罰款 (學校處理中)。
(5) 各單位可設置『巡查員』每日定時巡查空耗之冷氣、電器等。
(6) 提倡『弱冷』概念，空調設定只要不熱即可，不要有很冷的感覺。

附件2

國立臺灣大學外部系所評鑑校級評鑑指導委員會第一次會議紀錄

決　議：

一、作業時程修正如下

日期	作業項目	主政單位
98年1月6日前	1.各系、所、學程將自評評鑑委員名單送校(教務處)。 2.學院對所屬系所之監督機制送校備查。	各學院 系、所、學程
98年1月13日	校級「評鑑指導委員會」審議自評評鑑委員名單	教務處
98年1月15日	函復核定自評評鑑委員名單	教務處
98年3月1日至5月31日	各系所完成自評作業並將自評報告提送院級「評鑑指導委員會」審議。	各系、所、學程
98年7月10日前	各學院完成所屬系、所、學位學程自評報告之審議，並將系所修正後自評報告併同學院審查意見各一式16份送教務處。	各學院
98年7月21日前	校級「評鑑指導委員會」完成系所自評報告審議。	教務處
98年7月24日前	函知各系所系所自評報告審議結果	教務處
98年8月10日前	應修正之自評報告完成修正送校	各系、所、學程
98年8月20日前	各系所自評報告上傳至高教評鑑中心，並將紙本送校彙報該中心	各系、所、學程

二、系所自評委員人數與資格：各系所及學位學程自評委員人數為3位，由本單位專任教師以外學者專家擔任，其中至少應有1名為校外委員。

三、經費補助：由校方補助每系、所評鑑作業經費3萬元。如有採共同評鑑者，每增1系、所，增補助經費1萬元，但至多補助6萬元整。校外委員得致發其評鑑工作費（其標準為每天至多5000元，並以1天為原則）。

四、各學院應成立委員會，以對所屬系所自評作業加以監督及協助。

附件 3

國立臺灣大學生命科學院教師評審委員會設置辦法第二條修正條文對照表

96 年 4 月 3 日本校第 2474 次行政會議討論通過
自上網公告日起 3 日後施行
97 年 11 月　日 97 學年度第 1 學期第　次院務會議修正通過
97 年　月　日本校第　　次行政會議討論修正通過

修　正　條　文	現　行　條　文	說　明
第二條　本會由左列人員組成之： 一、當然委員：院長（召集人）、**副院長**、各系所主任及所長。 二、推選委員：由本院專任講師以上教師就專任教授推選之，其人數應比當然委員人數多三名。推選委員任期一年，連選得連任一次，在任期中出缺時，得再行補選或由候補委員遞補，其任期以補足所遺任期為限。但教師於該學年度將出國超過半年以上時，不得被選為推選委員。當選為推選委員後出國超過半年以上者，應即喪失委員資格。 推選委員因故不能出席時，由候補委員代理。但受託代理人僅得代理一人。 候補委員之產生係以未當選推選委員之教授中得票最高之前五名出任為原則。候補委員之候補次序依得票數由高至低排列。各系所擔任推選委員及候補委員之總人數不得超過二名。	第二條　本會由左列人員組成之： 一、當然委員：院長（召集人）、各系所主任及所長。 二、推選委員：由本院專任講師以上教師就專任教授推選之，其人數應比當然委員人數多三名。推選委員任期一年，連選得連任一次，在任期中出缺時，得再行補選或由候補委員遞補，其任期以補足所遺任期為限。但教師於該學年度將出國超過半年以上時，不得被選為推選委員。當選為推選委員後出國超過半年以上者，應即喪失委員資格。 推選委員因故不能出席時，由候補委員代理。但受託代理人僅得代理一人。 候補委員之產生係以未當選推選委員之教授中得票最高之前五名出任為原則。候補委員之候補次序依得票數由高至低排列。各系所擔任推選委員及候補委員之總人數不得超過二名。	增列副院長為當然代表。

國立臺灣大學生命科學院教師評審委員會設置辦法修正草案

92 年 10 月 16 日本院 92 學年度第 1 學期第 4 次院務會議通過
92 年 11 月 18 日本校第 2317 次行政會議修正通過
96 年 3 月 8 日本院 95 學年度第 2 學期第 1 次院務會議修正通過
96 年 4 月 3 日本校第 2474 次行政會議討論通過
自上網公告日起 3 日後施行
97 年 11 月 日本院 97 學年度第 1 學期第　次院務會議修正通過
97 年　月　日本校第　　次行政會議討論通過

第 一 條　本辦法依本校各學院教師評審委員會設置準則第八條第一項之規定訂定。

第 二 條　本會由左列人員組成之：

一、當然委員：院長（召集人）**、副院長**、各系所主任及所長。

二、推選委員：由本院專任講師以上教師就專任教授推選之，其人數應比當然委員人數多三名。推選委員任期一年，連選得連任一次，在任期中出缺時，得再行補選或由候補委員遞補，其任期以補足所遺任期為限。但教師於該學年度將出國超過半年以上時，不得被選為推選委員。當選為推選委員後出國超過半年以上者，應即喪失委員資格。

推選委員因故不能出席時，由候補委員代理。但受託代理人僅得代理一人。

候補委員之產生係以未當選推選委員之教授中得票最高之前五名出任為原則。候補委員之候補次序依得票數由高至低排列。各系所擔任推選委員及候補委員之總人數不得超過二名。

第 三 條　本會職掌為審議教師（研究人員）之聘任、聘期、升等、不續聘、停聘、解聘，教授與副教授延長服務、出國進修、教授休假研究暨依法令應由本會審議之事項。

第 四 條　本會推選委員之選舉於每學年第一學期上課開始後二星期內辦理完成。推選委員之任期為一年，連選得連任。

第 五 條　本會會議每學期至少舉行一次，由院長召集之。非達全體委員三分之二(含）以上之出席，不得開議。

第 六 條　本會之當然委員因故不能出席時，得指定職務代理人代理出席；推選委員不能出席時，由候補委員依序代理。

第 七 條　本會會議時，採無記名投票。對教師聘任、升等之審查，以出席委員三分之二（含）以上同意為通過，本院始向校方推薦。其他議案除相關法規有明文規定者外，以出席委員過半數之同意，始得為決議；惟教師之停聘、解聘以全體委員總額三分之二（含）以上同意，不續聘之裁決須經全體委員總額過半數同意始得為決議。

第 八 條　本會開會時得邀請有關人員列席報告或說明。

第 九 條　本會委員在審查或討論與自身利益有關之事項時，應自行迴避，未自行迴避者，主席得請該委員迴避。

第 十 條　本辦法如有未盡事宜，悉依教育部、本校暨本院其他相關規定辦理。

第十一條　本辦法經院務會議通過，並報校核備後，自發布日施行。

附件 4

國立臺灣大學生命科學院提昇學術研究授課時數減免實施要點(草案)

97 年 11 月　日 97 學年度第 1 學期第　次院務會議修正通過
97 年　月　日本校第　　次行政會議修正通過

一、國立臺灣大學生命科學院(以下簡稱本院)為鼓勵新進教師致力學術研究、追求卓越，特依本校「提昇學術研究激勵辦法制訂準則」及「專任教師每週授課時數計算標準及超授鐘點費核支準則」，訂立本要點。

依據校方母法訂定本院新進教師核減鐘點之實施要點。

二、 本要點所謂新進教師，係指到校服務三年內之專任教師。

新進教師的定義

三、 本院新進教師得減免授課時數之條件與內容如下：

新進教師申請減免授課時數之條件與內容，並將母法可減一併帶入。

(一) 該學期擔任導師或研究生論文指導者，各計入基本授課時數二小時，總數以四小時為限。

(二) 該學期未擔任導師或研究生論文指導者，得申請減免授課時數二小時。

(三) 該學期未擔任導師且未擔任研究生論文指導者,得申請減免授課時數三小時。

(四) 其它依本校「專任教師每週授課時數計算標準及超授鐘點費核支準則」第四條規定得核減項目。

四、 教師因擔任導師、論文指導或執行研究計畫而計入，以及依本校相關規定或本要點而核減之授課時數，均不計入於超授鐘點時數內。

將母法第五條第七款一併敘明。

五、 新進教師申請減免授課時數概依教師聘期學年為單位（八月一日至隔年七月三十一日或二月一日至隔年一月三十一日），於每學期開學後一週內，檢具申請書、未來一年之研究計畫等資料，經各系所同意後彙送本院轉送校方辦理減授事宜。

新進教師申請減免的時間、應檢具之資料及送校程序。

六、 獲得減免授課時數之教師，應於當學年結束後一個月內，提出研究成果送系所評核。

說明由系核教師減時數之研究成果由系所評核。

七、 本要點經院務會議、行政會議通過後，自發布日施行。

國立臺灣大學生命科學院學生參與學術研究績效獎勵要點(草案)

97 年 11 月 13 日 97 學年度第 1 學期第 2 次院務會議修正通過
97 年　月　日 本校第　　次行政會議修正通過

依據校方母法訂定對本院學生參與學術研究之獎勵方式。

一、 國立臺灣大學生命科學院（以下簡稱本院）為執行教育部「邁向頂尖大學」計畫，鼓勵本院學生**（含大學部學生及碩博士班研究生）**積極參與教師研究並發表學術研究成果，特依「國立臺灣大學提昇學術研究激勵辦法制定準則」，訂定「國立臺灣大學生命科學院學生參與學術研究績效獎勵要點」（以下簡稱本要點）。

符合獎勵之條件與獎勵金額。

二、 本要點獎勵之學術研究成果，係指本院學生以本院為所屬學術機構為名發表之期刊論文。期刊論文之分級，及各級獎勵金額如下：

頂尖期刊論文：	刊登於自然期刊（*Nature*）或科學期刊（*Science*）者。	獎勵金 5 萬元
傑出期刊論文：	刊登於 SCI 期刊，以 JCR 計算或經本院審核在其領域（含次領域）排名前百分之十五（含百分之十五）之期刊者。	獎勵金 1 萬元
優良期刊論文：	刊登於 SCI 期刊，以 JCR 計算或經本院審核在其領域（含次領域）排名前百分之四十（含百分之四十）之期刊者。	獎勵金 5 仟元

獎勵金之來源。

三、 本**要點**獎勵金來源由本院「邁向頂尖大學」計畫下編列預算，本院得依當年度經費狀況調整獎勵金。

獎勵方式之說明。

四、 凡依本要點提出論文獎勵申請者，每篇以獎勵一次為限。~~頂尖期刊論文每人每年獎勵篇數不限，傑出期刊論文每人每年以獎勵三篇為限，優良期刊論文每人每年以獎勵四篇為限。~~論文係多人共同著作者，限由第一著作人或通訊著作人提出申請。但頂尖期刊係與國內外研究團隊共同著作，而非第一著作人或通訊著作人，本院學生限以一人提出申請，其獎勵比照傑出期刊。

申請時間及應檢附之資料。

五、 **依本要點提出獎勵申請者，應於本院公告之辦理期限內（每年 3 月底前公告，6 月 20 日截止收件），填具申請書，並檢附截止日期前一年內出版之論文抽印本乙式三份(含已被接受Accepted)，經學生所屬單位初審後彙送本院審議，審議委員會由院長召集之。（註：本院簽報獎勵金時，若非本院在學學生將無法敘獎）**

六、 本**要點**經院務會議通過**後**並報校核備**後**，自發布日施行。

依母法規定送校核定。

國立臺灣大學生命科學院提昇學術研究授課時數減免實施要點(草案)

97 年 11 月　日 97 學年度第 1 學期第　次院務會議修正通過
97 年　月　日本校第　　次行政會議修正通過

一、國立臺灣大學生命科學院(以下簡稱本院)為鼓勵新進教師致力學術研究、追求卓越，特依本校「提昇學術研究激勵辦法制訂準則」及「專任教師每週授課時數計算標準及超授鐘點費核支準則」，訂立本要點。

依據校方母法訂定本院新進教師核減鐘點之實施要點。

二、 本要點所謂新進教師，係指到校服務三年內之專任教師。

新進教師的定義

三、 本院新進教師得減免授課時數之條件與內容如下：

新進教師申請減免授課時數之條件與內容，並將母法可減一併帶入。

(一) 該學期擔任導師或研究生論文指導者，各計入基本授課時數二小時，總數以四小時為限。

(二) 該學期未擔任導師或研究生論文指導者，得申請減免授課時數二小時。

(三) 該學期未擔任導師且未擔任研究生論文指導者,得申請減免授課時數三小時。

(四) 其它依本校「專任教師每週授課時數計算標準及超授鐘點費核支準則」第四條規定得核減項目。

四、 教師因擔任導師、論文指導或執行研究計畫而計入，以及依本校相關規定或本要點而核減之授課時數，均不計入於超授鐘點時數內。

將母法第五條第七款一併敘明。

五、 新進教師申請減免授課時數概依教師聘期學年為單位（八月一日至隔年七月三十一日或二月一日至隔年一月三十一日），於每學期開學後一週內，檢具申請書、未來一年之研究計畫等資料，經各系所同意後彙送本院轉送校方辦理減授事宜。

新進教師申請減免的時間、應檢具之資料及送校程序。

六、 獲得減免授課時數之教師，應於當學年結束後一個月內，提出研究成果送系所評核。

說明由系核教師減時數之研究成果系所評核。

七、 本要點經院務會議、行政會議通過後，自發布日施行。

國立臺灣大學生命科學院新進教師授課時數減免實施要點(草案)

97 年 11 月　日 97 學年度第 1 學期第 次院務會議修正通過
97 年　月　日本校第　　次行政會議修正通過

一、國立臺灣大學生命科學院(以下簡稱本院)為鼓勵新進教師致力學術研究、追求卓越，特依本校「提昇學術研究激勵辦法制訂準則」及「專任教師每週授課時數計算標準及超授鐘點費核支準則」，訂立本要點。

