周廷潮校友的最近科研進展

各位母校師長、校友及同學們：

新年好！2009年七月七日拜訪母校會見許多師長、朋友及同學，感到非常高興。此行並給一個演講，這是我二年以來25個國際演講中的第21個演講（請參閱Appendix I演講目錄）。九月中旬高醫留美校友會年會，余幸司校長及首長訪紐約，彙報母校的後顧及前瞻，對母校的刻苦奮鬥及欣欣向榮的景象感到崇敬及幸慰。

弟旅美自1965年在耶魯大學以來，已四十多年默默耕耘學術，處世淡泊，治學兢業。35年前首創的理論，最近10年才開始起飛，被普遍應用。現在已是古稀之年，不知來年尚有幾許，謹把握這次徵稿機會向大家呈獻科研成果，以滋共勉。

一、 學術報告 (Articles)

- 243篇論文已被國際文獻引用11,207次，平均每篇引用46.07次。
- 其中理論論文被引用約4,500次。
- 僅一篇理論論文 (Chou T.C. & Talalay P., Adv. Enz. Regul. 22:27-25,1984）被引用1,984次於433種不同學術期刊。其引用次數超出該雜誌Impact Factor一千多倍，其引用雜誌數目超過全世界生物醫藥雜誌總合之10%以上。

二、創新公式、術語及圖表 (New Terminologies, Equations and Plots)

- The Unified Theory of the Mass Action Law [普世質量作用定理] (The median-effect equation, median-effect plot; The Chou Plot)
- The Combination-Index Theorem [藥物合併指數定理] (The combination index-equation and plot; The Chou-Talalay Plot)
- The Dose-Reduction Index Equation [合併劑量減低公式] (The DRL Plot; The Chou-Martin Plot)
- The Normalized Isobologram [公約等效圖形] (The normalized isobol; The Chou-Chou Plot)
- The Polygonogram [多角藥物合併圖形] (The Chou-Chou Graphics for multiple drugs)

三、創造發明及新詞彙 (Innovation and New Phrases)

- 25個美國專利共同發明人(Among the 99th percentile of inventors since 1976)
- 命名新詞：Floudelone, Iso- Floudelone, Dehydelone, Iso-oxazole Floudelone
- Equation of Log-Cell Kill ；Definition of Therapeutic Care.

四、計量哲學觀及古代哲學新釋 (Quantitative Philosophy and Interpretation of Ancient Chinese Philosophy)

- 一元論；劑效互換一體論 (The Unity Theory)
- 質量作用中效定理 (Median-Effect Principle of the Mass-Action Law)
- 動力學平衡的科學哲學觀 (Philosophy of Equilibrium Dynamic Theory)
- ”中”的宇宙觀、科學觀 (Median as Universal Reference Point and Common Link)
- 以”中”爲基準的計量哲學 (The Median-Based Quantitative Philosophy)
- 數學演繹歸納法 (Mathematical Induction-Deduction for Systems Biology)
- 儒家中庸之道 (Confucian Doctrine of the Mean)，道家和諧 (Harmony)，無極太極 (Wuji Er Taiji)，五行 (The Five Elements)， 伏義八卦 (Fu Si Ba Gua) 之數理新釋。

(For more details, see http://precedings.nature.com/documents/2064/version/2 and the 16th International Conference of Chinese Philosophy, at Fu-Jen University, Taipei, sponsored by ISCP and CAP, 7/7-12/2009. Paper No. D-16, available in an electronic memory drive.)

五、參考資料 (References)

1.Chou TC. Theoretical basis, experimental design, and computerized simulation of synergism and antagonism in drug combination studies. Pharmacol Rev 2006;68:621-681. (Free web link: http://pharmrev.aspetjournals.org/cgi/reprint/58/3/621)

2.Chou TC. What is synergy? Scientist 2007;21: 15.

3.Chou TC. Preclinical versus clinical drug combination studies. Leukemia & Lymphoma 2008;49:2059-2080.

