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現職：高雄醫學大學 學士後醫學系 生物化學科 助理教授

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Education

School name	Degree	Date
國立成功大學 基礎醫學研究所	Ph.D.	2010/09~ 2016/03
國立成功大學 微生物暨免疫學研究所		2008/07~ 2010/08
東吳大學 微生物學系	B.S.	2004/9-2008/6

EXPERIENCE:

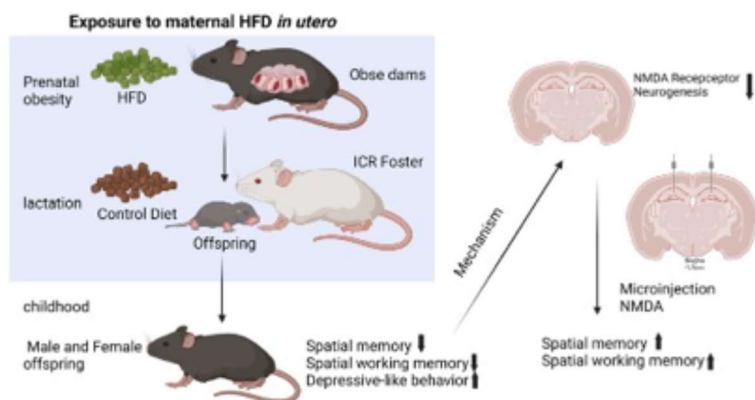
Service Institution	Department/Title	Date
義大醫院醫學研究部	助理研究員	2023/03~
國立成功大學婦產科 Advisor: Pao-Lin Kuo (郭保麟) M.D.	博士後研究員	2019/05~ 2023/02
中央研究院/生物醫學科學研究所 Advisor: Pin Ling (凌斌), Ph.D. and Chen, Huan-Yuan (陳煥源), Ph.D.	博士後研究員	2019/02~ 2019/05
成大研究總中心 科技部重點產業高階人才培訓計畫	專案工作人員	2018/01~ 2018/12
中央研究院/生物醫學科學研究所 Advisor: Pin Ling (凌斌), Ph.D. and Chen, Huan-Yuan (陳煥源), Ph.D.	博士後研究員	2017/09~ 2018/01
國立成功大學微生物暨免疫學研究所 Advisor: Pin Ling (凌斌), Ph.D.	博士後研究員	2016/3-2017/07

學術專長 1. 訊號傳導 2. 微生物及免疫學 3. 分子及細胞生物學 4. 懷孕與子代神經發育

研究室簡介

1. 母體肥胖與子代神經發育

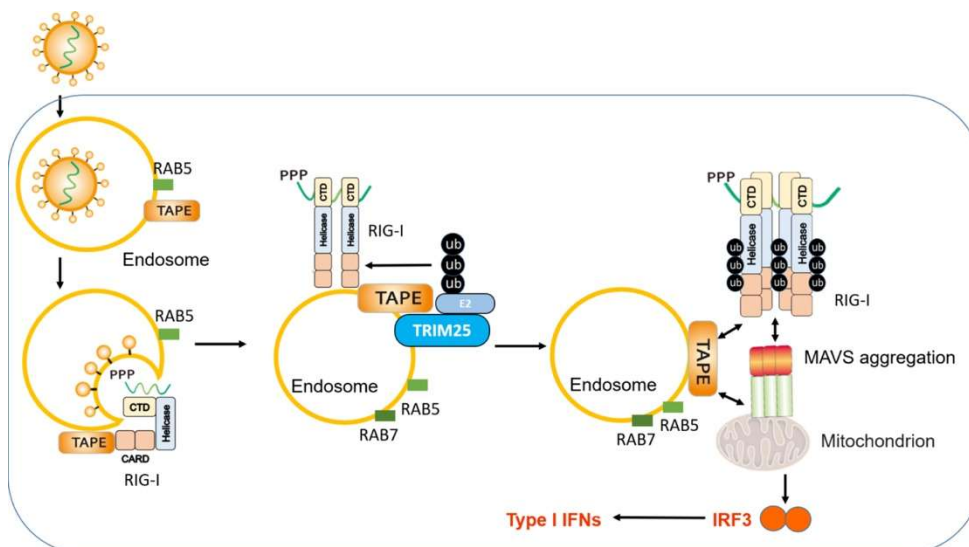
懷孕前肥胖或懷孕期間體重增加過多不只會增加孕婦併發症的機會，例如早產、妊娠糖尿病及妊娠高血壓，也會增加下一代的疾病發生，例如心血管疾病、代謝症候群、糖尿病、癌症及神經精神疾病等。目前已經發母體肥胖會造成後代智力障礙、自閉症及注意力缺乏過動症等，然而相關機制仍有待闡明。本實驗室利用動物模式建立肥胖母鼠造成仔鼠存在認知缺陷，並探討肥胖對於胎盤、胚胎前腦的影響及造成成鼠行為異常的機制，更進一步利用此動物模型探討產前藥物治療肥胖母鼠，預防所生的仔鼠神經發育異常。



Transl Psychiatry. 2025 Aug 19;15(1):294.