依據校方母法訂定本院新進教師核減鐘點之實施要點。

二、 本要點所謂新進教師，係指到校服務三年內之專任教師。

新進教師的定義

三、 本院新進教師得減免授課時數之條件與內容如下：

新進教師申請減免授課時數之條件與內容，並將母法可減一併帶入。

(一) 該學期擔任導師或研究生論文指導者，各計入基本授課時數二小時，總數以四小時為限。

(二) 該學期未擔任導師或研究生論文指導者，得申請減免授課時數二小時。

(三) 該學期未擔任導師且未擔任研究生論文指導者,得申請減免授課時數三小時。

(四) 其它依本校「專任教師每週授課時數計算標準及超授鐘點費核支準則」第四條規定得核減項目。

四、 教師因擔任導師、論文指導或執行研究計畫而計入，以及依本校相關規定或本要點而核減之授課時數，均不計入於超授鐘點時數內。

將母法第五條第七款一併敘明。

五、 新進教師申請減免授課時數概依教師聘期學年為單位（八月一日至隔年七月三十一日或二月一日至隔年一月三十一日），於每學期開學後一週內，檢具申請書、未來一年之研究計畫等資料，經各系所同意後彙送本院轉送校方辦理減授事宜。

新進教師申請減免的時間、應檢具之資料及送校程序。

六、 獲得減免授課時數之教師，應於當學年結束後一個月內，提出研究成果送系所評核。

說明由系核教師減時數之研究成果系所評核。

附件 6

國立臺灣大學生命科學院生命科學系系主任選任辦法
部分條文修正草案

97.10.17　97 學年度第 1 學期第 1 次系務會議通過訂定

第 一 條　國立臺灣大學生命科學院生命科學系（以下簡稱本系）為辦理系主任之遴選、續任及解聘等事宜，依據「國立臺灣大學組織規程」第十七條、暨「生命科學院生命科學系及其相關研究所業務運作要點」第六、第七點規定訂定本辦法。

第 二 條　本系系主任之遴選由遴選委員會行之。

第 三 條　(一) 遴選委員會應於現任系主任任期屆滿六個月前組成，並由現任系主任召開第一次會議。

(二) 遴選委員會由本系佔實缺講師以上教師及本系相關**研究**所各指派兩名佔實缺教師代表組成。

(三) 遴選委員會設主任委員一人，由委員互選之。

(四) 遴選委員如接受推薦為系主任候選人時，即自動退出遴選委員會。

第 四 條　遇系主任因故於任期屆滿前去職時，**由本系佔實缺之教授互推一名擔任代理主任，並於兩週內籌組系主任遴選委員會。**

第 五 條　(一) 遴選委員會由主任委員視需要召開，或由應到委員三分之一以上聯署要求召開。

(二) 遴選委員會會議由主任委員擔任主席，如主任委員未克出席，則由到場委員互選一人擔任主席。

(三) 遴選委員會需有委員三分之二以上出席始得開會，其決議需經出席委員半數以上同意始為通過。

第 六 條　本系系主任應具備下列資格：

(一) 具教育部認可之國內外學術機構教授或副教授或相當資格。

(二) 任職於生命科學相關機構或其學術領域經遴選委員認定與生命科學相關。

(三) 任期初始時未滿六十二歲。

第 七 條　本系系主任候選人產生辦法：

(一) 符合前條資格之本系及相關**研究所**佔實缺副教授以上教師，經任一位遴選委員徵求其同意後推薦者。

(二) 符合前條資格之其它人士，得依下列辦法成為本系系主任候選人。

1、經國內外生命科學院相關院校副教授以上教師三人以上連署推薦，並徵得被推薦人同意者。

2、自行推薦，經三位(含)以上遴選委員同意者。

第 八 條　遴選委員會應主動並公開徵求，接受國內外人士或團體推薦人選，公開徵求期間至少二個月，候選人達二人（含）以上時，始得進行初審程序。

第 九 條　**(一)遴選委員會應依據候選人詳細履歷及其他相關資料，進行初審。**

(二) 初審期間，如認為有其他合適人選，必要時得經委員三名以上同意，再加入為

候選人。

(三) 初審期間，本系得視需要安排各候選人與遴選委員會委員進行座談，再進行最後之票選程序。

第 十 條　(一) 遴選委員會票選程序分兩階段進行：

1、第一階段由**遴選委員**就列有所有通過初審之候選人之選票上至少圈選二位，其中得票最高之二人為第二階段圈選之候選人，進行第二階段圈選。

2、第二階段圈選，由就第一階段產生之二位候選人中圈選一人，以其中得票最高者為當選。

3、當通過初審之候選人僅有二位時，則直接進行第二階段圈選程序。

(二) 各階段投票，實際投票總人數須超過**遴選委員總人數**之三分之二始為有效。

(三) 票選程序之時程及方法等細節，由遴選委員會決定之。

第十一條　遴選委員會應於現任系主任任期屆滿兩個月前完成系主任遴選作業。本系應於遴選作業完成後一個月內，將系主任當選人報請院長轉陳校方聘兼之。

第十二條　經遴選委員會選定之系主任當選人若非本系及相關**研究**所佔實缺之教師，其員額由本院依「教師員額流通辦法」調配或向校方借用，依程序聘任為本系專任教師。

第十三條　系主任之任期依本校學年度為準，每任三年，得續任一次。依本辦法第四條**推舉**選出之代理系主任任期，至新任系主任就職為止。

第十四條　系主任之續任：

(一) 系主任任期屆滿，擬續任者（續任初始時未滿六十二歲），應於任期屆滿九個月前，向系務會議提出續任聲明，由系務會議決定續任同意案之投票時程及方式，並於系主任任期屆滿七個月前完成續任同意案票決程序。

(二) 系主任續任同意案由本系**當學期**系務會議委員行使同意權，投票總數之二分之一同意則可續任，三分之一以上但未達二分之一，則可為下任系主任候選人，未達三分之一則不得**為系主任候選人**。

(三) 系主任無意續任或未於第一項所訂期限內表示意願或未能通過續任者，依本辦法規定辦理新任系主任遴選。

第十五條　系主任之解聘：

(一) 系主任因重大事由，經本系**當學期**系務會議委員總數三分之一以上連署向本院院長提出系主任解聘案，並由院長於兩週內協助召開臨時系務會議決定解聘案之投票時程及方式。

(二) 系主任解聘案由本系**當學期**系務會議委員行使同意權，經系務會議代表總額三分之二以上同意，則解聘案成立，由院長陳報校長於任期屆滿前免除其聘兼職務。

第十六條　系主任應迴避續任同意案或解聘案之討論及表決事宜，遇系務會議討論相關案由時，應由出席系務會議委員互選一人擔任主席。

第十七條　本辦法經系務會議、院務會議通過後，自發布日實施。

附件 A

國立臺灣大學生命科學院生命科學系系主任選任辦法
部分條文修正草案

97.10.17　97 學年度第 1 學期第 1 次系務會議通過訂定

第 一 條　國立臺灣大學生命科學院生命科學系（以下簡稱本系）為辦理系主任之選任、續任及解聘等事宜，依據「國立臺灣大學組織規程」第十七條、暨「生命科學院生命科學系及其相關研究所業務運作要點」第六、第七點規定訂定本辦法。

第 二 條　本系系主任之選任由選任委員會行之。

第 三 條　(一) 選任委員會應於現任系主任任期屆滿六個月前組成，並由現任系主任召開第一次會議。

(二) 選任委員會由本系佔實缺講師以上教師及本系相關**研究**所各指派兩名佔實缺教師代表組成。

(三) 選任委員會設主任委員一人，由委員互選之。

(四) 選任委員如接受推薦為系主任候選人時，即自動退出選任委員會。

第 四 條　遇系主任因故於任期屆滿前去職時，**由本系佔實缺之教授互推一名擔任代理主任，並於兩週內籌組系主任選任委員會。**

第 五 條　(一) 選任委員會由主任委員視需要召開，或由應到委員三分之一以上聯署要求召開。

(二) 選任委員會會議由主任委員擔任主席，如主任委員未克出席，則由到場委員互選一人擔任主席。

(三) 選任委員會需有委員三分之二以上出席始得開會，其決議需經出席委員半數以上同意始為通過。

第 六 條　本系系主任應具備下列資格：

(一) 具教育部認可之國內外學術機構教授或副教授或相當資格。

(二) 任職於生命科學相關機構或其學術領域經選任委員認定與生命科學相關。

(三) 任期初始時未滿六十二歲。

第 七 條　本系系主任候選人產生辦法：

(一) 符合前條資格之本系及相關**研究所**佔實缺副教授以上教師，經任一位選任委員徵求其同意後推薦者。

(二) 符合前條資格之其它人士，得依下列辦法成為本系系主任候選人。

1、經國內外生命科學院相關院校副教授以上教師三人以上連署推薦，並徵得被推薦人同意者。

2、自行推薦，經三位(含)以上選任委員同意者。

第 八 條　選任委員會應主動並公開徵求，接受國內外人士或團體推薦人選，公開徵求期間至少二個月，候選人達二人（含）以上時，始得進行初審程序。

第 九 條　**(一)選任委員會應依據候選人詳細履歷及其他相關資料，進行初審。**

(二) 初審期間，如認為有其他合適人選，必要時得經委員三名以上同意，再加入為

候選人。

(三) 初審期間，本系得視需要安排各候選人與選任委員會委員進行座談，再進行最後之票選程序。

第 十 條　(一) 選任委員會票選程序分兩階段進行：

1、第一階段由**選任委員**就列有所有通過初審之候選人之選票上至少圈選二位，其中得票最高之二人為第二階段圈選之候選人，進行第二階段圈選。

2、第二階段圈選，由就第一階段產生之二位候選人中圈選一人，以其中得票最高者為當選。

3、當通過初審之候選人僅有二位時，則直接進行第二階段圈選程序。

(二) 各階段投票，實際投票總人數須超過**選任委員總人數**之三分之二始為有效。

(三) 票選程序之時程及方法等細節，由選任委員會決定之。

第十一條　選任委員會應於現任系主任任期屆滿兩個月前完成系主任選任作業。本系應於選任作業完成後一個月內，將系主任當選人報請院長轉陳校方聘兼之。

第十二條　經選任委員會選定之系主任當選人若非本系及相關**研究**所佔實缺之教師，其員額由本院依「教師員額流通辦法」調配或向校方借用，依程序聘任為本系專任教師。

第十三條　系主任之任期依本校學年度為準，每任三年，得續任一次。依本辦法第四條**推舉**選出之代理系主任任期，至新任系主任就職為止。

第十四條　系主任之續任：

(一) 系主任任期屆滿，擬續任者（續任初始時未滿六十二歲），應於任期屆滿九個月前，向系務會議提出續任聲明，由系務會議決定續任同意案之投票時程及方式，並於系主任任期屆滿七個月前完成續任同意案票決程序。

(二) 系主任續任同意案由本系**當學期**系務會議委員行使同意權，投票總數之二分之一同意則可續任，三分之一以上但未達二分之一，則可為下任系主任候選人，未達三分之一則不得**為系主任候選人**。

(三) 系主任無意續任或未於第一項所訂期限內表示意願或未能通過續任者，依本辦法規定辦理新任系主任選任。

第十五條　系主任之解聘：

(一) 系主任因重大事由，經本系**當學期**系務會議委員總數三分之一以上連署向本院院長提出系主任解聘案，並由院長於兩週內協助召開臨時系務會議決定解聘案之投票時程及方式。

(二) 系主任解聘案由本系**當學期**系務會議委員行使同意權，經系務會議代表總額三分之二以上同意，則解聘案成立，由院長陳報校長於任期屆滿前免除其聘兼職務。

第十六條　系主任應迴避續任同意案或解聘案之討論及表決事宜，遇系務會議討論相關案由時，應由出席系務會議委員互選一人擔任主席。

第十七條　本辦法經系務會議、院務會議通過後，自發布日實施。

國立臺灣大學生命科學院生命科學系課程委員會組織辦法
部分條文修正對照表

94.02.18 本系九十三學年度第四次系務會議通過訂定

94.05.20 93 學年度第二學期第二次教務會議通過訂定

97.10.17 97 學年度第一學期第一次系務會議通過訂定

	修正條文	原條文	說明
第一條	國立臺灣大學生命科學院生命科學系（以下簡稱本系）為辦理必修課程之訂定及其它與課程或教學等相關事宜，特依據本校八十二學年度第二學期第一次教務會議修正通過之「國立臺灣大學必修科目處理要點」第三條及第五條制定本辦法，組織「生命科學系經常性課程委員會」(以下簡稱系課委會）及「生命科學系一系五所(註)聯合課程委員會」(以下簡稱一系五所課委會)。		(未修正)
第二條	**「系課委會」設委員三至五人，包括教師及學生委員。教師委員由本系系務會議就本系佔實缺之教師中遴選或推舉之，並指定一名委員為主任委員，協助經常性事務；學生委員一人，由本系學生會推派之。** 「系課委會」委員任期一年，連選得連任。 「系課委會」每學期至少應召開會議一次，必要時得由主任委員或二位以上（含）委員聯署召開臨時會議。 「系課委會」由主任委員擔任會議主席，必要時得邀請相關教師及學生列席。 「系課委會」須有三分之二以上（含）委員出席方可開會，出席委員二分之一以上同意，方可決議。	「系課委會」設委員三至五人，於本系系務會議由本系佔實缺之教師中遴選或推舉組成之，並指定一名委員為主任委員，協助經常性事務。 「系課委會」委員任期一年，連選得連任。 「系課委會」每學期至少應召開會議一次，必要時得由主任委員或二位以上（含）委員聯署召開臨時會議。 「系課委會」由主任委員擔任會議主席，必要時得邀請相關教師及學生列席。 「系課委會」須有三分之二以上(含)委員出席方可開會，出席委員二分之一以上同意，方可決議。	增加一位學生委員
第三條	**「一系五所課委會」包括教師及學生委員。教師委員由一系五所主管、本系「系課委會」主任委員及一系五所另各指派一名代表教師共十三人組成之；學生委員若干名，由一系五所各學生會自行決定是否推派，各單位至多推派一名。** **「一系五所課委會」由本系系主任擔任召集人並為會議主席，必要時得邀**	「一系五所課委會」由一系五所主管、本系「系課委會」主任委員及一系五所另各指派一名代表教師共十三人組成之，由本系系主任擔任召集人並為會議主席，必要時得邀請相關教師及學生列席。	增加學生委員若干名