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5. Chou TC. Relationships between

inhibition constants and fractional inhibition in enzyme-catalyzed reactions with different numbers of reactants, different reaction mechanisms, and different types and mechanisms of inhibition. Mol Pharmacol 1974;10:235-247.

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9. Chou TC, Talalay P. Analysis of combined drug effects: a new look at a very old problem. Trends Pharmacol Sci 1983;4:450-454.

10. Chou TC, Talalay P. Quantitative analysis of dose-effect relationships: the combined effects of multiple drugs or enzyme inhibitors. Adv Enzyme Regul 1984;22:27-55.

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13. Chou TC. The mass-action law based GPS concept for bio-informatics.Nature Precedings (npre.2008.2064-2); July 22, 2008. Available free at [http://precedings.nature.com/documents/2064/version/2].

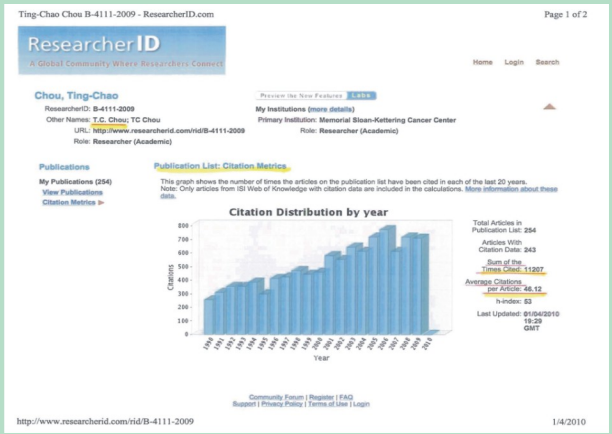
14. Chou TC. Drug combination studies and their synergy quantification using the Chou-Talalay Method. Cancer Res. 70: (1/15/2010), in press (An Invited Perspectives Article)

上面最後一個Reference是Invited Perspectives article. 預定(1/15/2010) 在Cancer Research刊出。Title 上掛作者的名字不是我的本意而是極稀有的榮譽。此文是用Free Style 撰寫，完全脫離了期刊的Format，還用第一人稱 “I” 。此文主要是在著重討論Pitfalls, Common Errors 及 Frequently Asked Questions. 文中28個References 中21個是自己的論文，其中Reference 2 (Ref.4) 是最短的 Full “完全reference” 包括標點和空白只有47個character spaces。其文後之Disclosure 及Acknowledgments 亦具有非常奈人尋味的特色。預料將是一篇影響深遠的實用論文，歡迎參閱。(Online version to be published on 1/12/2010, and in the journal, 1/15/2010).

六、統計與評鑑

(Statistics and “What Have Been Said”)

●ResearcherID Report

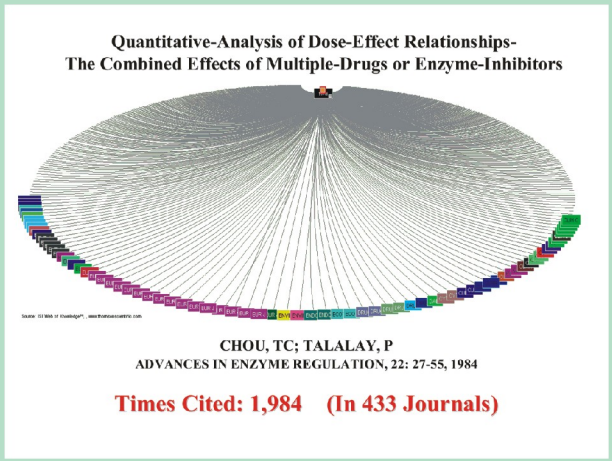


●Thompson-Reuter ISI Web of Science and Google Scholar Report

七、論壇（An Open Forum）

上述數理公式、定理及哲學，歡迎提供可以驗證的意見，以便正式的，有益的討論。正式的意見請下載于Nature Precedings

[http://precedings.nature.com/documents/2064/version/2]。謝謝參與。



周廷潮謹啓　2010年1月7日于紐約市