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學歷

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| 1988-1994 | PH.D., Microbiology and Molecular Genetics, Rutgers University/Molecular Genetics and Microbiology, University of Medicine and Dentistry of New Jersey |
| 1986-1988 | M.S., Medical Microbiology and Immunology, The Ohio State University |
| 1981-1985 | B.S., Department of Agricultural Chemistry, National Taiwan University. |

研究方向

(1) 氣喘相關研究

氣喘與過敏疾病常影響已開發國家人民的健康，也消耗許多醫療資源。這類疾病是由多個遺傳與環境因素引起體內免疫系統不平衡反應所致，本實驗室目前著重於深入探討調控過敏病的分子與細胞反應。例如利用 non-depleting 抗 CD4 抗體，用以預防或是治療疾病模式小鼠的各項氣喘指標，目前正積極釐清其作用機制。另外，我們開發以病毒載體為基礎之基因治療方法，期望將各式具療效的基因專一地表現在肺組織中，減少不必要的全身性反應。

(2) 治療氣喘中藥之研發

治療氣喘中藥之研發。以臨床使用療效佳之方劑如「定喘湯」，利用氣喘動物模式來研究中藥使用之劑量、給藥時機、療效機制及安全性，做為分離出有效成分之基礎；也和中、西醫臨床醫師合作，完成並發表合乎臨床試驗標準之複方療效評估。目前則加強測試具有抗發炎效果之天然物之純化藥，並注重中藥作用於細胞訊號傳遞系統之探討，搭配以 DNA 晶片或是蛋白質體學來快速分析藥物對免疫細胞作用的分子機制。

(3) 人類周邊或臍帶血中免疫細胞調控

本實驗室的另一個研究主題，是探討以不同細胞激素組合對臍帶血中 T 輔助細胞及自然毒殺細胞之複製、死亡及活性的作用，亦研究臍帶血中含有較多 T 調節細胞的機制，有助於釐清移植臍帶血時有較低的排斥性、或是應用於移植臍帶血於自體免疫疾病或是組織移植時的免疫調控。此外，探討某類抗生素具有抑制免疫細胞活化的作用機制，是我們新近有興趣的研究領域。

著作 (近五年發表 從 2010 起~迄今)

*: Correspondence author †: Co-correspondence author #: equal contribution

Publication

(2014 SCI)

- 2010 1. Liou C-J, Huang W-C, **Kuo M-L**, Yang R-C, and Shen J-J. 2010 (Oct). Long-term oral administration of *Gynostemma pentaphyllum* extract attenuates airway inflammation and Th2 cell activities in ovalbumin- sensitized mice. *Food Chem. Toxicol.* 48(8): 2592-2598. (DOI:10.1016/j.fct.2010.06.020)
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5. Shen J-J, Chiang M-S, **Kuo M-L**, Hwang T-L, Liou C-J, Huang W-C. 2011 (Jun). Partially purified extract and viscolin from *Viscum coloratum* attenuate airway inflammation and eosinophil infiltration in ovalbumin-sensitized mice. *J. Ethnopharmacol.* 135: 646-653
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6. Tsai Y-C, Yeh K-W, Yao T-C, Huang Y-L, **Kuo M-L**, Huang J-L. 2011 (Jul). Mannose-binding lectin expression genotype in pediatric-onset systemic lupus erythematosus: associations with susceptibility to renal disease and protection against infections. *J. Rheumatol.* 38 (7): 1429-1435.
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(IF 3.044, 63/148 in Immunology)
- 2012 8. Lin S-J, Cheng P-J, Lin T-Y, Lee P-T, Hsiao H-S, and **Kuo M-L***. 2012 (Mar). Effect of influenza A infection on umbilical cord blood natural killer function-regulation with

- interleukin-15. *J. Infect. Dis.* 205 (5):745-756.
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9. Chen Y-H [#], **Kuo M-L** [#], Cheng P-J, Hsiao H-S, Lee P-T, and Lin S-J. 2012 (Apr). Regulation of CD28 expression on umbilical cord blood and adult peripheral blood CD8⁺ T cells by interleukin (IL)-15/IL-21. *Cytokine*. 58(1):40-46.
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11. Chan C-K, Wu K-H, Lee Y-S, Hwang S-M, Lee M-S, Liao S-K, Cheng E-H, See L-C(史麗珠), Tsai C-N, **Kuo M-L**[‡], and J-L Huang[‡]. 2012 (Jul). The comparison of interleukin-6 associated immunosuppressive effects of human ESCs, fetal-type MSCs, and adult-type MSCs. *Transplant.* 94(2):132-138.
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16. Wu S-A, Yeh K-W, Lee W-I, Yao T-C, **Kuo M-L**, Huang B, Huang J-L. 2013 (Jan). Impaired Phagocytosis and Susceptibility to Infection in Pediatric-Onset Systemic Lupus Erythematosus. *Lupus.* 22(3):279-88.
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19. Chen J-C, Ou L-S, Yu H-Y, Chang H-L, Chang P-Y, and **Kuo M-L**. 2013. (Jul) Allogeneic lymphocytes exerted graft-versus-host rather than tolerogenic effects on preimmune fetuses. *J. Surg. Res.* 183(1):405-411.

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(DOI: 10.1016/j.jdermsci.2013.06.015.)

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22. Hsieh C-H, Chen H-C, Chang Y-H, Pang S-T, **Kuo M-L**[‡], Chuang C-K, Liao S-K[‡]. 2013(Nov) Co-existence of epithelioid and fibroblastoid subsets in a sarcomatoid renal carcinoma cell line revealed by clonal studies. *Anticancer Res.* 33 (11):4875-89.

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- 2014 23. Huang W-C [#], Chan C-C [#], Wu S-J, Chen L-C, Shen J-J, **Kuo M-L**, Chen M-C, Liou C-J. 2014 (Jan). Matrine attenuates allergic airway inflammation and eosinophil infiltration by suppressing eotaxin and Th2 cytokines production in asthmatic mice. *J. Ethnopharmacol.* 151(1): 470-477.

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(IF: 2.998, 3/24 in Integrative & Complementary Medicine)

24. Lin S-J, Lu C-H, Yan D-C, Lee P-T, Hsiao H-S, **Kuo M-L***. 2014 (Oct) Expansion of regulatory T cells from umbilical cord blood and adult peripheral blood CD4⁺CD25⁺ T cells. *Immunol. Res.* 60 (1):105-111.

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- 2015 26. Yang T-Y, Chiang N-Y, Tseng W-Y, Pan H-L, Peng Y-M, Shen J-J, Wu K-A, **Kuo M-L**, Chang G-W, Lin H-H*.2015(May). Expression and immunoaffinity purification of recombinant soluble human GPR56 protein for the analysis of GPR56 receptor shedding by ELISA. *Protein Expr. Purif.* 2015.109: 85- 92.

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Review articles:

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2. Lin S-J, Lee P-T, Kuo M-L. Cytokine activation of natural killer cells. Ch19. pp in *Cancer Vaccines: Methods and Protocols, Methods in Molecular Biology, Vol 1139*. Springer Science+Business Media, New York, NY, USA. DOI:10.1007/978-1-4939-0345-0_19.

Perspectives or comments:

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2015/12/01更新