	請相關教師及學生列席。 「一系五所課委會」每學年至少應召開會議一次，必要時得由召集人或三位以上（含）委員聯署召開臨時會議。 「一系五所課委會」須有三分之二以上（含）委員出席方可開會，出席委員二分之一以上同意，方可決議。	「一系五所課委會」每學年至少應召開會議一次，必要時得由召集人或三位以上（含）委員聯署召開臨時會議。 「一系五所課委會」須有三分之二以上（含）委員出席方可開會，出席委員二分之一以上同意，方可決議。	
第四條	「系課委會」職掌如下： （一）本系必、選修課程之開設事宜。 （二）本系新開課程之審查及建議。 （三）本系學生課程抵免與替代等申請案之審核。 （四）其他有關本系課程或教學等事宜。		(未修正)
第五條	「一系五所課委會」職掌如下： （一）本系必修規定之規劃與建議（建議案彙送本系系務會議討論）。 （二）本系必修課程之規劃與協調等事宜。 （三）本系開設之全校性教學課程（包括教育學程）之規劃與協調。 （四）一系五所「研究生共同修業規定暨助學金發放共同準則」之修訂及相關事務之協調。		(未修正)
第六條	本辦法未盡事宜，悉依本校相關規定辦理。		(未修正)
第七條	本辦法經本系系務會議通過，並提報本院院務會議及本校教務會議備查後，**自發布日施行。**	本辦法經本系系務會議通過，並提報本院院務會議及本校教務會議備查後**實施**。	依校方統一規定修正。

註：「一系五所」為本校生命科學院之生命科學系、動物學研究所、植物科學研究所、分子與細胞生物學研究所、生態學與演化生物學研究所及漁業科學研究所。

國立臺灣大學生命科學院生命科學系課程委員會組織辦法修正草案

94.02.18 本系九十三學年度第四次系務會議通過訂定

94.05.20 93 學年度第二學期第二次教務會議通過訂定

97.10.17 97 學年度第一學期第一次系務會議通過訂定

第一條 國立臺灣大學生命科學院生命科學系（以下簡稱本系）為辦理必修課程之訂定及其它與課程或教學等相關事宜，特依據本校八十二學年度第二學期第一次教務會議修正通過之「國立臺灣大學必修科目處理要點」第三條及第五條制定本辦法，組織「生命科學系經常性課程委員會」(以下簡稱系課委會）及「生命科學系一系五所[註]聯合課程委員會」(以下簡稱一系五所課委會)。

第二條 **「系課委會」設委員三至五人，包括教師及學生委員。教師委員由本系系務會議就本系佔實缺之教師中遴選或推舉之，並指定一名委員為主任委員，協助經常性事務；學生委員一人，由本系學生會推派之。**

「系課委會」委員任期一年，連選得連任。

「系課委會」每學期至少應召開會議一次，必要時得由主任委員或二位以上(含)委員聯署召開臨時會議。

「系課委會」由主任委員擔任會議主席，必要時得邀請相關教師及學生列席。

「系課委會」須有三分之二以上（含）委員出席方可開會，出席委員二分之一以上同意，方可決議。

第三條 **「一系五所課委會」包括教師及學生委員。教師委員由一系五所主管、本系「系課委會」主任委員及一系五所另各指派一名代表教師共十三人組成之；學生委員若干名，由一系五所各學生會自行決定是否推派，各單位至多推派一名。**

「一系五所課委會」由本系系主任擔任召集人並為會議主席，必要時得邀請相關教師及學生列席。

「一系五所課委會」每學年至少應召開會議一次，必要時得由召集人或三位以上（含）委員聯署召開臨時會議。

「一系五所課委會」須有三分之二以上（含）委員出席方可開會，出席委員二分之一以上同意，方可決議。

第四條 「系課委會」職掌如下：

（一）本系必、選修課程之開設事宜。

（二）本系新開課程之審查及建議。

（三）本系學生課程抵免與替代等申請案之審核。

（四）其他有關本系課程或教學等事宜。

第五條 「一系五所課委會」職掌如下：

（一）本系必修規定之規劃與建議（建議案彙送本系系務會議討論)。

（二）本系必修課程之規劃與協調等事宜。

（三）本系開設之全校性教學課程（包括教育學程）之規劃與協調。

（四）一系五所「研究生共同修業規定暨助學金發放共同準則」之修訂及相關事務之協調。

第六條 本辦法未盡事宜，悉依本校相關規定辦理。

第七條 本辦法經本系系務會議通過，並提報本院院務會議及本校教務會議備查後，**自發布日施行。**

註：「一系五所」為本校生命科學院之生命科學系、動物學研究所、植物科學研究所、分子與細胞生物學研究所、生態學與演化生物學研究所及漁業科學研究所。

98 學年度臺灣大學申請增設、調整特殊項目院系所學位學程計畫書格式

第一部份、摘要表

*本表為計畫書首頁，務請詳實填列

<table>
<tr><td colspan="8">國立臺灣大學 98 學年度申請增設院系所學位學程計畫書</td></tr>
<tr><td>申請類別</td><td colspan="3">□新增　　■調整</td><td>班別</td><td colspan="3">■學士班■碩士班■博士班</td></tr>
<tr><td>申請案名</td><td colspan="7">中文名稱：生化科技學系(學士班、碩士班與博士班)
(微生物與生化學研究所與生化科技學系合併案)
英文名稱：Department of Biochemical Science and Technology</td></tr>
<tr><td>授予學位名稱</td><td colspan="7">生命科學碩士、生命科學博士學位</td></tr>
<tr><td rowspan="5">所屬院系所或校內現有相關學門之系所學位學程</td><td></td><td>名稱</td><td>設立學年度</td><td colspan="4">現有學生數</td></tr>
<tr><td></td><td></td><td></td><td>大學</td><td>碩士</td><td>博士</td><td>小計</td></tr>
<tr><td>學系</td><td>生命科學系</td><td>92</td><td>382</td><td>0</td><td>0</td><td>382</td></tr>
<tr><td>學系</td><td>生化科技學系</td><td>92</td><td>224</td><td>0</td><td>0</td><td>224</td></tr>
<tr><td>研究所</td><td>生化科學研究所</td><td>92</td><td>0</td><td>67</td><td>92</td><td>159</td></tr>
<tr><td>研究所</td><td>微生物與生化學研究所</td><td>92</td><td>0</td><td>103</td><td>55</td><td>158</td></tr>
<tr><td>國內設有本學系博(碩)士班相關系所學位學程學校</td><td colspan="7">國內以『生化科技學系』為名的僅有本系與國立嘉義大學生化科技學系暨研究所。該所原名為分子與生物化學系暨生物科技研究所，於 96 學年更名生化科技學系學士班碩士班後招生。</td></tr>
<tr><td>師資</td><td colspan="7">1.現有專任師資：29 員(其中副教授資格以上者 23 員，具助理教授資格者：6 員。)
2.生師比：
（1）全校生師比為 17.99，全校日間生師比為 17.16，全校研究生生師比為：8.46。
（2）全系/所當量生師比（全系/所加權學生數除以專任教師數）為：15.54。</td></tr>
<tr><td>專業圖書</td><td colspan="7">1.中文圖書 252 冊；外文圖書：5872 冊
2.中文期刊:24 種，外文期刊：391 種
3.擬增期刊 3 種</td></tr>
<tr><td>招生管道</td><td colspan="7">學士班推甄申請入學、指考分發入學；碩士班甄試，碩士班一般招生入學；博士班一班招生入學。</td></tr>
<tr><td>擬招生名額</td><td colspan="7">學士班 52 名；碩士班 54 名，博士班 10 名。</td></tr>
<tr><td rowspan="3">填表人資料(請務必填列)</td><td>服務單位及職稱</td><td colspan="2"></td><td>姓名</td><td colspan="2"></td></tr>
<tr><td>電話</td><td colspan="2"></td><td>傳真</td><td colspan="2"></td></tr>
<tr><td>Email</td><td colspan="5"></td></tr>
</table>

＊本計畫書需逐案填報，每案列印 1 式 7 份

壹、申請調整之理由

一、生化科技產業為二十一世紀國家經濟建設與發展的重點：

過去數十年來，台灣在經濟發展的成就有目共睹。然而，近年來由於國內經營環境的成本大幅提高，競爭力下降，使得所謂『傳統產業』的獲利能力大幅縮減，而有逐漸萎縮的趨勢。衡諸台灣的經濟發展條件，由於土地與天然資源有限，發展『低污染』與『高附加價值』的高科技產品成為台灣經濟發展的不二選擇。例如，在發展台灣成『科技島』的目標下，電子產業於過去數十年來之蓬勃發展，已成為目前台灣獨樹一幟之明星產業。而生技產業，政府在二十年前即將之列為國家經濟發展的重點，並規劃諸多輔導措施，期望此等以知識經濟、智慧財產掛帥之高科技產業，也能成為二十一世紀的明星產業之一，延續台灣經濟高度發展的命脈。

二、生化科技產業高級專業人才的培育為國家建設與經濟發展的基礎：

高科技電子產業發展成功之重要因素很多，例如：確實掌握投資時機、優良的研發動能及高效率的經營管理等。然究其最關鍵性的基礎環節，乃是過去數十年來國內各大專院校，培育了大量優秀的各階層人才，投入研發設計、生產製造、行銷推廣…等各環節。在生技產業方面，政府雖推動多年，至今仍未有顯著發展，國內生技產業仍欠缺競爭力。雖然生技產業性質與電子產業不同，電子產業的成功經驗無法完全應用於生技產業，但「人才」仍為兩種產業未來發展共同的關鍵因素。具研發能力之高層級生化科技專業人才的不足，實為發展國內生技產業最大之限制因素。

三、生化科技學系、微生物與生化學研究所之設立

有鑑於生技產業對國家經濟發展的重要性,教育部自民國 84 年起也積極在各大學推展生物技術科技教育改進方案，鼓勵各校設置相關課程及學程，重視生技人才的培育。十餘年來，在生物技術相關之基礎教育已具成效，但生技專業人才的培育，仍只侷限在部分大學中的少數研究所。各大學院校大學部，專門以培育高層級生化科技與生技產業人才之科系極為有限。加速此領域的人才培育，乃刻不容緩。因此，本校於規劃設立生命科學院時，積極整合原理學院生化科學研究所及原農學院農業化學系，調整為一系二所之架構，即生化科技學系、生化科學研究所及微生物與生化學研究所。

四、簡化行政單位之需求:

生命科學院於 2003 年 8 月成立至今，生化科技學系及微生物與生化學研究所在招生、教學與研究發展大致順利。唯原訂之一系二所架構並未完全發揮原先設計之功能。微生物與生化學研究所及生化科技學系之教師乃於兩單位各佔 1/2 員額，換言之，此二單位之佔缺教師乃完全相同。而生化科學研究所因其於本校支薪之教師員額過少，無法將缺額移入生化科技學系。生化科學研究所對生化科技學系之參與，乃限於少數幾位教師，協助生化科技學系開授課程。最近，生命科學院內已有共識，生化科學研究所不再參與一系二所之架構。

生化科技學系及微生物與生化學研究所依校方規定，於 2007 年 4 月進行評鑑。評鑑委員之報告(見附錄一)，對此二單位均建議進行系所合一，成為生化科技學系學士班、碩士班及博士班，以簡化行政程序，提高效率。讓生化科技人材養成由學士、碩士至博士，得以連貫。目前兩單位合併之師資員額數，符合校方系所合一教學研究單位之規定。

五、.新名稱之訂定

調整後之系名訂為**生化科技學系學士班、碩士班及博士班**。如前所述，調整後學系之教學目標為培育生化科技基礎研究及產業發展所需人才。調整後學系之教學包含了結構生物學、生物工業化學、生物化學與生化科技、營養科學以及微生物學等範疇。因此，以**生化科技**為新系名不但包含了培育生技產業與生化科技人才之教學目標，更充分說明本系領域之多樣性。

貳、發展方向與重點

本系將以訓練培育基礎生化科學研究及生化科技產品研發人才為主要發展目標。生技產業之發展需結合上游的基礎研究、中游的可利用性評估研究及下游的生產條件與產程設計開發研究。本系除以深厚化學知識技術背景為基礎，亦加入最新生化科學研究方法與概念及基本遺傳工程技術的薰陶，配合生化、生物工業、微生物與營養等領域，期望培育出之人才可於下列生技產業之各環節有所發揮，以為國家生技產業發展之中堅。

一、功能性基因體、生化代謝途徑與基因調節以及基礎微生物分子生物學等研究人才之培育：

清楚了解生物與人體細胞的結構、功能與調節，尤其是分子層次的闡明，乃生技產業所以能夠有效應用的最重要基礎。在人類基因體 30 億個鹼基、大腸菌、水稻甚至小鼠基因體已分別陸續被定序之後，解碼工作，亦即所謂"功能性基因體"研究將成為未來最重要的基礎研究工作。結構生物學與蛋白質體學乃此等"功能性基因體"研究階段最重要的專門性工具。目前，此方面人才極為短缺，故列入本系人才培養的重要目標。此外，以分子生物學、生化學配合分子生物學等工具探討人體、動植物體、微生物等之細胞生化代謝功能與調節，亦為本系基礎研究人才培育的目標。期望所培育的人才將來可以投入生物醫學、生物農學、分子生物學、生物化學等相關領域的之分子層次、細胞層次乃至整體生理層次研究。成為我國生技產業上游基礎研究之中堅。

二、以微生物或高等生物細胞為生產工具之生技產業人才培育

以微生物或動植物細胞培養為生技產業產品生產最經濟、易於控制，故也是最普遍、常見之生產型式與工具。單細胞大量培養以及產品之純化回收等，原本即為農化系農產製造組之發展特點與目標，其於新系生技產業下游研究之人才培育方面，更顯示出其獨特價值。

三、生化科技產品可利用性評估人才之培育

生技產業發展的中游研究係將基礎研究之成果，進行應用方面的可利用性初步評估。基礎研究結果所鑑定出之調節機制與調節分子可否供實際應用？需進行生技產業研發中游之可行性、可利用性評估。應用性評估，基本上可採用試管（體外）化學反應系統、微生物系統、培養細胞或組織系統、實驗動物系統等。本系亦將進行可利用性基礎評估能力，列為培育人才之基本專長之一。

