

## **CURRICULUM VITAE 簡歷**

### **MING-ZONG LAI, Ph.D. 賴明宗**

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### **CURRENT**

2022.8-present	Adjunct Research Fellow Institute of Molecular Biology Academia Sinica
1996.2-Present	Adjunct Professor Graduate Institute of Immunology National Taiwan University School of Medicine

### **EDUCATION**

1979.9-1984.8	Ph.D. in Pharmaceutical Chemistry, University of California, San Francisco.
1977.9-1979.8	M.S. in Biological Chemistry, University of Illinois, College of Medicine, Chicago.
1970.9-1974.6	B.S. in Pharmacy, National Taiwan University, Taipei.

### **APPOINTMENTS**

2010.9-2022.7	Distinguished Research Fellow Institute of Molecular Biology Academia Sinica
1996.8-2012.7	Adjunct Professor Graduate Institute of Microbiology and Immunology National Yang-Ming University
1995.3-2010.9	Research Fellow Institute of Molecular Biology Academia Sinica
1991.2-1996.1	Adjunct Associate Professor Graduate Institute of Microbiology National Taiwan University School of Medicine
1988.9-1996.7	Adjunct Associate Professor Graduate Institute of Microbiology and Immunology National Yang-Ming Medical School
1988.3-1995.3	Associate Research Fellow

Institute of Molecular Biology  
Academia Sinica  
1984.9-1988.2 Postdoctoral Fellow, Department of Biology, Massachusetts  
Institute of Technology.

## **AWARDS**

1977-1978 Graduate School Fellowship, University of Illinois.  
1979-1980 Reagent's Fellowship, University of California.  
1985-1987 Damon Runyon-Walter Winchell Postdoctoral Fellowship.  
1996-1998 Outstanding Award, National Science Council, R.O.C. 國科會傑出獎  
1998-2000 Outstanding Award, National Science Council, R.O.C. 國科會傑出獎  
2000-2002 Outstanding Award, National Science Council, R.O.C. 國科會傑出獎  
2003-2006 Research Scholar, National Science Council, Taiwan, R.O.C.  
2006-2009 Research Scholar, National Science Council, Taiwan, R.O.C.  
2010 Hou Jin-Duei Outstanding Research Honor 侯金堆傑出榮譽獎  
2010 國科會傑出特約研究員獎  
2017 Academic Award, Ministry of Education 教育部第 61 屆學術獎  
2022 Dr. Tsong-Ming Tu Memorial Lecture Award 故杜聰明博士紀念演  
講獎

## **PROFESSIONAL SOCIETIES**

Member, American Association of Immunologists  
Member, Chinese Society of Immunology, Taiwan  
Member, Chinese Society of Cell and Molecular Biology

## **RECENT PUBLICATIONS (\*Correspondence Author):**

1. Chuang, Y.-T., Fang, L.-W., Lin-Feng, M.-H., Chen, R.-H., and Lai, M.-Z.\*. (2008) The tumor suppressor death associated protein kinase targets to TCR-stimulated NF- $\kappa$ B activation. *J. Immunol.* 180: 3238-3249.
2. Lo, Y.-H., Wu, C. C., Shih, H.-M., and Lai, M.-Z.\*. (2008) Selective activation of NFAT by promyelocytic leukemia protein. *Oncogene* 27: 3821-3830.
3. Hsiao, H.-W., Liu, W.-H., Wang, C.-J., Lo, Y.-H., Wu, Y.-H., Jiang, S.-T., and Lai, M.-Z.\*. (2009) Deltex1 is a target of the transcription factor NFAT that promotes T cell anergy. *Immunity* 31:72-83. (Selected for Faculty of 1000 Biology).
4. Huang, H.-L., Yeh, W.-C., Lai, M.-Z., Mirtsos, C., Chau, H., Chou, C.-H., Benchimol, S. (2009) Impaired TNF $\alpha$ -induced A20 expression in E1A/Ras-transformed cells. *Br. J. Cancer* 101:1555-1564.
5. Kuo, W.-C., Yang, K.-T., Hsieh, S.-L., and Lai, M.-Z.\*. (2010) Ezrin is a negative regulator of death receptor-induced apoptosis. *Oncogene* 29:1374-1383.
6. Chuang, Y.-T., Lin, Y.-C., Lin, K.-H., Chou, T.-F., Kuo, W.-C., Yang, K.-T., Wu, P.-R., Chen, R.-H., Kimchi, A., and Lai, M.-Z.\*. (2011) Tumor suppressor death-associated protein kinase is required for full IL-1 $\beta$  production. *Blood* 117:960-970.

