

CURRICULUM VITAE

NAME	POSITION TITLE
 Kuo-I Lin	Distinguished Professor Genomics Research Center, Academia Sinica Taipei, Taiwan Office: +886-2-2787-1253 Email: kuoilin@gate.sinica.edu.tw

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Columbia University, New York, NY, US	Post-doc.	2004	Immunology
The Johns Hopkins University, Baltimore, MD, US	Ph.D.	1998	Molecular Microbiology and Immunology
National Taiwan University, Taipei, Taiwan	M.S.	1993	Medical Technology
National Taiwan University, Taipei, Taiwan	B.S.	1991	Medical Technology

A. POSITIONS AND HONORS

Positions and Employment

- 2022 July- Distinguished Research Fellow, Genomics Research Center, Academia Sinica, Taipei, Taiwan
- 2014 Dec.- Division Director of Medical Biology, Genomics Research Center, Academia Sinica, Taipei, Taiwan
- 2014-2022 Research Fellow, Genomics Research Center, Academia Sinica, Taipei, Taiwan
- 2009-2014 Associate Research Fellow (with tenure), Genomics Research Center, Academia Sinica, Taipei, Taiwan
- 2004-2009 Assistant Research Fellow, Genomics Research Center, Academia Sinica, Taipei, Taiwan
- 2019- Adjunct Research Fellow, Biomedical Translational Research Center, Academia Sinica, Taipei, Taiwan
- 2017- Joint Professor, Institute of New Drug Development, China Medical University, Taichung, Taiwan
- 2016- Adjunct Professor, Graduate Institute of Immunology, National Taiwan University, Taipei, Taiwan
- 2010-2016 Adjunct Associate Professor, Graduate Institute of Immunology, National Taiwan University, Taipei, Taiwan

Honors

2012, 2013, 2016 & 2019 Academia Sinica Significant Research Publications

2019	Outstanding Research Achievement to National Health, Ming-Ning Wang Memorial Foundation
2018	Academia Sinica Investigator Award
2016	Outstanding Research Award, Ministry of Science and Technology (MOST), Taiwan
2015	Chair in Biotechnology, Taiwan Bio-Development Foundation
2014	Outstanding Research Award, The Chinese Society of Immunology, Taiwan
2014	Young Scientist Research Award, Tien-Te Lee Biomedical Foundation, Taiwan
2013	Outstanding Research Award, National Science Council (MOST), Taiwan
2010	Academia Sinica Career Development Award
2008	1 st ASAIHL-Scopus Young Scientist Award (Winner of Life Sciences)
2005	Li Foundation Heritage Prize
1999-2002	The Leukemia and Lymphoma Society Fellowship
1999	Phi Beta Kappa, The Johns Hopkins University
1995	Betty Lee Hampil Honorary Fellowship, Dept. of Molecular Microbiology & Immunology. The Johns Hopkins University
1987-1991	National Taiwan University Presidential Award (top 5% student)

Selected Invited Talks (2014-2022)

2022

1. Mechanisms underlying B cell differentiation and antibody effector functions. Special seminar for celebrating thirty-fifth anniversary, Chang Gung University, TaoYuan, Taiwan. 04/15/2022
2. Galectin-8 suppresses colorectal cancer metastasis via binding with TGF β receptor. 2022 Taiwan Forum Retreat, Taiwan. 05/06/2022

2021

1. Mechanisms underlying the regulation of differentiation and effector functions of B cells, Mu-Shan Seminar, Taipei Medical University, Taipei, Taiwan. 05/06/2021

2020

1. Factors regulating B cell development and function, National Taiwan University, Taipei, Taiwan. 03/20/2020
2. Signaling and molecular pathways contributing to B-cell chronic lymphocytic leukemia progression and the survival of multiple myeloma. Keystone symposia E3 (canceled due to COVID-19).
3. Molecular mechanisms underlying B cell activation and differentiation, The Taiwan Society for Biochemistry and Molecular Biology Autumn Camp, Tainan, Taiwan. 10/31/2020