四、生化科技產品生產條件建立(與產程設計)人才之培育

生技產業研發之下游研究，也就是生產方法與生產條件之確立以及製程設計，產物之純化回收，產品之品管與監控等。此為設廠量產之關鍵技術。對生化科技產業之發展具有

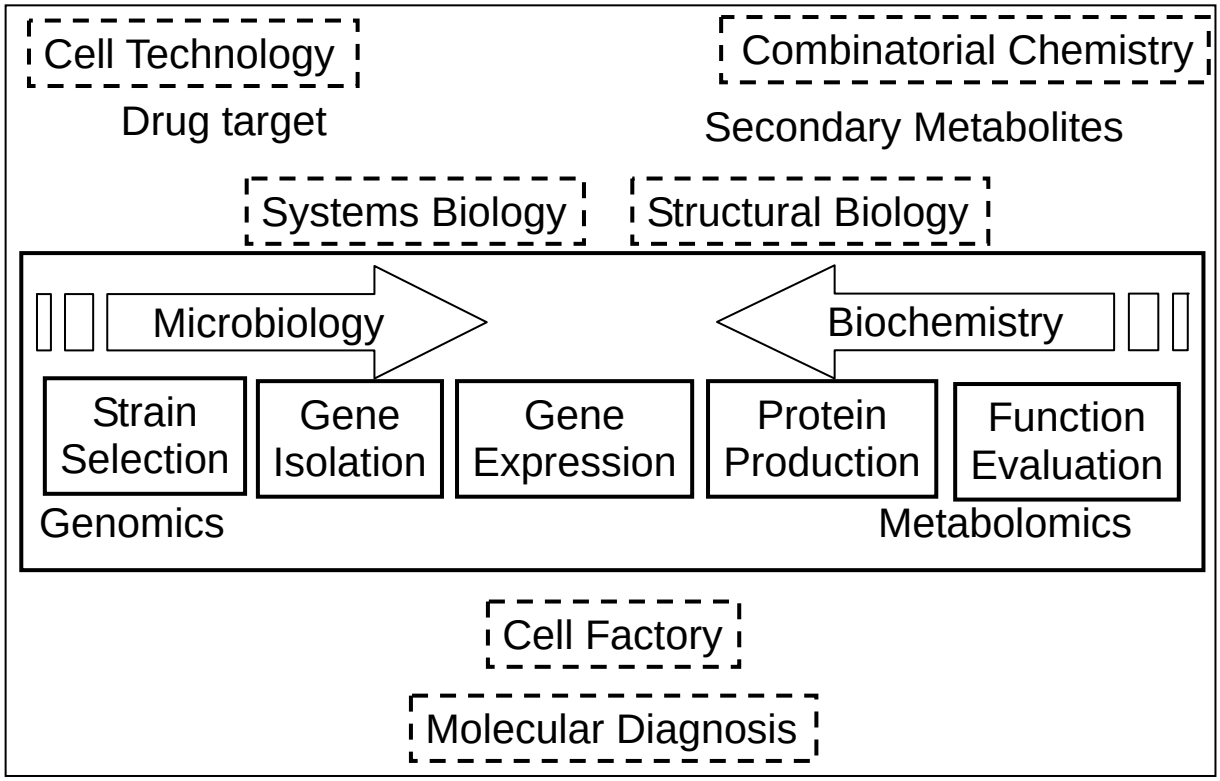
不可忽視的重要性。未來生化科技系之人才培育亦將延續此點，並注入最新的科學知識與技術。

基於上述之目標下，本系之教學發展方向與重點乃包含：

(一) 功能性基因探討研究人才之培育: 未來生化科技之發展重點在蛋白質體、結構生物學，並配合分子生物學、生化學、酵素學等方法，闡明動、植物、人體或微生物之基因功能與分子調節基制。因此，本系以培養未來此方面之研發人才為第一目標。

(二) 生化科技產品研發人才之培育，特別是對於下列生化科技產品具有研發能力之人才， 以微生物或細胞為工具生產高附加價值產品，尤其是酵素或其他具特定功能的蛋白質（如 peptide、荷爾蒙、生長因子或抗體等），以及如特殊醣類、胺基酸、脂肪酸、香氣成份與其他具特殊功能或生產價值之代謝產物分子。其可供為高價值醫藥衛生相關用品、保健用品、保健食品、工業產品、環保及除污染產品等。

整體發展架構如下圖所示:



參、本系(所)之課程規劃

本系之教學目標為：(1)培育生化科學研究人才，使學生具有堅實的生物與化學基礎知識技術，以進一步投入學術研究。(2)培育生化科技產業發展人才，使學生具有生技產品開發與生產之應用技術，以為生技產業研究發展之基礎。由以上教學目標可知，本系在研究與人才培育上基礎與應用並重，以培育兼具研究與開發創新能力之生化科技高級人才為主要目標，以因應國內外在生化科技產業發展所需。

本系非常注重化學背景的加強及實驗操作的訓練，以各種生物體為研究對象，加

上『生物化學』的統整，配合系所教育目標與特色，訂定『以生物為研究系統』、『以化學為實驗工具』的發展方向。除基礎必修科目以外，另有四大領域之必修課，包括：微生物科技、生物化學、結構生物學及綜合領域等融合『生物』與『化學』，以建立堅實的『生化科技』背景。完全配合培育兼具研究與開發創新能力之生化科技高級人才為教育目標與特色。

詳細課程規劃內容如下表：

大學部

1. 固定必修課程：

課程名稱	學分數	修課年級	授課教師	開課系所
國文領域	3, 3	一	中文系教師	中文系
英文領域或外文領域	3, 3		外文系教師	外文系
微積分乙	3, 3		數學系教師	數學系
普通化學丙	3, 0		化學系教師	化學系
普通化學實驗	1, 0		化學系教師	化學系
普通物理學乙	3, 3		物理系教師	物理系
普通物理學實驗	1, 1		物理系教師	物理系
普通生物學	2, 2		生科系教師	生科系
普通生物學實驗	1, 1		生科系教師	生科系
有機化學	0, 3		化學系教師	化學系
有機化學實驗	0, 1		化學系教師	化學系
生化科技概論	1,0		本系教師	本系
分析化學乙	2, 2	二	化學系所教師	化學系
分析化學實驗乙	1, 1		化學系所教師	化學系
生物化學上	4, 0		生化組教師	本系
生物化學下	0, 4		生化組教師	本系
生物化學實驗	2, 0		生化組教師	本系
生物物理化學	2, 2		化學系所教師	本系
微生物學	2, 2		微生物學組教師	本系
微生物學實驗	1, 0		微生物學組教師	本系
分子生物學	4, 0	三	本系、生科系教師	本系、生科系
生物技術核心實驗	0, 4		本系教師	生技中心
專題討論	0, 1		本系教師	本系
專題討論	1, 0	四	本系教師	本系

2.領域必修：下列四大領域每一領域至少選修一門 (至少共修 8 學分) ：

(1)微生物科技領域	課程名稱	學分數	修課年級	(2)生物化學領域	課程名稱	學分數	修課年級
	應用微生物學	2	三、四		植物之二級代謝	2	三、四
	應用微生物學實驗	1			生物分子動力學	2	
	微生物遺傳學	2			營養生化學與實驗	2+1	
	微生物代謝	2			荷爾蒙與調節物質	2	
	免疫學	2			臨床生化學	2	
	病毒學	2					

(3)結構生物學領域	課程名稱	學分數	修課年級	(4)綜合領域	課程名稱	學分數	修課年級
	分子生物物理	2	三、四		生物統計學	3	三、四
	蛋白體學	2			遺傳學	3	
	蛋白質結構與功能	2			生物有機化學	2	
	生物資訊	2			生物材料分析	2	
	結構生物學概論	2			生物材料分析實驗	2	
					細胞生物學	3	

3. 建議選修課程：

課程名稱	學分數	開課系所
醱酵學	2	生化科技學系
專題研究 一、二	2、2	生化科技學系
生物技術概論 一	2	生化科技學系
微生物之生物技術檢驗法	2	微生物與生化學研究所
工業微生物育種	2	微生物與生化學研究所
基因改造食品	2	微生物與生化學研究所
機能性食品	2	微生物與生化學研究所
植物細胞培養與工業應用	2	微生物與生化學研究所
經濟真菌學	2	微生物與生化學研究所
結構生物學概論	2	微生物與生化學研究所
營養基因體學	2	微生物與生化學研究所
生物膜之基礎與應用	2	微生物與生化學研究所

<u>碩士班</u>

必修課程			
課程名稱	學分數	授課年級	任課教師

碩士論文	6	2	全體教師
專題討論	1	1、2	全體教師
生化科技實驗法一	1	1	全體教師
生化科技實驗法二	1	1	全體教師
下列課程中必選十學分(多修者可計入選修學分)			
課程名稱	學分數	授課年級	任課教師
微生物生理學	2	1	黃健雄、劉俊民、李昆達、陳俊任
工業微生物學	2	1	黃健雄、劉俊民、李昆達、陳俊任
微生物之生物技術檢驗法	2	1	潘子明
工業微生物育種	2	1	劉俊民
基因改造食品	2	1	潘子明
機能性食品	2	1	潘子明
植物細胞培養與工業應用	2	1	李昆達
分子病毒學	2	1	吳金洌、陳俊任
病毒學	2	1	張麗冠、陳俊任
酵素純化與分析實驗	3	1	張世宗
蛋白質結構與功能	2	1	生化所教師
酵素純化與分析	1	1	張世宗
內分泌與代謝	2	1	醫學院教師
流行病學設計與資料分析	2	1	醫學院教師
酵素化學	2	1	楊健志
營養流行病學	2	1	潘文涵
營養與免疫	2	1	林璧鳳
礦物質營養學	2	1	蕭寧馨
維生素營養學	2	1	黃青真、林璧鳳
生物分子動力學	2	1	楊健志
荷爾蒙與調節物質	2	1	黃青真
營養基因體學	2	1	蕭寧馨
蛋白質體學	1	1	生技中心教師
生化探索	1、2	4	李平篤、莊榮輝、王愛玉、楊健志、張世宗
植物分子生物學	3	1	生技中心教師
酵素化學	2	1	楊健志

植物之醣代謝與基因調控	1	1	王愛玉
生物分子動力學	2	1	楊健志
植物之二級代謝	2	1	李平篤
分子生物學	4	1	王愛玉、張麗冠、丁照棣
分子遺傳學	4	1	生技中心教師
植物細胞與組織培養	2	1	生技中心教師
植物細胞與組織培養實驗	2	1	生技中心教師
微生物醱酵生產技術(預)	1	1	微生學組教師
高等真菌細胞核行為研究(預)	1	1	許瑞祥
螢光技術在微生物研究之應(預)	1	1	黃慶璨
蛋白質養晶概論與實作	1	1	楊啟伸
分子微生物學研究法	1	1	張麗冠
生醫光電特論	1	1	陳進庭
結構生物學概論	2	1	楊啟伸
生物膜之基礎與應用	2	1	黃慶璨
免疫學	2	1	陳進庭
微生物代謝	2	1	黃慶璨
細胞生長與死亡	2	1	陳進庭
基因體學實驗	2	1	生技中心教師
蛋白質體學實驗	1	1	生技中心教師
基因體學	2	1	生技中心教師
其他建議選修課程			
課程名稱	學分數	授課年級	任課教師
專題研究	2	1	全體教師
生化科技教學實習	2	1	全體教師

博士班

必修課程							
課程名稱	學分	授課年級	任課教師	課程名稱	學分	授課年級	任課教師
博士論文	12		全體教師	專題討論	1	1、2	全體教師
選修課程							
請參考碩士班必選十學分課程及其他選修課程							

肆、師資現況及擬聘師資規劃：

一、原有系、所專任師資 29 員，其中副教授以上者 23 員，具助理教授者 6 員；兼任師資 0 員。

二、現有專任師資名冊

職稱	姓名	最高學歷	專　長	開課名稱	備　　註
教授	潘子明	國立臺灣大學應用微生物學博士	生物技術、微生物學、醱酵化學、環境化學、食品化學	食品化學、生物材料分析、生物資源化學、微生物之生物技術檢驗法、專題討論、專題研究、生物工業科技研究法、生物科技研究法、微生物學與免疫學、食品生物技術、機能性食品、基因改造食品、生化科技概論	原生技系與微生所各占缺1/2
教授	楊盛行	國立臺灣大學微生物學博士	環境微生物學、微生物科技、農業生物技術…..	微生物學、微生物代謝化學、微生物與生化學實驗法、微生物生化工程學、環境微生物學、專題研究	原生技系與微生所各占缺1/2
教授	李平篤	國立臺灣大學生物化學博士	生物生化科技、植物二次代謝、酵素化學	生物化學、植物之二級代謝、植物生化、普通分子生物學、生化科技概論	原生技系與微生所各占缺1/2
教授	莊榮輝	國立臺灣大學生物化學博士	蛋白質生化學、酵素學、 免疫化學	生物化學、蛋白質體學實驗 (nbsc)；細胞、分子與生命(通識課程)；細胞、分子與人類(通識課程)、免疫學技術 - 抗體工具、生化探索 (BioX)、科學之路、酵素化學實驗、生物科學通論(電機系) 、酵素純化與分析(實驗)、生物化學實驗、生物技術核心實驗(BCT) 、生化科技概論	原生技系與微生所各占缺1/2
教授	黃青真	國立臺灣大學營養生化學博士	營養學、生化代謝、分子營養學	食品營養概論、營養生化學及實驗、維生素營養學、荷爾蒙與調節物質、專題研究、微生物與生化學教學實習、生化科技概論	原生技系與微生所各占缺1/2
教授	黃健雄	國立臺灣大學應用微生物學博士	應用微生物、生物技術、食品科技	應用微生物學、微生物生理學、工業微生物學、發酵學	原生技系與微生所各占缺1/2
教授	蕭寧馨	美國康乃爾大學食品科技博士	營養學、食品科技	食品營養與安全概論、食品營養學、營養生化學與實驗、礦物質營養學、營養基因體學、動物細胞實驗法、工程發展與社會變遷、專題討論、專題研究、微生物與生化學教學實習、生化科技概論	原生技系與微生所各占缺1/2
教授	陳建源	國立臺灣大學應用微生物學博士	生物感測技術、醱酵工程、動植物細胞工程技術	普通微生物學、微生物生化工程學、生物感測技術	原生技系與微生所各占缺1/2