7. Wu, Y.-H., Yang, C.-Y., Chien, W.-L., Lin, K.-I., and Lai, M.-Z.\*. (2012) Removal of syndecan-1 promotes TRAIL-induced apoptosis in myeloma cells. *J. Immunol.* 188:2914-2921.
8. Lee, Y.-C., Chang, A.-Y., Lin-Feng, M.-H., Tsou, W.-I., Chiang, I.-H., and Lai, M.-Z.\*. (2012) Paxillin phosphorylation by JNK and p38 is required for NFAT activation. *Eur. J. Immunol.* 42:2165-2175. (Featured by "In this issue" editorial introduction).
9. Lo, Y.-H., Huang, Y.-W., Wu, Y.-H., Tsai, C.-S., Lin, Y.-C., Mo, S.-T., Kuo, W.-C., Chaung, Y.-T., Jiang, S.-T., Shih, H.-M., and Lai, M.-Z.\*. (2013) Selective inhibition of the NLRP3 inflammasome by targeting to promyelocytic leukemia protein in mouse and human. *Blood* 121:3185-3194.
10. Lai, M.-Z.\* and Chen, R.-H\*. (2014) Regulation of inflammation by DAPK. *Apoptosis* 19:357-363.
11. Wu, Y.-H., Kuo, W.-C., Wu, Y.-J., Yang, K.-T., Chen, S.-T., Jiang, S.-T., Gordy, C., He, Y.-W., and Lai, M.-Z.\*. (2014) Participation of c-FLIP in NLRP3 and AIM2 inflammasome activation. *Cell Death Diff.* 21:451-461.
12. Hsu, T.-S., Hsiao, H.-W., Wu, P.-J., Liu, W.-H., and Lai, M.-Z.\*. (2014) Deltex1 promotes protein kinase C $\theta$  degradation and sustains Casitas B-lineage lymphoma expression. *J. Immunol.* 193(4):1672-1680.
13. Hsieh, W. C., Chuang, Y.-T., Chiang, I.-H., Hsu, S.-C., Miao, S.-C., and Lai, M.-Z.\*. (2014) Inability to resolve specific infection generates innate immunodeficiency syndrome in *Xiap*<sup>-/-</sup> mice. *Blood.* 124(18):2847-2857. (Featured by "Comment" by Chiochetti, A. *Blood.* 124(18):2761-2763).
14. Hsiao, H.-W., Hsu, T.-S., Liu, W.-H., Hsieh, W. C., Chou, T.-F., Wu, Y.-J., Jiang, S.-T., and Lai, M.-Z.\*. (2015) Deltex1 antagonizes HIF-1 $\alpha$  and sustains the stability of regulatory T cells *in vivo*. *Nature Communications* 6, Feb 19. doi:10.1038/ncomms7353.
15. Wu, Y.-J., Wu, Y.-H., Hsiao, H.-W., He, Y.-W., and Lai, M.-Z.\*. (2015) Cellular FLIP inhibits myeloid cell activation by suppressing selective innate signaling. *J. Immunol.* 195(6): 2612-2623.
16. Cho, C.-Y., Lee, K.-T., Chen, W.-C., Wang, C.-Y., Chang, Y.-S., Huang, H.-L., Hsu, H.-P., Yen, M.-C., Lai, M.-Z., and Lai, M.-D.\* (2016) MST3 promotes proliferation and tumorigenicity through the VAV2/Rac1 signal axis in breast cancer. *Oncotarget* 7(12): 14586-14604.
17. Wu, Y.-H., and Lai, M.-Z.\*. (2016) Measuring NLR Oligomerization V: In Situ Proximity Ligation Assay. *Methods Molecular Biology* 1417:185-195. DOI:10.1007/978-1-4939-3566-6\_12
18. Chou, T.-F., Chuang, Y.-T., Hsieh, W. C., Chang, P.-Y., Liu, H.-Y., Mo, S.-T., Hsu, T.-S., Miao, S.-C., Chen, R.-H., Kimchi, A., and Lai, M.-Z.\*. (2016) Tumor suppressor death-associated protein kinase targets cytoplasmic HIF-1 $\alpha$  for Th17 suppression. *Nature Communications* 7:11904, doi: 10.1038/ncomms11904.
19. Wang, Y. T., Chen, J., Chang, C. W., Jen, J., Huang, T. Y., Chen, C. M., Shen, R., Liang, S. Y., Cheng, I. C., Yang, S. C., Lai, W. W., Cheng, K. H., Hsieh, T. S., Lai, M. Z., Cheng, H. C., Wang, Y. C., Chen, R. H\*. (2017) WDR4-driven PML destruction fosters immunosuppressive and pro-metastatic lung tumor microenvironment. *J. Clin. Invest.* 127(8): 2982-2997.
20. Hsu, T.-S., Mo, S.-T., Hsu, P.-N., and Lai, M.-Z.\*. (2018) c-FLIP is a target of the E3 ligase deltex1 in gastric cancer. *Cell Death & Disease* 9:135. DOI 10.1038/s41419-017-0165-6.