2019

1. O-GlcNAcylation in B cell immunity, GRC & Hanoi Medical University Bilateral Workshop, Taipei, Taiwan. 06/12/2019
2. Uncovering pathogenic mechanisms of inflammatory diseases, GRC, AS & Osaka University Bilateral Symposium, Taipei, Taiwan. 10/08/2019
3. Factors regulating B cell development and function, National Cheng Kung University, Tainan, Taiwan. 10/14/2019
4. Molecular mechanisms underlying B cell activation and differentiation, 2019 International Symposium of Korean Autoimmunity, Seoul, Korea. 12/21/2019 *Keynote Speaker*.

2018

1. The sweet side of B cells, Academia Sinica & UC Davis Bilateral Joint Symposium, Davis, USA. 01/23/2018
2. O-GlcNAcylation in B cell immunity, The 33rd Joint Annual Conference of Biomedical Science, Taipei, Taiwan. 03/24/2018
3. O-GlcNAcylation in B cell immunity, Immunology 2018, American Association for

Immunologists (AAI) Annual Meeting, Austin, USA. 05/06/2018, *Invited Speaker and Session Chair*.

4. O-GlcNAcylation in B cell immunity, 24th IUBMB Congress, Seoul, South Korea. 06/08/2018, *Invited Speaker and Session Chair*.
5. O-GlcNAcylation in B cell immunity, The 4th Cross-strait Life Sciences Forum, Taipei, Taiwan. 08/27/2018
6. B cell activation and differentiation in autoimmune disease: *Factors that Regulate the Generation and Maintenance of Plasma Cells*. APLAR: Asia Pacific League of Associations for Rheumatology Congress Conference. Koahsiung, Taiwan. 09/05/2018

2017

1. Factors regulating inflammation and B cell responses, China Medical University, Taichung, Taiwan. 03/03/2017
2. Regulation of B cell activation and differentiation by post-translational modifications, Cross-straits Immunology Forum, Taipei, Taiwan. 03/18/2017
3. Factors regulating B cell responses, National Taiwan University, Taipei, Taiwan. 03/23/2017
4. The impact of glycans on B cell activation and differentiation, RIKEN -Academia Sinica Joint Conference: Focus on Chemistry and Chemical Biology, Wako, Japan. 03/29/2017
5. Galectins and O-GlcNAcylation in B cell activation and differentiation, The American Association of Immunologists Annual Meeting, Washington, USA. 05/16/2017
6. The sweet side of B cells, Glycoscience Forum, Academia Sinica, Taipei, Taiwan. 07/06/2017
7. Essential roles of O-GlcNAcylation in B cell activation, Glyco 24, the 24th International Symposium on Glycoconjugates (IGO), JeJu island, Korea. 08/28/2017.
8. Regulatory mechanisms of Blimp-1 in cellular differentiation, International Conference of Developmental Biology, Stem Cells and Regenerative Medicine, Taipei, Taiwan. 09/15/2017
9. The roles of galectins in normal and malignant B cells, IUBMB, Taipei, Taiwan. 12/04/2017

2016

1. Regulatory mechanisms of B cell differentiation, National Taiwan University, Taipei, Taiwan. 03/15/2016
2. Regulating inflammation and B cell immunity, UMMS-Academia Sinica-NHRI Joint Symposium, Taipei, Taiwan. 06/27/2016
3. Regulatory mechanisms in B cell activation and plasma cell formation, The 6th International Conference on B cells and Autoimmunity, Taichung, Taiwan. 08/17/2016
4. Regulating inflammation and B cell immunity, Bilateral symposium of AS GRC and Osaka University. Osaka, Japan. 10/06/2016
5. Regulation of B cell activation and differentiation by post-translational modifications, Cross-straits Life Sciences Forum, Shanghai, China. 11/08/2016