教授	林璧鳳	美國柏克萊加州大學營養科學博士	營養化學、營養免疫學、細胞培養	食品營養概論、食品營養學、營養生化學與實驗、營養與免疫、專題討論、專題研究、微生物與生化學教學實習、生化科技概論	原生技系與微生所各占缺1/2
教授	許瑞祥	國立臺灣大學微生物學博士	靈芝・冬蟲夏草・巴西洋菇、真菌鑑定開發、嫌氣性真菌鑑定	微生物學、經濟真菌學、微生物生化工程學、經濟真菌育種技術、生化科技概論	原生技系與微生所各占缺1/2
教授	王愛玉	國立臺灣大學生物化學博士	植物生化與分子生物	分子生物學、生物化學 甲、生物化學實驗、生物技術核心實驗(BCT) 、植物生化、植物醣代謝與基因調控、專題研究、專題討論、生化科技概論	原生技系與微生所各占缺1/2
教授	黃慶璨	美國杜克大學生化工程學博士	微生物學、生化工程、分子生物學	微生物學、微生物代謝、生物膜之基礎與應用、生化科技概論	原生技系與微生所各占缺1/2
副教授	劉俊民	日本東京大學應用微生物學博士	農化·環保及土壤、生物技術、食品科技	生物技術概論、應用微生物學、微生物之固氮與固氮菌之利用、應用微生物學實驗、工業微生物育種概論、工業微生物學、微生物遺傳學、微生物與生化學實驗法、生物科技研究法、微生物與環境復育 (下學期) 、生物工業科技研究法、生化科技概論	原生技系與微生所各占缺1/2
副教授	李昆達	日本東京大學應用生命工學博士	植物二次代謝物與植物細胞培養、應用微生物學、醫用酵素工業純化	植物細胞培養與工業應用、應用微生物學、應用微生物學實驗、醱酵學、生化科技概論	原生技系與微生所各占缺1/2
助理教授	楊健志	英國劍橋大學生物化學博士	生物化學、蛋白質化學	生物化學甲、生物化學實驗、酵素化學、生物技術核心實驗 (BCT)、專題研究、專題討論、生化科技概論	原生技系與微生所各占缺1/2
助理教授	楊啟伸	美國伊利諾大學生理暨生物物理學博士	結構生物學、生理學、生物物理學	生物化學甲、生物化學實驗、微生物與生化學實驗法一、專題討論、專題研究、生化科技概論	原生技系與微生所各占缺1/2
助理教授	陳俊任	美國德州大學奧斯汀分校微生物學博士	免疫學、病毒學學、應用微生物學	病毒學、分子病毒學、應用微生物學、應用微生物學實驗、生物技術概論、微生物與生化學實驗法、專題研究、專題討論、生化科技概論	原生技系與微生所各占缺1/2
助理教授	張世宗	國立臺灣大學生物化學博士	細胞生物學、分子生物學、生物化學	酵素純化與分析及實驗、生物化學、胺基酸及核酸之生合成及代謝、生物化學實驗、微生物與生化學實驗法、動物細胞培養與基因轉染、專題研究、專題討論、 生物技術核心實驗(BCT)、蛋白質部分、生物技術概論、生化科技概論、生化探索/進階生化探索、生化科技概論	原生技系與微生所各占缺1/2
助理教授	張麗冠	長庚大學基礎醫學博士	分子病毒學、微生物學、分子生物學	病毒學、微生物學、微生物學實驗、微生物與生化學教學實習、分子微生物學研究法、微生物與生化學實驗	原生技系與微生所各占缺

				法、分子生物學、專題研究、專題討論、生化科技概論	1/2
教授	李敏雄	美國 Rutgers 大學食品科學博士	食品科技、微生物利用與油脂化學		與農化系合聘
教授	賴喜美	伊利諾大學食品營養所博士	穀類化學、穀物加工學、碳水化合物學、食品化學		與農化系合聘
副教授	吳蕙芬	美國愛荷華大學微生物學博士	細菌生理、分子遺傳學		與農化系合聘
副教授	蘇南維	國立台灣大學食品化學博士	食品科技、儀器分析、微生物與發酵		與農化系合聘
教授	吳金洌	美國阿肯色大學博士	海洋分子生物學、分子魚類病毒學、海洋生物技術	分子病毒學、專題研究	與中研院合聘
教授	潘文涵	美國康乃爾大學博士	學生物統計、營養生化、營養流行病學、心臟血管流行病學	營養流行病學	與中研院合聘
教授	徐麗芬	國立臺灣大學生物化學博士	癌症化學預防、蛋白質工程、酵素化學	植物化學與草藥科學、蛋白質工程於生物技術學之應用、植物代謝產物體學之發展	與中研院合聘
副教授	陳進庭	美國肯塔基大學微生物免疫學博士	細胞生長與死亡調控、細胞訊息傳遞、光電生物醫學	微生物學、細胞生長與死亡、雷射新知、免疫學	與醫學院合聘
副教授	常怡雍	美國密西根州立大學生物化學博士	生化與分子生物學、植物生理學、生物技術學	蛋白質修飾	與中研院合聘
助理教授	梁國淦	國立台灣大學物理學博士	物理化學、分子光譜學、反應動力論	生物物理化學	與中研院合聘

註：各教師五年內論著請參閱附錄二。

三、現有副教授以上教師最近三年指導研究生論文情形：

教師姓名	研究生姓名	論文題目
潘子明	黃毓茹	酸逆境下本土分離腸出血性大腸桿菌 O157:H7 TWC01 之生理反應及蛋白質表現變化

	尤俊傑	奈米化紅麴菌發酵產物之安全性試驗與保健成份之血脂調節評估
	洪璽凱	紅麴山藥之發酵生產與改善粥狀動脈硬化之體內評估
	朱立涵	乳酸菌發酵之山苦瓜牛奶豆漿與枸杞牛奶豆漿預防動脈粥狀硬化之評估
	陳汶佩	開發不易形成體脂肪之紅麴保健食品
	呂建德	基因改造芥藍之安全性評估及檢定
	蔡瑞蘭	利用二甲基苯蒽誘導倉鼠口腔癌變動物模式探討紅麴對於口腔癌之影響
	吳政倫	含 γ-胺基丁酸與血管收縮素 I 轉化酶抑制劑紅麴山藥之最適化生產與降血壓功效評估
	邱秋霞	Lactobacillus plantarum NTU 102 生理特性及其在保健食品及水產養殖應用之探討
	張謙裕	樟芝菌絲體量產技術開發及相關功能性之探討
	蔡宗佑	O157:H7 型大腸桿菌之分子檢驗分型與逆境反應之研究
	李俊霖	預防高血脂與阿茲海默症之多功效紅麴保健產品開發
	楊怡真	仙人掌桿菌群之分子檢驗方法及非溶血性腸毒素表現之研究
	小計　　指導研究生 13 名	
黃健雄	侯廷鉞	利用 *Pichia pastoris* 生產 *Candida rugosa* 脂肪酶第三型
	曾瑋盈	一新分離枯草菌所產生細菌素之部份特性鑑定
	陳俊帆	細菌素生產菌之分離與鑑定及生產條件之初步探討
	郭亭君	*Pichia pastoris* 生產 *Candida rugosa* 脂肪酶第三型的純化與性質分析及其在廢報紙脫墨上之應用
	謝佩真	類胰島素生長因子及其細胞產物之生物活性測定
	李培儒	利用複合培養基與甘蔗糖蜜以 *Pichia pastoris* 搖瓶培養生產 *Candida rugosa* 脂肪酶三
	余忠佑	以全合成培養基饋料批次培養 *Pichia pastoris* 生產 *Candida rugosa* 脂肪酶三

	小計　　指導研究生 7 名	
吳金洌	林文政	導致脂肪肝之斑馬魚第一型固醇調控序列結合蛋白基因被 SREBP1, C/EBP ，C/EBP ，以及肝毒素 thioacetamide 活化
	廖嘉瑄	轉基因斑馬魚肌肉專一性表現 *Progranulin* 基因導致肌肉肥大之分子機制研究
	小計　　指導研究生 2 名	
劉俊民	傅超群	嗜水性產氣單胞桿菌 *Aeromonas hydrophila* 質體 pAH163、pAH35 之性質分析
	葉素惠	抗胡瓜嵌紋病毒基因轉殖番茄之食品安全分析
	小計　　指導研究生 2 名	
李昆達	蔣佩穎	以菸草毛狀根表現綠色螢光蛋白質
	郭冠黎	茶菁經小綠葉蟬叮咬前後蛋白質體學及香氣成份變化之研究
	吳俊諺	利用 QCPCR 進行基因改造玉米樣品檢測追蹤
	林毅佳	香葉草醇 10-羥基酶之異源表現之研究
	張憲綸	根毛農桿菌十異戊二烯雙磷酸合成酶基因之選殖與表現
	林宛宜	以批次饋料培養方法於菸草細胞中生產重組塵蟎過敏原蛋白 Der p 2
	盧佩君	台灣八角蓮 Pinoresinol lariciresinol reductase 與 Secoisolariciresinol dehydrogenase 之基因選殖與表現
	蔡旻憧	以 *Pichia pastoris* 進行重組融合塵蟎過敏原 Der p 1nd 2 之表現
	郭致均	根毛農桿菌對黃豆之基因轉形研究
	許宗達	利用大腸桿菌表現重組 Subtilisin NAT 之研究
	郭倫甄	納豆菌 NTU-18 對大豆異黃酮去醣基轉化之研究
	小計　　指導研究生 11 名	
李平篤	謝毅霖	經酵母菌表現之綠竹筍苯丙胺酸脫氨裂解酶的點突變
	朱珮柔	溫度對甘藷 β-澱粉酶活性影響之研究
	盧厚任	綠竹筍殼蔗糖磷酯合成酶之生化學研究
	蕭哲仁	綠竹蘋果酸去氫酶之表現與檢定

	小計　　指導研究生 4 名	
莊榮輝	王維德	L78 對 L 型澱粉磷解酶活性調控及催化機制之角色
	吳岱澤	綠竹筍不同生長時期 non-phosphorylating glyceraldehyde-3-phosphate dehydrogenase 之純化與生化性質探討
	陳均全	裂殖性酵母菌 ATCC 2476 鎘結合物質之研究
	王宏祥	甘藷塊根澱粉磷解脢不需醣引子活性之分子機制探討
	張瓊尹	甘藷澱粉磷解脢重組蛋白之表現與活性分析
	鄧慧馨	甘藷塊根糊化過程澱粉磷解酶降解機制探討
	蔣采昕	細菌細胞壁組成對光動力治療抑制革蘭氏陽性菌與革蘭氏陰性菌效果之影響
	范嫻蘄	以甘油醛-3-磷酸脫氫酶基因啟動子研究美白菇轉形系統
	蔡和成	綠竹筍生長過程差異性蛋白質體及其抗體庫之建立
	沈志昱	哺乳類動物胚胎著床前關鍵蛋白質之抗體製備及蛋白質體研究
	劉雨亭	甘藷塊根澱粉磷解酶 L78 之性質分析
	吳裕仁	綠竹筍生長過程蛋白質體變化及其抗體庫之建
	小計　　指導研究生 12 名	
王愛玉	蔡逸君	酵母菌 *Pichia pastoris* 中表現重組水稻蔗糖合成酶 RSuS3 之性質與結構探討
	黃玉嬌	水稻蔗糖合成酶 RSuS1 野生型與突變型蛋白質之表現與檢定
	陳泰宏	以定位點突變法探討綠竹液泡型蔗糖轉化酶活性區之結構與功能
	梁成芝	水稻蔗糖合成酶 RSuS2 之 N 端序列對其酵素活性之影響
	黃卓萱	水稻蔗糖合成酶 RSuS3 突變株之分析與結構性質探討
	蔡青霖	酵母菌 *Pichia pastoris* 中表現之重組水稻蔗糖合成酶 RSuS1 及 RSuS3 之性質探討
	邱文彬	綠竹蔗糖合成酶異構酶之基因表現與生理功能探討
	小計　　指導研究生 7 名	
黃青真	羅聲晴	以維生素 E 代謝物 α-CEHC 於血漿中含量為評估維生素 E 營養狀況之可行性初探

	黃懿寧	癸酸降低脂多醣活化巨噬細胞株前列腺素 E2 生成之機制探討
	陳永如	數種植物雌激素食材萃物對 PPAR、脂肪細胞生成及雌激素活性特質鑑定
	吳夢婷	數種具植物雌激素活性材料對卵巢剔除鼠代謝症候群及鈣代謝之影響
	許珊菁	鼠模式中高脂飲食、肥胖與脂質調控基因之表現
	鄭瑋宜	山藥具雌激素活性成份之單離與鑑定研究
	小計　　指導研究生 6 名	
蕭寧馨	謝佳玲	以 Caco-2 細胞模式探討 ferric reductase 的活性與小腸攝鐵之必要性
	王婉齡	缺鋅飼料對大鼠小腸食慾控制與全基因表現之影響
	小計　　指導研究生 2 名	
林璧鳳	羅文音	以卵蛋白致敏小鼠模式探討攝食山藥對過敏性氣喘的影響
	黃繼萱	以動物模式評估液態靈芝產品對免疫功能的調節
	王姿晴	促進或抑制巨噬細胞株分泌前列腺素 E2 的食材對發炎反應的影響
	許銘志	塵蟎蛋白致敏小鼠短期攝取塵蟎蛋白產生口服耐受性的機制探討
	洪翊恬	餵食熟山藥粉及山藥萃物對 MRL/lpr 自體免疫小鼠 病程之探討
	吳繼恆	具影響干擾素　分泌的食材對 OVA 致敏 BALB/c 小鼠免疫反應的影響
	吳泰均	以誘發小鼠關節炎模式探討攝食山藥對類風濕性關節炎的影響
	陳冠如	台灣地區老年人葉酸營養狀況與慢性疾病之相關性探討
	洪永瀚	苜蓿芽乙酸乙酯萃取物改善 MRL-lpr/lpr 自體免疫鼠病程發展之探討
	小計　　指導研究生 9 名	
潘文涵	廖祈然	探討淋巴球細胞中脂蛋白脂解酶表現量及活性與致高三酸甘油酯危險性及保護性單套型之相關性
	梁喬琪	探討重要肥胖候選基因、飲食因素及其交互作對肥胖風險之影響：竹東朴子社區研究
	符明伶	注意力缺陷過動症與營養狀況及過敏關係之探討
	陳信宏	搜尋台灣病態型肥胖重要易感受基因及減重手術成效之預後基因暨發展新的 DNA 集合檢體比較法以應用於相關性研究分析