2. 先天免疫訊號傳導

RIG-I-like receptors (RLRs) 是胞內 RNA 感測器，對抗病毒至關重要。RLR 與 RNA 結合後使得 RLR 進行 polyubiquitination 和 oligomerization 調控。然而，RLR 如何利用細胞內的胞器促進其 posttranslational modifications 和活化所知甚少。我們先前發現一個新的先天免疫調節分子稱為 TAPE (TBK1-Associated Protein in Endolysosomes)，也稱為 CC2D1A/Freud-1/Aki-1。TAPE 參與 RLRs 活化第一型干擾素。訊號傳導機制如下圖，發表於 2024 Science Advances。



Sci Adv. 2024 Nov 8;10(45):eadq0660.

國科會計畫

計畫名稱	主持人類別	執行期間	補助機構
胞內體對 RIG-I 樣受體訊號傳導在細胞內的時空調節 (NSTC 114-2320-B-006 -038 -)	共同主持人	2025/08/01~ 2026/07/31	國科會 (微生物免疫)
探討羅格列酮如何在肥胖母親小鼠模型中調節胎兒神經發育(NSTC 113-2320-B-650 -002 -MY3)	計畫主持人	2024/08/01 – 2027/07/31	國科會(生理學門)
應用高脂肪飲食誘導肥胖小鼠模式探討可以改善兒童神經發育的藥物 (NSTC 112-2320-B-650-002 -)	計畫主持人	2023/08/01 ~ 2024/07/31	國科會(生理學門)
母體肥胖如何重塑胎兒大腦發育走向之研究(112-2314-B-816-002-MY3)	共同主持人	2023/08/01~ 2026/07/31	國科會 (婦產醫學)

Publications

1. **Chen KR**, Ho YC, Huang CW, Yu L, Kuo PL. Prenatal maternal HFD exposure impairs cognition via a hippocampal NMDA mechanism. *Transl Psychiatry*. 2025 Aug 19;15(1):294.
(第一作者; IF: 6.2; Rank 21/288 (7.3%), PSYCHIATRY)
2. **Chen KR**, Chu SK, Kuo PL. Barrier genes are associated with preterm birth. *Front Med*. 2025 Jun 23;12:1580877.
(第一作者; IF: 3; Rank 61/332 (12.8%), MEDICINE, GENERAL & INTERNAL)
3. **Chen K-R**, Wang H-Y, Kuo Y-C, Lo Y-C and Kuo P-L. A novel SEPT12 mutation, T96I, is associated with sperm head and annulus defects. *Front. Cell Dev. Biol*. 2025, 12:1498013.
(第一作者; IF: 4.3; Rank 5/39 (12.8%), Developmental Biology)
4. Wang HY, **Chen KR**, Yeh BC, Li WD, Wu SR, Ching YH, Wang CY, Kuo PL. SEPT14 complexes maintain sperm morphogenesis and function. *FASEB J*. 2025 Feb 28;39(4):e70414.
(第二作者; IF: 4.4; Rank 17/107 (15.9%), Biology)
5. **Chen KR**, Yang CY, Shu SG, Lo YC, Lee KW, Wang LC, Chen JB, Shih MC, Chang HC, Hsiao YJ, Wu CL, Tan TH, Ling P. Endosomes serve as signaling platforms for RIG-I ubiquitination and activation. *Sci Adv*. 2024 Nov 8;10(45):eadq0660. doi: 10.1126/sciadv.adq0660. Epub 2024 Nov 6.
(第一作者; IF: 11.7; Rank 11/134 (8.2%), MULTIDISCIPLINARY SCIENCES)
6. **Chen KR**, Yu T, Lien YJ, Chou YY, Kuo PL. Childhood neurodevelopmental disorders and maternal diabetes: A population-based cohort study. *Dev Med Child Neurol*. 2023 Jul;65(7):933-941. doi: 10.1111/dmcn.15488. Epub 2022 Dec 21.
(第一作者; IF: 3.8; Rank 17/130 (13%), Pediatrics)
7. **Chen K-R**, Wang H-Y, Liao Y-H, Sun L-H, Huang Y-H, Yu L and Kuo P-L. Effects of Septin-14 Gene Deletion on Adult Cognitive/Emotional Behavior. *Front. Mol. Neurosci*. (2022) 15:880858.
(第一作者; IF: 6.261; Rank 55/275 (20%), NEUROSCIENCES)
8. Chun-Yang Lin, Meng-Cen Shih, Hung-Chun Chang, Kuan-Jung Lin, Lin-Fang Chen, Sheng-Wen Huang, Mei-Lin Yang, Sheng-Kai Ma, Ai-Li Shiau, Jen-Ren Wang, **Kuan-Ru Chen** & Pin Ling. Influenza A virus NS1 resembles a TRAF3-interacting motif to target the RNA sensing-TRAF3-type I IFN axis and impair antiviral innate immunity. *J Biomed Sci* 28, 66 (2021).