2015

1. Vaccination with monoglycosylated hemagglutinin induced cross-strain immunity against influenza virus infections, Gordon Research Conference: Glycobiology, Lucca (Barga), Italy. 03/05/2015
2. Regulating inflammation and B cell immunity, Development Center for Biotechnology, Taipei, Taiwan. 07/23/2015
3. The impact of glycans on B cell immunity, RIKEN-Academia Sinica Joint Conference on Chemical Biology, Academia Sinica, Taipei, Taiwan. 10/16/2015
4. The Roles of Blimp-1 in Skin Inflammation and B Cell Immunity, The 11st Annual Meeting of Taiwanese Society for Investigative Dermatology, Taipei, Taiwan. 11/21/2015

2014

1. Modulation of B cell Responses by Galectins and O-GlcNAcylation, Glycoretreat, Taiwan. 04/24/2014
2. Regulating inflammation and B cell immunity, Cross-strait Immunology Conference, Taipei,

- Taiwan. 04/28/2014
3. Regulating B cell immunity and inflammation, Mu-Shan Seminar, Taipei Medical University, Taipei, Taiwan. 06/12/2014
 4. Regulating inflammation and B cell immunity, National Cheng Kung University, Tainan, Taiwan. 09/25/2014
 5. PRDM1 (Blimp-1) controls human germ cell fate choice. Taiwan Society for Stem Cell Research, Taipei, Taiwan. 10/04/2014
 6. Regulating Skin Inflammation and B Cell Immunity by Blimp-1, NHRI/IBMS Joint International Conference on Inflammation & Disease, Academia Sinica, Taipei, Taiwan. 10/17/2014
 7. Modulation of B Cell Responses by Galectins, The 1st Glycoimmunology Meeting, Taipei, Taiwan. 12/04/2014

B. PEER-REVIEWED PUBLICATIONS (in reverse chronological order)

ORCID 0000-0003-4477-0798

PUBLICATIONS

1. Chang, L.-Y., Liang, S.-Y., Lu, S.-C., Tseng, H.-C., Tsai, H.-Y., Tang, C.-J., Sugata, M., Chen, Y.-J., Chen, Y.-J., Wu, S.-J., Lin, K.-I., Khoo, K.-H., and Angata, T. (2022) Molecular basis and role of Siglec-7 ligand expression on chronic lymphocytic leukemia B cells. *Frontiers in Immunology*. 13:840388
2. Wu, J.-L., Wu, H.-Y., Wu, S.-J., Tsai, H.-Y., Weng, S.-H., Lin, K.-T., Lin, L.-I., Yao, C.-Y., Zamanova, M., Lee, Y.-Y., Angata, T., Tien, H.-F., Chen, Y.-J.* and Lin, K.-I* (2022) Phosphoproteomics reveals the role of constitutive KAP1 phosphorylation by B-cell receptor signaling in chronic lymphocytic leukemia. *Molecular Cancer Research*. 20(8):1222-1232. ([Featured article](#)) *corresponding author