	小計　　指導研究生 4 名	
楊盛行	安妮塔	塔塔加森林硬木區與草原區土壤微生物族群之季節性變化
	黃茜渝	具脂肪分解酵素活性之耐高溫微生物
	王俊傑	嗜高溫菌的分離及其聚木醣分解酵素
	李文翔	以共固定糖化菌及 *Saccharomyces cerevisiae* 生產甘藷生質酒精
	蔡書憲	福山森林土壤微生物族群、生質量、功能和基因多樣性
	張育彰	氣單胞菌基因體可變基因池中毒素基因與抗藥基因
	陳顗竹	堆肥製作過程二氧化碳及甲烷排放量測
	張政雄	耐高溫溶磷微生物分離及多功能性生物肥料製作
	小計　　指導研究生 8 名	
許瑞祥	謝秀欣	巴西洋菇性別基因選殖與交配型之探討
	許境芳	以冬蟲夏草性別基因作為即時定量系統標的之研究
	小計　　指導研究生 2 名	
陳建源	涂珮甄	石英晶體微天平基因感測系統之開發及其應用
	王敏璇	自地黃毛狀根再生其基因轉殖植株與其型態特徵比較之研究
	黃士倫	牛膝毛狀根之建立及其藥效成分齊墩果酸型皂甙生產之研究
	張殷榕	菘藍毛狀根之建立及其藥效成分靛玉紅之生產研究
	史佩珊	使用經聚對二甲苯修飾之表面電漿子共振系統開發A型流感病毒免疫感測器之研究
	劉怡妏	使用經聚對二甲苯修飾之壓電石英晶體微天平系統開發肺結核分枝桿菌核酸感測器偵測之研究
	韓謝忱	生物感測分析系統之開發研究---應用於微生物與病毒之檢測
	小計　　指導研究生 7 名	
黃慶璨	陳英琮	光動力作用抑制白色念珠菌懸浮細胞與生物膜
	何文旭	以米麴菌表達由小孢子靈芝選殖之免疫調節蛋白質 GMI

	張家禎	屋塵蟎過敏原蛋白 Der p 2 於金針菇之異源表現
	李啟睿	利用漢遜酵母MOX及FMD啟動子異源表現瘤胃真菌*Neocallimastix frontalis*之木聚醣酶
	吳明玥	利用熱休克蛋白質 5'端非轉譯區片段調控免疫調節蛋白質 GMI 於米麴菌表達系統之產量
	林千椀	利用分子演化增加小孢子靈芝選殖之免疫調節蛋白質 GMI 的免疫活性
	徐韻涵	以農桿菌媒介轉形法進行金針菇表達系統之研究
	羅敏慈	新型光感物質 BMVC 之特性分析及其光動力抑菌作用
	蔡孟男	利用甘油受限誘導漢遜氏酵母菌表現重組蛋白質
	郭俊毅	食用菇異源基因表現系統之建立及其應用
	小計　　指導研究生 10 名	
陳進庭	林郁欣	粒線體功能異常所引發PC12細胞生長與死亡之相關訊息傳遞機制探討
	王澤嫻	以微脂體或微胞包埋血紫質之光動力殺菌探討
	小計　　指導研究生 2 名	

五、現有相關學門系所學位學程之學生人數現況：

系所學位學程名稱	學生數		
	博士班	碩士班	大學部
台灣大學生命科學院**生化科技學系**	0	0	224
臺灣大學生命科學院**微生物與生化學研究所**	55	103	0
台灣大學生命科學院生命科學系	0	0	382
台灣大學生命科學院生化科學研究所	92	67	0
嘉義大學生命科學院生化科技學系/所	0	45	191

伍、本系(所)圖、書儀器設備規劃及增購之計畫：

一、 本校該領域專業圖書：中文圖書：252 冊；外文圖書：5872 冊；中文期刊：24 種；外文期刊：391 種；97 學年度擬新購外文期刊 3 種。

原先生化科學研究所圖書室訂有國內外生化期刊 80 餘種，農業化學系原設有系圖書室，供系內師生研究及閱覽之用。其收藏之圖書資料計有：中文圖書 231 冊，西文圖書 4040 冊，日文圖書 1312 冊；中文期刊 16 種， 英文期刊 141 種及日文期刊 8 種。隨新總圖之啟用，搬遷入新總圖，近 5 年生命科學院陸續增購中文圖書 21 冊，外文圖書 520 冊；中文期刊 8 種，外文期刊 162 種，本學年度仍持續購買外文期刊 3 種。目前總圖收藏之圖書與學術期刊，以及本校醫學校區圖書館之豐富藏書與學術期刊，足可供本系教學研究之用。

二、 主要設備：

教學研究之儀器設備相當齊全，下表舉出較為貴重或新近購置之重要儀器或設備。教學設備方面，除一般筆記型電腦、單槍投影機、投影機、擴音機等上課必需設備外，於今年整修農化新館 B10 教室，更設置數位多功能講桌以改善教學與學習環境。研究設備方面，各實驗課程的教學設備尚可滿足現況，不足的部分由各教師的研究設備支援，但部分儀器需汰舊換新，未來將校方經費支援。中小型儀器大部分是由各教師依其需求對外爭取之研究經費所購置，來自校方經費所購置的大型儀器則提供全系教師使用，目前尚可滿足需求，然而仍有必要再增購新型儀器設備，以提高研究效率及成果，目前已向校方提出計畫爭取明年添購超高速離心機（含離心陀）及離子色層分析系統等貴重儀器，未來朝向設置全所「教學儀器管理中心」努力，由中心統籌儀器之管理、維護及利用，使儀器發揮最大效益。

儀 器 設 備 名 稱	放 置 地 點
掃瞄式電子顯微鏡(能量分散式) 1 部	電顯館
核酸序列自動判讀系統 1 部	生化研究室
96 孔微盤冷光螢光可視光四合一偵測儀	營養研究室
動態光散射光譜儀 1 部	生化研究室
超高速冷凍離心機及轉子 3 部	營養研究室, 生化研究室、農藝館應微研究室
高速冷凍離心機 5 部	生化研究室(3 台)、三號館發酵研究室、農藝館應微研究室
高效液相層析儀 3 部	三號館發酵、新館發酵研究室、營養研究室
醣類液相層析儀 1 部	生化研究室
日立螢光分光光譜儀 1 部	新館應微研究室
高效能幫浦 1 部	生化研究室
分液收集器 1 部	生化研究室
高效率電泳儀 1 部	生化研究室
二極體分光光度計 1 部	生化研究室
菌體研磨機 1 部	三號館醱酵研究室
醱酵槽 1 部	新館醱酵研究室
微電腦控制之聯醱酵槽 1 部	三號館醱酵研究室
超壓力式細胞打碎機 1 部	電顯館
空氣品質監測儀 1 部	農藝館應微研究室
氣相層析自動取樣機 1 部	農藝館應微研究室
放射 潛影像處理系統 1 部	生化研究室
生物影像分析儀 2 部	生化研究室

顯微鏡照像系統及螢光附件 1 部	新館醱酵研究室
冷凍乾燥機 2 部	營養研究室、電顯館
基因移入細胞電極器 1 部	生化研究室
FPLC 系統 1 部	生化研究室
珈瑪射線計數儀 1 部	生化研究室
動物細胞培養室及相關設備	營養研究室
動物實驗室及相關設備	營養研究室
超高速離心機（含離心陀）	生化研究室
植物細胞培養室	生化研究室

三、 增購計畫

主要設備名稱(或所需設備名稱)	已有或擬購年度	擬購經費
離子色層分析系統	97 學年度增購	擬向校方提出計畫爭取

陸、本系(所) 之空間規劃

一、現使用空間規劃狀況：

(一)本系所能自行支配之空間 3771.39 平方公尺， 目前使用空間為部份農化一館（舊三號館）與農化二館西半部等兩棟建築物為主，另有部份教師之研究室分別位於農藝系一樓等。使用空間共約三千平方公尺。含共用教室 6 間、共用教學實驗室 7 間、共用系辦公室系會議室各 1 間 、教師研究實驗室 23 間、共同儀器室 2 間等。

教師研究與實驗室：
微生物科技領域：農化一館 1 樓全部及 3 樓東側、農化二館 3 樓部份、地下樓部份、農藝館 1 樓、電子顯微鏡館、辦公大樓後方平房部份。生物化學與營養科學領域：農化二館 5 樓及 4 樓部份

(二)單位學生、教師面積 16.66 平方公尺。

(三)座落農化二館，第 B1、1、2、3、4、5 樓層(與農化系及行政單位共用樓層)；三號館，第 1 樓層(與農化系共用樓層)；農藝館，第 B1、1 樓層(與農藝系共用樓層)；紅磚屋，第 1 樓層(與農化系、大陸研究社、理髮部及洗衣部共用樓層)。

二、本系(所)之第一年至第四年之空間規劃情形：

建築面積無成長，單位學生、教師校舍建築面積無甚變動。

三、如需配合新建校舍空間，請說明其規劃情形。

各教師的研究室分散於三號館，農化新館，農藝館及紅磚屋等四處，對教學研究聯繫造成不便，亦普遍有空間嚴重不足的現象，目前正積極爭取興建獨立系館。

附錄一

生化科技學系評鑑總結報告內容摘要

一、前言

生化科技學系係由農業化學系農產製造組衍生，以培養生化科技學研究人才及生化科技產業發展人才為教學目標，目標正確，教師教學認真，招收學生素質優良，且為臺灣大學唯一與生化科技有關之科系。經過四年草創時期，應以追求卓越、國際一流為目標，全面檢討課程：在培養產業人才這部分似仍無具體辦法。盼校方能在各種資源及經費方面予以協助，期能在生技研究及產業發展扮演重要角色，成為國際間一流學系。

二、教學分項

(一) 現況優、缺點

優點：重視實驗及小組教學值得鼓勵，教師教學相當認真，深獲學生肯定。

缺點：1. 各教師之教學負擔過重。盼能全面檢討開課狀況，課程需能配合教學目標，加強基礎課程。建議可採大班教學、小組輔導形式，並在經費許可下聘請以教學為主之教師， 酌量減少優秀研究教師及青年新進教師之授課負擔，請校方探討教師評估及升等時教學及研究所佔比例是否可具彈性。

2. 學生反應生物物理及物理化學應檢討改進。

(二) 改善建議：1. **重新檢討四個分組是否合宜，並建議系所合一。**

2. 領域必修部分，可整併為生化科技與基因體領域及生技產業領域。

3. 在課程方面可增加英語授課的比例。

三、研究分項

(一) 現況優、缺點

優點：每位教師平均有兩篇 SCI 論文，每年研究經費超過五千萬元屬優，有不少與產業合作計畫。

缺點： 11. 教師發表的論文品質尚有進步空間，且各老師發表論文質量相差懸殊（可由 RPI 值看出）。

2. 雖有與產業合作計畫，但似乎侷限於食品、營養方面。各組間互動不足，缺乏跨領域合作計畫且深度不足。

(二) 改善建議：1. 需注重專利及技術移轉，方符合此學系目標。

2. 延攬人才時需打破組的疆界，以延攬生化科技領域之最傑出人才為最重要考量，應修改新聘甄選委員會設置辦法第 3 條：「出缺該組推舉 3 名委員」之規定。多聘請大師級學者及傑出校友擔任短期講座，或與之進行國際合作。

3. 發展重點可著重於基因體或蛋白體之研究，並且發展農、工業有關之生物科技，方能顯現生化科技學系特色。

4. 專題討論（Seminar）應以整系整合進行，以增加跨領域互動。

四、服務分項

(一) 現況優、缺點

優點：1.教師參與國內學會活動熱絡，除積極參與各種學術研討會議，並於各學會擔當理事長及理、監事等要職，及政府單位多項審議工作。

2.有教師擔任亞洲營養學會秘書長，並有一些老師擔任國際期刊審稿人。

缺點： 參與國際性學術活動較少，擔任國際重要會議之邀請講者或主持人很少，較少國際學會理監事職務或國際期刊主編、編輯委員審查委員較少，這部份仍有進步空間。

(二) 改善建議：多參與國際性學術活動。

五、行政分項

(一) 現況優、缺點

優點：辦公室同仁行政支援良好。

缺點：1. 缺乏由學術界及產業界專家組成之諮詢委員會，且系所名稱不一。

2. 與農化系在空間與員額上尚有衝突，影響士氣甚鉅，請校方積極協調解決。

(二) 改善建議：1. 應設立由學術界及產業界專家組成之諮詢委員會，提供課程改革、人才延攬及系發展方向之建議。

2. 實驗室空間需重整，將空間做有效利用。如每位教師依在學術研究之活躍度調整其使用空間。

3. 可考慮合聘生化科學所師資，除可加強基礎課程教學，亦可分攤教學負擔及指導研究生。

4. 系主任應以遴選方式聘用系內外具領導能力之傑出學者擔任。

六、受評單位發展方向之意見及建議

建議：研究方面建議以功能基因體或蛋白體等生技領域前沿研究主題為研究方向，並且以跨領域研究及國際學術合作為目標。可多借重已有成就之傑出校友、系友，聘請其回台擔任講座，增加學術交流機會。在教學方面，盼能提供足以培養學生創意之環境及課程，增加學生與產業界互動之機會。如增設以創業成功系友返校演講之 Seminar，或於大三暑假時設計可到國內外研究機構或相關產業界實習之實習課程。除提供學生將理論應用於實際之機會，亦培養學生獨立及領導能力。

七、總結

1. 肯定生化科技學系在教學及研究方面皆有不錯表現，但仍有進步空間。期望不但要國內頂尖且國際一流。
2. 課程改革、研究及服務方面，需通盤檢討。可設立諮詢委員會，多聆聽學術界及產業界專家之建議。
3. 建議臺灣大學多投入資源及經費在農、工業的生物科技研究方面，並且多聘請相關領域之大師級傑出學者來台，進行學術交流，提供教師及學生新的思維。
4. 目前教師大多較為年輕，校方或院方應提供競爭性員額與彈性薪資，聘請較資深具卓越學術地位之教師。

5. 生化科技學系空間分散、相對擁擠，教師學生均強烈要求校方設法解決，讓生化科技學系有獨立空間

微生物與生化學研究所評鑑總結報告內容摘要

一、前言

微生物與生化學研究所係由農業化學系農產製造組衍生，以培養生化科學研究人才及生化科技產業發展人才為教學目標，教師教學認真，招收學生素質優良。經過四年草創時期，應以追求卓越、國際一流為目標，全面檢討課程：在培養產業人才這部分似仍無具體辦法。盼校方能在各種資源及經費方面予以協助，期能在生技研究及產業發展扮演重要角色，成為國際間一流研究所。