(通訊作者 IF: 8.41; Rank 15/140 (10.7%), Medicine, Research & Experimental)

9. **Chen KR**, Yu T, Kang L, Lien YJ, Kuo PL. Childhood neurodevelopmental disorders and maternal hypertensive disorder of pregnancy. *Dev Med Child Neurol*. 2021 Apr 21. doi: 10.1111/dmcn.14893. Epub ahead of print.
(第一作者; IF: 5.449; Rank 7/129 (5.4%), Pediatrics)
10. **Chen, K. R.**, Ling, P. Interplays between Enterovirus A71 and the innate immune system. *J Biomed Sci* 26, 95 (2019)
(第一作者; IF: 5.203; Rank 20/136 (14.7%), Medicine, Research, Experimental)
11. Tsai, P. Y., **K. R. Chen**, Y. C. Li, and P. L. Kuo. NLRP7 Is Involved in the Differentiation of the Decidual Macrophages. *Int. J. Mol. Sci.* 2019, 20(23) (第二作者; IF: 4.183; Rank 78/299 (26%), Biochemistry & Molecular Biology)
12. **Chen, K.-R.**, Yu, C.-K., Kung, S.-H., Chen, S.-H., Chang, C.-F., Ho, T.-C., Lee, Y.-P., Chang, H.-C., Huang, L.-Y., Lo, S.-Y., Chang, J.-C., Ling, P. Toll-Like Receptor 3 Is Involved in Detection of Enterovirus A71 Infection and Targeted by Viral 2A Protease. *Viruses* 2018, 10, 689
(第一作者; IF: 3.811; Rank 11/35 (31.4%), Virology)
13. **Chen K.R.**, Chang C.H., Huang C.Y., Lin C.Y., Lin W.Y., Lo Y.C., Yang C.Y., Hsing E.W., Chen L.F., Shih S.R., Shiau A.L., Lei H.Y., Tan T.H., Ling P. 2012. TBK1-associated protein in endolysosomes (TAPE)/CC2D1A is a key regulator linking RIG-I-like receptors to antiviral immunity. *J Biol Chem* 287:32216-32221
(第一作者; IF: 4.773; Rank 66/290 (22.7%), Biochemistry & Molecular Biology)
14. Chang C.H., Lai L.C., Cheng H.C., **Chen K.R.**, Syue Y.Z., Lu H.C., Lin W.Y., Chen S.H., Huang H.S., Shiau A.L., Lei H.Y., Qin J, Ling P. 2011. TBK1-associated protein in endolysosomes (TAPE) is an innate immune regulator modulating the TLR3 and TLR4 signaling pathways. *J Biol Chem* 286:7043-7051
(第四作者; IF: 5.328; Rank 50/286 (17.4%), Biochemistry & Molecular Biology)
15. 凌斌、**陳冠儒**、何慈娟 (2013 年 10 月)。病毒與先天免疫系統的攻防。科學發展

Books

1. **Chen K.R.** and Ling P. Emerging roles of an innate immune regulator TAPE in the Toll-like receptor and RIG-I-like receptor pathways. 2015. *Inflammation and Immunity in Cancer*. Springer, Japan. Chapter 5: 6374 (Review book edited by Seya, T., Matsumoto, M., Udaka, K., and Sato, N.).

Academic Honors/ Experience

- 1 2024 年義大醫療學術海報日活動榮獲從業人員類別 **特優**
- 2 **博士後優良獎** Grand Review 博士生暨博士後研究學術競賽(2021 Aug). (**Oral presentation**)
- 3 **Fellowship by Ministry of Science and Technology**. The 16th International Congress of Immunology, Melbourne, Australia (2016 Aug). (**Oral presentation**)
- 4 **Fellowship by Foundation for The Advancement of Outstanding Scholarship**. The American Association of Immunologists Annual Meeting 2016. Seattle, USA (**Oral presentation and Poster**)
- 5 **Poster award** in the 2015 NHRI/IBMS Joint International Conference on Inflammation and Disease. Zhunan, Taiwan. (**Oral presentation and Poster**)
- 6 **Fellowship by Ministry of Science and Technology**. The 15th International Congress of Immunology,

Milan, Italy. **(Poster)**

- 7 **Poster award** in the 2011 International Symposium on Infectious Disease and Signal Transduction / 2011 Taiwan-Japan Joint Symposium on Cell Signaling and Gene Regulation. Tainan, Taiwan. 2011 **(Poster)**
- 8 **Poster award** in the Asia Pacific Association of Pediatric Allergy, Respiriology & Immunology (APAPARI) 2012 congress. Taipei, Taiwan. 2012 **(Poster)**

專利

1. 重組非結構蛋白 1、含此之重組流感病毒及免疫組成物暨其用於製備流感病毒疫苗組成物之用途。凌斌;陳冠儒;林峻暘;施孟岑;張宏全;林冠蓉;馬聖凱. 中華民國. 17853392. 2022-12-01 – 2040-06-03
2. 重組非結構蛋白 1、含此之重組流感病毒及免疫組成物暨其用於製備流感病毒疫苗組成物之用途。凌斌;陳冠儒;林峻暘;施孟岑;張宏全;林冠蓉;馬聖凱. 中華人民共和國. CN114072417B. 2024-05-24– 2040-06-04

邀請演講

114 年度生理醫學研習會暨國科會研究成果發表會

學會

中國生理學會