3. Huang, H.-Y., Liao, H.-Y., Chen, X., Wang, S.-W., Cheng, C.-W., Shahed-Al-Mahmud, M. Chen, T.-H., Lo, J. M., Liu, Y.-M., Wu, Y.-M., Ma, H.-H., Chang, Y.-H., Tsai, H.-Y., Chou, Y.-C., Hsieh, Y.-P., Tsai, C.-Y., Huang, P.-Y., Chang, S.-Y., Chao, T.-L., Kao, H.-C., Tsai, Y.-M., Chen, Y.-H., Wu, C.-Y., Jan, J.-T., Cheng, T.-J. R., Lin, K.-I*, Ma, C*. and Wong, C.-H.* (2022) Vaccination with SARS-CoV-2 spike protein lacking glycan shields elicits enhanced protective responses in animal models. *Science Translational Medicine*. 6; 14 (639) ([Featured article](#)) *corresponding author
4. Gebreyesus, S. T., Siyal, A. A., Kitata, R. B., Chen, S.-W., Enkhbayar, B., Angata, T., Lin, K.-I., Chen, Y.-J. and Tu., S.-L. (2022) Streamlined single-cell proteomics by an integrated microfluidic chip and data-independent acquisition mass spectrometry. *Nature Communications*. 13(1):37.
5. Hsieh, W.-C., Lai, E.-Y., Liu, Y.-T., Wang, Y.-F., Tzeng, Y.-S., Cui, L., Lai, Y.-J., Huang, H.-C., Huang, J.-H., Ni, H.-C., Tsai, D.-Y., Liang, J.-J., Liao, C.-C., Jiang, L., Liu, M.-T., Wang, J.-T., Chang, S.-Y., Chen, C.-Y., Tsai, H.-C., Chang, Y.-M., Wernig, G., Li, C.-W., Lin, K.-I, Lin, Y.-L., Tsai, H.-K., Huang, Y.-T. and Chen, S.-Y. (2021) Natural killer receptor and ligand composition influences the clearance of SARS-CoV-2. *Journal of Clinical Investigation*. 131 (21): e146408.
6. Ko, Y.-A., Yu, Y.-H., Wu, Y.-F., Tseng, Y.-C., Chen, C.-L., Goh, K.-S., Liao, H.-Y., Chen, T.-H., Cheng, R. T.-J., Yang, A.-S., Wong, C.-H., Ma, C. and Lin, K.-I* (2021) A non-neutralizing antibody broadly protects against influenza virus infection by engaging effector cells. *PLOS Pathogens*. 17(8): e1009724. *corresponding author
7. Lo, L.-W., Chang, C.-W., Chiang, M.-F., Lin, I.-Y., and Lin, K.-I* (2021) Marginal zone B cells assist with neutrophil accumulation to fight against systemic *Staphylococcus aureus* infection. *Frontiers in Immunology*. 12:636818. doi: 10.3389/fimmu.2021.636818. *corresponding author
8. Lee, W., Wang, L.-T., Yen, M.-L., Hsu, P.-J., Lee, Y.-W., Liu, K.-J., Lin, K.-I, Su, Y.-W., Sytwu,