二、教學分項

(一) 現況優、缺點

優點：教師教學相當認真，深獲學生肯定。

缺點：1. 分四組開課，無全所共同核心課程。

2. 無全所共同之研究生專題討論課程

(二) 改善建議：

1.研究所併入生化科技學系之碩士班與博士班，系所合一。

2.在課程方面可增加英語授課的課程，

3.博士畢業論文以英文撰寫。

三、研究分項

(一) 現況優、缺點

優點：每位教師平均有兩篇 SCI 論文，每年研究經費超過五千萬元屬優，有不少與產業合作計畫。

缺點： 1. 教師發表的論文品質尚有進步空間，且各老師發表論文質量相差懸殊（可由 RPI 值值看出）。

2. 雖有與產業合作計畫，但似乎侷限於食品、營養方面。各組間互動不足，缺乏跨領域合作計畫且深度不足。

(二) 改善建議：1. 需注重專利及技術移轉，方符合此研究所目標。

2. 延攬人才時需打破組的疆界，以延攬生化科技領域之最傑出人才為最重要考量，應修改新聘甄選委員會設置辦法第 3 條：「出缺該組推舉 3 名委員」之規定。多聘請大師級學者及傑出校友擔任短期講座，或與之進行國際合作。

3. 發展重點可著重於基因體或蛋白體之研究，並且發展農、工業有關之生物科技，方能顯現微生物與生化學研究所特色。

4. 專題討論（Seminar）應以整所整合進行，以增加跨領域互動。

四、服務分項

(一) 現況優、缺點

優點：1.教師參與國內學會活動熱絡，除積極參與各種學術研討會議，並於各學會擔當理事長及理、監事等要職，及政府單位多項審議工作。

2.有教師擔任亞洲營養學會秘書長，並有一些老師擔任國際期刊審稿人。

缺點： 參與國際性學術活動較少，擔任國際重要會議之邀請講者或主持人很少，較少擔任國際學會理監事職務或國際期刊主編或編輯委員，這部份仍有進步空間。

(二) 改善建議：多參與國際性學術活動。

五、行政分項

(一) 現況優、缺點

優點：辦公室同仁行政支援良好。

缺點：1. 缺乏由學術界及產業界專家組成之諮詢委員會，且系所名稱不一。

2. 與農化系在空間與員額上尚有衝突，影響士氣甚鉅，請校方積極協調解決。

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2. 實驗室空間需重整，將空間做有效利用。如每位教師依在學術研究之活躍度調整其使用空間。

3. 可考慮合聘生化科學所師資，除可加強基礎課程教學，亦可分攤教學負擔及指導研究生。

4. 所長可以遴選方式聘用系內外具領導能力之傑出學者擔任。

六、受評單位發展方向之意見及建議

建議：研究方面建議以功能基因體或蛋白體等生技領域前沿研究主題為研究方向，並且以跨領域研究及國際學術合作為目標。可多借重已有成就之傑出校友、系友，聘請其回台擔任講座，增加學術交流機會。在教學方面，盼能提供足以培養學生創意之環境及課程，增加學生與產業界互動之機會。如增設以創業成功系友返校演講之 Seminar。除提供學生將理論應用於實際之機會，亦培養學生獨立及領導能力。

七、總結

1. 肯定微生物與生化學研究所在教學及研究方面皆有不錯表現，但仍有進步空間。期望不但要國內頂尖且國際一流。
2. 課程改革、研究及服務方面，需通盤檢討。可設立諮詢委員會，多聆聽學術界及產業界專家之建議。
3. 建議臺灣大學多投入資源及經費在農、工業的生物科技研究方面，並且多聘請相關領域之大師級傑出學者來台，進行學術交流，提供教師及學生新的思維。
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5. 微生物與生化學研究所空間分散、相對擁擠，教師學生均強烈要求校方設法解決，讓微生物與生化學研究所有獨立空間。
6. **研究所併入生化科技學系之碩士班與博士班，系所合一。**

附錄二

專任教師近六年(2003~2008)年發表之著作（統計範圍：2004.01～2008.10）

潘子明 教授

◎期刊論文 (*表示為通訊作者)

1. Chiun-Chieh Yu, Jyh-Jye Wang, Chun-Lin Lee, Shu-Hui Lee and **Tzu-Ming Pan***, 2008, Safety and mutagenicity evaluation of nanoparticulate red mold rice. J Agri Food Chem. (on line). **(SCI).**
2. Yueh-Ting Tsai, Po-Ching Cheng, Chia-Kwung Fan and **Tzu-Ming Pan***, 2008, Time-dependent persistence of enhanced immune response by a potential probiotic strain *Lactobacillus paracasei* subsp. *paracasei* NTU 101. Int. J. Food Microb. (on line). **(SCI).**
3. Wen-Pei Chen, Bing-Ying Ho, Chung-Lin Lee, Chung-Hsien Lee and **Tzu-Ming Pan***, 2008, Red mold rice prevetns the development of obesity, dyslipidemia and hyperinsulinemia induced by high-fat diet. Int. J. Obes. (on line). **(SCI).**
4. Jui-Ming Hsieh, Ren-Shinn Chen, Tsung-Yu Tsai, **Tzu-Ming Pan***, Chin-Cheng Chou, 2008, Phylogenetic analysis of livestock oxacillin-resistabt *Staphylococcus aureus*. Vert. Microb. 126: 234-242. **(SCI).**
5. **Tzu-Ming Pan***, The application and the status of intellectual property right protection of red mold rice. J Life Sci. (2008) 2: 38-54. **(SCI).**
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9. I-Chen Yang, Daniel Yang-Chih Shih, Jan-Yi Wang, and **Tzu-Ming Pan***, 2007, Development of rapid real-time PCR and most-probable-number real-time PCR assays to quantify enterotoxigenic strains of the species in the *Bacillus cereus* group, J Food Protection. 70: 2774-2781.[IF =1.921 *FOOD & SCIENCE TECHNOLOGY* rank16/96]**(SCI).**
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11101-11108.[IF = 2.322 *AGRICULTURE* rank 1/31**](SCI).**

11. Chun-Lin Lee, Tzong-Fu Kuo, Jyh-Jye Wang, **Tzu-Ming Pan***, 2007, Red mold rice ameliorates impairment of memory and learning ability in intracerebroventricular amyloid beta-infused rat via repressing amyloid beta accumulation, J Neurosci. Res. 85: 3171-3182. **[**IF=3.476 *NEUROSCEIENCE* rank 59/200 **](SCI).**

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陳建源 教授

◎期刊論文

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莊榮輝 教授

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劉俊民 副教授

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李昆達 副教授

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陳俊任 助理教授

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楊啟伸 助理教授

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◎專書及專章

1. Whi-Fin Wu, **Chii-Sen Yang**, Hsiang-Yun Lien, Fan-Ching Hsieh, and Chun-Yang, Chang. HslUV (ClpYQ), an ATPdependent protease with unique characteristics.ATP-Dependent Proteases, 2008: Chapter 4. Research Signpost, India. ISBN: 978-81-308-0282-4

2. Handbook of Photosensory Receptors (2005) Winslow R. Briggs and John L. Spudich. ISBN: 3-527-31019-3, Wiley, Hoboken, NJ, USA (內容貢獻及封面設計)

張麗冠 助理教授

◎期刊論文

1. Lin TP, Chen SY, Duh PD, **Chang LK**, Liu YN (2008) Inhibition of the Epstein-Barr virus lytic cycle by andrographolide. Biol. Pharm. Bull. (In Press) [IF:1.614 PHARMACOLOGY & PHARMACY rank 133/205] **(SCI)**

2. Lee YH, Chiu YF, Wang WH, **Chang LK**, Liu ST (2008) Activation of the ERK signal transduction pathway by Epstein-Barr virus immediate-early protein Rta. J. Gen Virol. 89:2437-2446. [IF:3.12 BIOTECHNOLOGY & APPLIED MICROBIOLOGY rank 32/138]**(SCI)**

3. **Chang LK***, Liu ST, Kuo CW, Wang WH, Chuang JY, Bianchi E, Hong YR (2008) Enhancement of transactivation activity of Rta of Epstein-Barr virus by RanBPM. J. Mol. Biol. 379(2):231-242. [IF=4.472 BIOCHEMISTRY & MOLECULAR BIOLOGY rank 56/263] **(SCI)**

4. Lin CC, Cheng TS, Hsu CM, Wu CM, Chang LS, Shen ZS, Yeh HM, **Chang LK**, Howng SL, Hong YR. (2006) Characterization and functional aspects of human ninein isoforms that regulated by centrosomal targeting signals and evidence for docking sites to direct gamma-tubulin. Cell Cycle. 5(21):2517-2527 [IF=3.214 CELL BIOLOGY rank 71/156]

5. Chang YF, Cheng CM, **Chang LK**, Jong YJ, and Yuo CY. (2006) The F-box protein Fbxo7 interacts with human inhibitor of apoptosis protein cIAP1 and promotes cIAP1 ubiquitination. *Biochem. Biophys. Res. Commun*. 342(4):1022-1026 [IF=2.855 BIOCHEMISTRY & MOLECULAR BIOLOGY rank 109/262] **(SCI)**

6. Liu ST, Wang WH, Hong YR, Chuang JY, Lu PJ, and **Chang LK.*** (2006) Sumoylation of Rta of Epstein-Barr virus is preferentially enhanced by PIASxb. *Virus Res*. 119(2):163-170(*

Correspondence) [IF=2.783 VIROLOGY rank 12/23] **(SCI)**

7. Cheng TS#, **Chang LK**#, Howng SL, Lu PJ, Lee CI, Hong YR. (2006). SUMO-1 modification of centrosomal protein hNinein promotes hNinein nuclear localization. *Life Sci*. 78(10):1114-1120 (# The authors contribute to the work equally) [IF=2.389 MEDICINE, RESEARCH & EXPERIMENTAL rank 28/76] **(SCI)**

8. **Chang LK**, Chuang JY, Hong YR, Ichimura T, Nakao M, and Liu ST (2005). Activation of Sp1-mediated transcription by Rta of Epstein-Barr Virus via an interaction with MCAF1. *Nucleic Acids Res*. 33:6528-6539. [IF=6.317 BIOCHEMISTRY & MOLECULAR BIOLOGY rank 36/262] **(SCI)**

9. Lin TP, Chen CL, Fu HC, Wu CY, Lin GH, Huang SH, **Chang LK** and Liu ST. (2005). Functional analysis of fengycin synthetase FenD. (2005) *Biochim. Biophys. Acta* 1730:159-164. [IF=2.293 BIOCHEMISTRY & MOLECULAR BIOLOGY rank 144/262] **(SCI)**

10. Hsu HC, Lee YL, Cheng TS, Howng SL, **Chang LK**, Lu PJ and Hong YR. (2005). Characterization of two non-testis-specific CABYR variants that bind to GSK3beta with a proline-rich extensin-like domain. *Biochem. Biophys. Res. Commun*. 329:1108-1117. [IF=2.855 *BIOCHEMISTRY & MOLECULAR BIOLOGY* rank 109/262] **(SCI)**

11. **Chang LK**, Lee YH, Cheng TS, Hong YR, Lu PJ, Wang JJ, Wang WH, Kuo CW, Li SS, and Liu ST. (2004). Posttranslational modification of Rta of Epstein-Barr virus by SUMO-1. *J. Biol. Chem*. 279:38803-38812. [IF=5.808 *BIOCHEMISTRY & MOLECULAR BIOLOGY* rank 39/262] **(SCI)**

12. Howng SL, Hsu HC, Cheng TS, Lee YL, **Chang LK**, Lu PJ, Hong YR. (2004). A novel ninein-interaction protein, CGI-99, blocks ninein phosphorylation by GSK3beta and is highly expressed in brain tumors. *FEBS Lett*. 566:162-168. [IF=3.372 CELL BIOLOGY rank 65/156] **(SCI)**

13. **Chang LK**, Wei TT, Chiu YF, Tung CP, Chuang JY, Hung SK, Li C, and Liu ST. (2003). Inhibition of Epstein-Barr virus lytic cycle by (-)-epigallocatechin gallate. *Biochem. Biophys. Res. Comm.* 301:1062-1068. [IF=2.855 *BIOCHEMISTRY & MOLECULAR BIOLOGY* rank 109/262] **(SCI)**

◎研討會論文

1. **Chang LK**, Chuang JY, Chang CW, Ichimura T, Nakao M, Liu ST (2008) Involvement of MCAF1 in the synergistically activation of the Epstein-Barr virus promoters by Rta and Zta. 108th General Meeting of American Society for Microbiology, June 1-5, 2008, Boston, USA (NTU 補助)

2. Kuo CW, Liu ST, Chuang JY, Hong YR, **Chang LK** (2007) Enhancement of the transactivation activity of Rta of Epstein-Barr virus by RanBPM. Third European Congress of Virology, Sep 1-5, 2007, Nurnberg, Germany (NTU 補助)

3. **Chang LK,** Chuang JY, Hong YR, Liu ST. (2005) Rta of Epstein-Barr virus is a coactivator involved in Sp1-dependent transcription. Microbes in a changing world, IUMS, July 23-28, 2005, San Francisco, California, USA（國科會補助）

4. **Chang LK,** Lee YH, Cheng TS, Hong YR, Liu ST. (2004) Post-translational Modification of Rta of Epstein-Barr Virus by SUMO-1. 104th General Meeting of American Society for Microbiology, May 23-27, 2004, New Orleans, Louisiana, USA（國科會補助）

楊健志 助理教授

◎期刊論文

1. Lee, M-H., **Yang, C-C.**, Wang, H-L, Lee, P-D. (2003) Regulation of sucrose phosphate synthase of the sweet potato callus is related to illumination and osmotic stress. Bot. Bull. Acad. Sin Vol 44, 257-265 [IF=1.045 *PLANT SCIENCE* rank 70/147] **(SCI)**

2. Hsu, J-H., **Yang, C-C.**, Su, J-C., Lee, P-D. (2004) Purification and characterization of a cytosolic starch phosphorylase from etiolated rice seedlings. Bot. Bull. Acad. Sin. 45(3): 187-196 [IF=1.045 *PLANT SCIENCE* rank 70/147] **(SCI)**

3. Lai, C-P; Lee, C-L; Chen, P-H; Wu, S-H; **Yang, C-C** and Shaw J-F (2004) Molecular analysis of the Arabidopsis TUBBY-like protein gene family. Plant Physiol. 134: 1586-1597 [IF =6.125 *PLANT SCIENCES* rank 7/147] **(SCI)**

4. Kao, A-L.; Chang, T-Y.; Chang, S-H.; Su, J-C. and **Yang, C-C** (2005) Characterization of a novel Arabidopsis protein family AtMAPR homologous to 25-Dx/IZAg/Hpr6.6 proteins. Bot. Bull. Acad. Sin. 46: 107-118 [IF=1.045 *PLANT SCIENCE* rank 70/147] **(SCI)**

5. Mu-Ho Lee, **Chien-Chi Yang**, Jong-Ching Su, and Ping-Du Lee (2005) Biochemical characterization of rice sucrose phosphate synthase under illumination and osmotic stress. Bot. Bull. Acad. Sin. 46: 32-52 [IF=1.045 *PLANT SCIENCE* rank 70/147] **(SCI)**

6. Chen, Wei-Liang, **Chien-Chih Yang**, Jong-Ching Su and Ping-Du LEE. (2007) Cloning and Expression of Sweet Potato Tuber Sucrose Phosphate Synthase Gene in *Escherichia coil.* Taiwanese J. of Agri.Chem. and Food Science. 45(2): 91-100.