21. Hsieh, W. C., Hsu, T.-S., Chang, Y.-J., and Lai, M.-Z.\*. (2018) IL-6 receptor blockade corrects defects of XIAP-deficient regulatory T cells. *Nature Communications* 9:463. DOI: 10.1038/s41467-018-02862-4.
22. Hsu, T.-S., and Lai, M.-Z.\*. (2018) Hypoxia-inducible factor 1 $\alpha$  plays a predominantly negative role in regulatory T cell functions. *J. Leukc. Biol.* 104(5) 911-918.
23. Leu, C.-M., Hsu, T.-S., Kuo, Y.-P., Lai, M.-Z., Liu, P.-C., Chen, M.-H., Chang, D.-M., Tsai, C.-Y., and Chen, M.-H.\* (2019) Deltex1 suppresses T cell function and is negatively correlated with disease activity in systemic lupus erythematosus. *Rheumatology* 58(4): 719-728.
24. Wu, Y.-H., Chou, T.-F., Young, L., Hsieh, F.-Y., Pan, H.-Y., Mo, S.-T., Brown, S. B., Chen, R.-H., Kimchi, A., and Lai, M.-Z.\*. (2020) Tumor suppressor death-associated protein kinase 1 inhibits necroptosis by p38 MAPK activation. *Cell Death & Disease*. 11:305. DOI 10.1038/s41419-020-2534-9.
25. Hsu, T.-S., Lin, Y.-L., Wang, Y.-A., Mo, S.-T., Chi, P.-Y., Lai, A. C.-Y., Pan, H.-Y., Chang, Y.-J., and Lai, M.-Z.\*. (2020) Hypoxia-inducible factor 2 $\alpha$  is indispensable for regulatory T cell function. *Nature Communications* 11:5005. DOI:10.1038/s41467-020-18731-y.
26. Chen, C.-Y., Hung, Y.-F., Tsai, C.-Y., Shih, Y.-C., Chou, T.-F., Lai, M.-Z., Wang, T.-F., Hsueh, Y.-P. (2021) Transcriptomic analysis and C-terminal epitope tagging reveal differential processing and signaling of endogenous TLR3 and TLR7. *Front. Immunol.* 12:686060. doi: 10.3389/fimmu.2021.686060.
27. Ku, C.-L.\* , Chen, I.-T., and Lai, M.-Z.\*. (2021) Infection-induced inflammation from specific inborn errors of immunity to COVID-19. *FEBS J.* 288(17): 5021-5041. doi: 10.1111/febs.15961.
28. Chen, I.-T., Chen, H.-C., Lo, Y.-H., Lai, P.-Y., Hsieh, F.-Y., Wu, Y.-H., Shih, H.-M., and Lai, M.-Z.\*. (2021) Promyelocytic leukemia protein targets MK2 to promote cytotoxicity. *EMBO Reports* 22(12): e52254. DOI: 10.15252/embr.202052254.
29. Wu, Y.-H., Mo, S.-T., Chen, I.-T., Hsieh, F.-Y., Hsieh, S.-L., Zhang, J., and Lai, M.-Z.\*. (2022) Caspase-8 inactivation drives autophagy-mediated inflammasome activation in myeloid cells. *Science Advances* 8, eabn9912. doi/10.1126/sciadv.abn9912.