- H.-K., and Yen, B. L. (2021) Resident vs. nonresident multipotent mesenchymal stromal cell interactions with B lymphocytes result in disparate outcomes. *Stem Cells Transl Med.* 10(5):711-724
9. Liao, H.-Y., Wang, S.-C., Ko, Y.-A. **Lin, K.-I.**, Ma, C., Cheng, R. T.-J., and Wong, C.-H. (2020) Chimeric hemagglutinin vaccine elicits broadly protective CD4 and CD8 T cell responses against multiple influenza strains and subtypes. *Proc Natl Acad Sci USA.* 117(30):17757-17763.
 10. Chang, Y.-H., Weng, C.-L., and **Lin, K.-I*** (2020) O-GlcNAcylation and its role in the immune system. *J Biomed Sci.* 27(1):57. *corresponding author
 11. Chen, H.-Y., Wu, Y.-F., Chou, F.-C., Wu, Y.-H., Yeh, L.-T., **Lin, K.-I.**, Liu, F.-T., Sytwu, H.-K. (2020) Intracellular galectin-9 enhances proximal TCR signaling and potentiates autoimmune disease. *Journal of Immunology.* 204(5):1158-1172.
 12. Liu, C.-H., Chou, C.-T., Chen, C.-H., Chen, C.-H., Yang, S.-Y., Ko, Y.-A., Wu, Y.-T., Wang, C.-C., Liu, F.-C., Yue, C.-T., Hung, S.-C., Tzeng, I-S., Tsai, W.-C. *, and **Lin, K.-I*** (2020) Aberrant distribution and function of plasmacytoid dendritic cells in patients with ankylosing spondylitis are associated with unfolded protein response. *Kaohsiung Journal of Medical Sciences.* DOI: 10.1002/kjm2.12184. *corresponding author
 13. Liu, C.-H., Raj, S, Chen, C.-H., Hung, K.-H., Chou, C.-T., Chen, I.-Ho., Chien, J.-T., Lin, I-Y., Yang, S.-Y., Angata, T., Tsai, W.-C., Wei. J. C.-C., Tzeng, I-S., Hung, S.-C.* , and **Lin, K.-I*** (2019) HLA-B27-mediated activation of TNAP phosphatase promotes pathogenic syndesmophyte formation in ankylosing spondylitis. *Journal of Clinical Investigation.* 129 (12): 5357-5373. *corresponding author ([Highlighted by Nature Reviews Rheumatology, Academia Sinica Significant Research Publication](#))
 14. Tsai, D.-Y., Hung, K.-H., Chang, C.-W., and **Lin, K.-I*** (2019). Regulatory Mechanisms of B cell responses and the implication in B cell-related diseases. *J Biomed Sci.* 26(1): 64. *corresponding author
 15. Wang, Y.-H., Tsai, D.-Y., Ko, Y.-A., Yang, T.-T., Lin, I-Y., Hung, K.-H., and **Lin, K.-I*** (2019) Blimp-1 contributes to the development and function of regulatory B cells. *Frontiers in Immunology* 10:1909. doi: 10.3389/fimmu.2019.01909. *corresponding author
 16. Tseng, Y.-C., Wu, C.-Y., Liu, M.-L., Chen, T.-H., Chiang, W.-L., Yu, Y.-H., Jan, J.-T., **Lin, K.-I.**, Wong, C.-H., and Ma, C. (2019) Egg-based influenza split virus vaccine with monoglycosylation induces cross-strain protection against influenza virus infections. *Proc Natl Acad Sci USA.* 116 (10): 4200-4205.
 17. Ko, Y.-A., Chan, Y.-H., Liu, C.-H., Liang, J.-J., Chuang, T.-H., Hsueh, Y.-P., Lin, Y.-L., and **Lin, K.-I*** (2018) Blimp-1-mediated pathway promotes type I IFN production in plasmacytoid dendritic cells by targeting to interleukin-1 receptor-associated kinase M. *Frontiers in Immunology.* <https://doi.org/10.3389/fimmu.2018.01828>. *corresponding author
 18. Tsai, M.-S., Chiang, M.-T., Tsai, D.-L., Yang, C.-W., Hou, H.-S., Li, Y.-R., Chang, P.-C., Lin, H. H., Chen, H.-Y., Hwang, I.-S., Wei, P.-K., Hsu, C.-P., **Lin, K.-I.**, Liu, F.-T., Chau, L.-Y. (2018) Galectin-1 restricts vascular smooth muscle cell motility via modulating adhesion force and focal adhesion dynamics. *Scientific Reports.* 8(1): 11497.
 19. Hung, K.-H., Woo, Y. H., Lin, I-Y., Liu, C.-H., Wang, L.-C., Chen, H.-Y., Chiang, B.-L., and **Lin, K.-I*** (2018) The KDM4A/KDM4C/NF-κB and WDR5 epigenetic cascade regulates the activation of B cells. *Nucleic Acids Research.* 46(11): 5547-5560. *corresponding author
 20. Wu, J.-L., Chiang, M.-F., Hsu, P.-H., Tsai, D.-Y., Hung, K.-H., Wang, Y.-H., Angata, T.* and **Lin, K.-I*** (2017) O-GlcNAcylation is required for B cell homeostasis and antibody responses. *Nature Communications.* 8(1): 1854. *corresponding author
 21. Lai, C.-Y., Su, Y.-W., **Lin, K.-I.**, Hsu, L.-C. and Chuang, T.-H. (2017) Natural modulators of endosomal Toll-like receptor-mediated psoriatic skin inflammation. *Journal of Immunology Research.* 10.1155/2017/7807313.
 22. Chen, T.-T., Tsai, M.-H., Kung, J.T., **Lin, K.-I.**, Decker, T. and Lee, C.-K. (2016) STAT1