7. Hsieh, LS., Wen-Min, Su, **Chien-Chih Yang**, and Ping-Du LEE. Purification and characterization of phenylalanine ammonia-lyase from different organs of bamboo (*Bambusa oldhamii*). Phytochemistry (Sumitted for publication 2008)[IF=2.417 *PLANT SCIENCES* rank 24/147] **(SCI)**

張世宗 助理教授

◎期刊論文

1. Rabl J, Smith DM, Yu Y, **Chang SC**, Goldberg AL, Cheng Y. (2008) Mechanism of gate opening in the 20S proteasome by the proteasomal ATPases. Mol Cell. May 9;30(3):360-8. [IF = 14.033 *BIOCHEMISTRY & MOLECULAR BIOLOGY* rank 6/262] **(SCI)**

2. Smith DM, **Chang SC**, Park S, Finley D, Cheng Y, Goldberg AL. (2007) Docking of the Proteasomal ATPases' Carboxyl Termini in the 20S Proteasome's alpha Ring Opens the Gate for Substrate Entry. Mol Cell. Sep 7;27(5):731-44. [IF = 14.033 *BIOCHEMISTRY & MOLECULAR BIOLOGY* rank 6/262] (SCI)

3. **Chang SC**, Momburg F, Bhutani N, Goldberg AL. (2005) The ER aminopeptidase, ERAP1, trimsprecursors to lengths for MHC class I binding by a "molecular ruler" mechanism. Proc Natl Acad Sci U S A. Nov 22;102(47):17107-12. [IF=9.634 *MULTIDISCIPLINARY SCIENCES* rank 3/50] (SCI)

4. Draenert R, Le Gall S, Pfafferott KJ, Leslie AJ, Chetty P, Brander C, Holmes EC, **Chang SC**, Feeney ME, Addo MM, Ruiz L, Ramduth D, Jeena P, Altfeld M, Thomas S, Tang Y, Verrill CL, Dixon C, Prado JG, Kiepiela P, Martinez-Picado J, Walker BD, Goulder PJ. (2004) Immune selection for altered antigen processing leads to cytotoxic T lymphocyte escape in chronic HIV-1 infection. J Exp Med. Apr 5;199(7):905-15. [IF=14.484 *IMMUNOLOGY* rank 5/117] **(SCI)**

◎研討會論文

1. Tsai JY, Liu BY, Liao PH, and **Chang SC**. The functional proteomics studies of molecules targeted by ubiquitin and sumo in the presence of cytotoxic stress and genotoxic stress. 33nd FEBS Congress, 2008, Athens, Greece.

2. **Chang SC**, Goni C, and Goldberg AL. Peptides allosterically stimulate the activity of ERAP1, the aminopeptidase in the endoplasmic reticulum that processes antigenic precursors. SPMDB 2007, 2007, Beijing, China.

3. Chen TM, Chen CP, Feng CC and **Chang SC**. PAN, the archaeal proteasomal ATPase, induces gate opening through interacting with critical sites in 20S -subunits. 32nd FEBS Congress, 2007, Vienna, Austria.

4. **Chang SC** and Goldberg AL. The IFN- -induced aminopeptidase, ERAP1, determines the length of antigenic peptides by monitoring distant C-terminal residues. 4th International Workshop on Antigen Processing and Presentation, 2004, Bar Harbor, Maine, USA.

5. **Chang SC**, Saric T, Goldberg AL. An IFN-gamma-induced aminopeptidase in the ER, ERAP1, trims precursors to MHC class I-presented peptides. Second Charite Zeuthener See Workshop, 2003, Berlin, Germany.

附錄三

訂購期刊圖書種類一覽表

序號	刊名	ISSN	版本*
1	Advances in applied microbiology	0065-2164	P
2	Australian journal of soil research	0004-9573	P+E
3	Biological trace element research	0163-4984	P
4	Biology and fertility of soils	0178-2762	P
5	Biometals : an international journal on the role of metal ions in biology, biochemistry, and medicine	0966-0844	P
6	Bioscience, biotechnology, and biochemistry	0916-8451	P
7	Biotechnology letters	0141-5492	P
8	Current advances in applied microbiology & biotechnology	0964-8712	P
9	Current microbiology	0343-8651	P
10	Current topics in microbiology and immunology	0070-217X	P
11	Ecotoxicology and environmental safety	0147-6513	E
12	Food technology	0015-6639	P
13	Free radical biology & medicine	0891-5849	E
14	Geoderma	0016-7061	E
15	Journal of agricultural and food chemistry	0021-8561	E
16	Journal of basic microbiology	0233-111X	P+E
17	Journal of bioscience and bioengineering	1389-1723	E
18	Journal of food science : an official publication of the Institute of Food Technologists	0022-1147	P+E
19	Journal of industrial microbiology & biotechnology	1367-5435	P
20	Journal of plant nutrition	0190-4167	P
21	Mycoscience	1340-3540	P
22	Nutrient cycling in agroecosystems	1385-1314	P
23	Nutrition reviews	0029-6643	P+E
24	Pedosphere	1002-0160	P
25	Plant and soil	0032-079X	P
26	Soil science	0038-075X	P
27	Soil science and plant nutrition	0038-0768	P+E
28	Soil Science Society of America journal	0361-5995	P
29	Soil use and management	0266-0032	P
30	The Biochemical journal	0264-6021	P
31	The Journal of agricultural science	0021-8596	P
32	The Journal of biochemistry	0021-924X	P

33	World journal of microbiology & biotechnology	0959-3993	P
34	化學と生物 日本農芸化學會編集	0453-073X	P
35	日本土壤肥料學雜誌	0029-0610	P
36	日本菌學會會報	0029-0289	P
37	日本農藥學會誌	0385-1559	P
38	臺灣農業化學與食品科學 Taiwanese journal of agricultural chemistry and food science eng	1605-2471	P

*訂購版本標示 P 為只有紙本，E 為只有電子期刊，P+E 為有紙本與電子期刊。

國立臺灣大學生命科學院
與
泰國宋卡王子大學理學院

合作備忘錄（草案）

臺灣國立臺灣大學（以下簡稱「NTU」）生命科學院與泰國宋卡王子大學（以下簡稱「PSU」）理學院咸信，經由建立雙方學院間的橋樑，並藉由連絡雙方學者、學生與人員而增進的緊密關係，將讓雙方互蒙其利。彼此堅信建立學術上的連繫，將促進雙方人員間的共識。因此，雙方同意簽署本備忘錄。

第一章

合作原則

國立臺灣大學生命科學院與泰國宋卡王子大學理學院同意，本於彼此共識、互惠、共同研究領域以及互補的原則下，發展雙方的學術交流。

第二章

合作目標

(1) 增進雙方學者、學生與職員間之接觸。
(2) 增進教學、研究與文化活動間的連絡。
(3) 提供雙方交換人員與學生之機會，並可以不對等之方式進行。
(4) 發展並鼓勵進行合作研究、研討會、會議或工作坊，並協助彼此向外爭取經費。
(5) 在適當時機，發展雙學位學程。
(6) 支持交換學術資源。
(7) 共享大學管理與經營之經驗與專長。
(8) 鼓勵雙方大學同意可互利的其他活動。

第三章

合作範圍

合作範圍包含國立臺灣大學生命科學院與泰國宋卡王子大學理學院所提供之任何學術或學程內容。

第四章

施行方式

雙方理解並同意以下事項：

(1) 本備忘錄規範下之合作計畫提案須向雙方行政主管提出，並且建議在每一計畫結束後，向彼此行政主管提交報告。

(2) 雙方對己方派出進行交換或訪問計畫之人員維持發放國內薪資，唯在特定合約約定下，受訪一方得對對方之訪問學者提供薪津補貼。

(3) 在約定的學生人數限額下，提供交換學生免繳學費之優待，受訪一方並將協助交換學生覓得適宜之膳宿。

(4) 雙方對大學部學生及研究生之動員令適用於彼此之交換學生，且可包含實習或產業條例。

(5) 合作研究、研討會、工作坊、會議與其他活動之經費分擔另訂之，並視經費許可範圍調整。

(6) 受訪一方不負責交換學者或學生之醫療與住院支出，建議出訪人員事先取得己方國內提供之海外醫療保險。

第五章

期限與協議之終止

(1) 本備忘錄在雙方行政主管簽署日起生效。

(2) 本備忘錄在雙方書面同意下，得隨時修正之。

(3) 本備忘錄得由任一方，於預定終止日期六個月前以書面通知對方終止合約。唯雙方同意，彼時將維持提供進行中計畫對學生、人員、經費補助單位與其他相關單位應負之責任，至該計畫結束爲止。

國立臺灣大學生命科學院	泰國宋卡王子大學理學院
_____	_____
羅竹芳教授	Assoc. Prof. Dr. Chutamas Satasook
院長	院長
日期：_____	日期：_____

(Draft)

Memorandum of Understanding

Between

Faculty of Science, Prince of Songkla University

And

College of Life Science, National Taiwan University

Faculty of Science, Prince of Songkla University (PSU), Thailand and College of Life Science, National Taiwan University (NTU), Taiwan believe that mutual benefits can be derived by bridging their two institutes, achieving a closer relationship by linking their scholars, students, and personnel. Both Institutes share the strong conviction that mutual understanding among people can be promoted through the establishment of academic links. Therefore, both institutes

agree to enter into this Memorandum of Understanding (MOU).

Article I: Principle of collaboration

Faculty of Science, (PSU) and College of Life Science, (NTU) agree to develop their academic links under the principle of mutual understanding, mutual benefits, common interests, and mutually complementary activities,

Article II : Aim of collaboration

(1) To promote individual contacts among scholars, students, and personnel of both institutes,

(2) To promote links in teaching, research, and cultural activities,

(3) To provide opportunities for both staff and students exchanges, however such exchange need not be equally reciprocated,

(4) To develop and to encourage joint research, seminars, conferences, workshops, and to also assist each other in obtaining external funding from outside sources,

(5) To develop, when opportunities avails, joint study program,

(6) To support the exchange of academic materials,

(7) To share experiences and expertise concerning university administration and management,

(8) To encourage any other activities that both universities agree will be of mutual benefit.

Article III : Area of Collaboration

Areas of collaboration can include any academic or other programs offered by Faculty of Science, (PSU) and College of Life Science, (NTU).

Article IV: Implementation

It is understood and agreed that

(1) Proposals for collaborative projects under this MOU will be submitted through the Chief Executive Officer of the two sides, and it is recommended that reports should be submitted to each Chief Executive officer at the completion of each project

(2) The two sides will continue to pay the regular in-country salary of its staff members on exchange or visiting programs. However, under specific contracts or secondments, the host institute may consider paying a supplemental salary to visiting scholars during the period of their assignment.

(3) Tuition fees will be waived for an agreed upon number of exchange students, and the host university will assist in finding reasonable accommodation for participating students.

(4) Student mobilization will apply to undergraduate and graduate/post graduate students from both two sides, and may include practical or industrial attachments.

(5) Financial arrangements for collaborative research, seminars, workshops, conferences, and other such activities will be negotiated separately and will be subject to the availability of funds.

(6) The host institute will not be responsible to cover the costs of medical treatment or hospitalization for visiting scholars or students, and it is recommended that visitors should obtain overseas health insurance coverage from their home country.

Article V : Duration and Termination of the Agreement

(1) This MOU is effective as of the date of signature by the Chief Executive officer of the two sides.

(2) This MOU may be amended at any time as indicated by written mutual consent.

(3) This MOU may be terminated by either university by the provision of a written notice of termination not less than six months prior to the desired termination date. However, both institutes agree that at that time all continuing obligation to students, staff, funding bodies or other entities are met in full subsequent to the notice of termination.

Faculty of Science,	College of Life Science
Prince of Songkla University	National Taiwan University
---	---
Assoc. Prof. Dr. Chutamas Satasook	Prof. Chu-Fang Lo
Dean of Faculty of Science	Dean of College of Life Science
Date……	Date……..

國立臺灣大學生命科學院

與

宋卡王子大學理學院

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(3) 交換學生免繳接待學校之學費，受訪一方並將協助交換學生覓得適宜之膳宿。

(4) 雙方對大學部學生及研究生之動員令適用於彼此之交換學生，且可包含實習或產業條例。

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刪除: 在約定的學生人數限額下，提供

格式化: 字型色彩: 藍色

刪除: 之優待

第五章

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(2) 本備忘錄在雙方書面同意下，得隨時修正之。

(3) 本備忘錄得由任一方，於預定終止日期六個月前以書面通知對方終止合約。唯雙方同意，彼時將維持提供進行中計畫對學生、人員、經費補助單位與其他相關單位應負之責任，至該計畫結束為止。

國立臺灣大學生命科學院	宋卡王子大學理學院
_____	_____
羅竹芳教授	Assoc. Prof. Dr. Chutamas Satasook
院長	院長
日期：_____	日期：_____

刪除: 泰國