- regulates marginal zone B cell differentiation in response to inflammation and infection with blood-borne bacteria. *Journal of Experimental Medicine*. 213: 3025-3039.
23. Wu, J.-L., Wu, H.-Y., Tsai, D.-Y., Chiang, M.-F., Chen, Y.-J., Gao, S., Lin, C.-C., Lin, C.-H., Khoo, K.-H., Chen, Y.-J.* and Lin, K.-I* (2016) Temporal regulation of Lsp1 O-GlcNAcylation and phosphorylation during apoptosis of activated B cells. *Nature Communications*. 7:12526. doi: 10.1038/ncomms12526. *corresponding author ([Academia Sinica Significant Research Publication](#))
 24. Chien, C.-Y., Lee, H.-S. Lee, Cho, C.H.H., Lin, K.-I, Tosh, D., Wu, R.-R., Mao, W.-Y., Shen, C.-N. (2016) Maternal Vitamin A deficiency during pregnancy affects vascularized islet development. *Journal of Nutritional Biochemistry*. 36:51-59.
 25. Yu, Y.-H., and Lin, K.-I* (2016) Factors that regulate the generation of antibody-secreting plasma cells. *Advances in Immunology*. 131:61-99. *corresponding author
 26. Hung, K.-H., Su, S.-T., Chen, C.-Y., Hsu, P.-H., Huang, S.-Y., Wu, W.-J., Chen, M.M., Chen, H.-Y., Wu, P.-C., Lin, F.-R., Tsai, M.-D., and Lin, K.-I* (2016) Aiolos collaborates with Blimp-1 to regulate the survival of multiple myeloma cells. *Cell Death and Differentiation*. 23(7), 1175–1184. *corresponding author
 27. Tsai, D.-Y., Hung, K.-H., Lin, I-Y., Su, S.-T., Wu, S.-Y., Chung, C.-H., Wang, T.-C., Li, W.-H., Shih, A. C.-C.* , and Lin, K.-I* (2015) Uncovering miRNA regulatory hubs that modulate plasma cell differentiation. *Scientific Reports*. 5: 17957. *corresponding author
 28. Tsai, C.-M. and Lin, K.-I* (2015) Examination of the role of galectins in plasma cell differentiation. *Methods Mol Biol*. 1207:153-167. *corresponding author
 29. Kretzschmar, K., Cottle, D.L., Donati, G, Chiang, M.-F., Quist, S.R., Gollnick, H.P., Natsuga, K., Aoyagi, S., Lin, K.-I, and Watt, F. M. (2014) BLIMP1 does not define a sebaceous gland progenitor population but is required for epidermal homeostasis. *Stem Cell Reports*. 3: 620-633. ([Cover story](#))
 30. Chiu, Y.-K., Lin, I-Y., Su, S.-T., Wang, K.-H., Yang, S.-Y., Tsai, D.-Y., Hsieh, Y.-T., and Lin, K.-I*. (2014) Transcription factor ABF-1 suppresses plasma cell differentiation but facilitates memory B cell formation. *Journal of Immunology*. 193(5): 2207-2217. *corresponding author
 31. Tsai, C.-M., Wu, H.-Y., Su, T.-H., Kuo, C.-W., Huang, H.-W., Chung, C.-H., Chen, C.-S., Khoo, K.-H., Chen, Y.-J.* and Lin, K.-I* (2014) Phosphoproteomic analyses reveal that galectin-1 augments the dynamics of B-cell receptor signaling. *Journal of Proteomics* 103: 241-253. *corresponding author
 32. Huang, K.-Y., Wu, H.-Y., Chen, Y.-J., Lu, C.-T., Su, M.-G., Hsieh, Y.-C., Tsai, C.-M., Lin, K.-I, Huang, H.-D., Lee, T.-Y. and Chen, Y.-J. (2014) RegPhos 2.0: an update resource to explore protein kinase-substrate phosphorylation networks in mammals. *Database: the journal of biological databases and curation (Oxford)* 25; 2014(0): bau034
 33. Lin, I-Y., Chiu, F.-L., Yeang, C.-H., Chen, H.-F., Chuang, C.-Y., Yang, S.-Y., Hou, P.-S., Sintupisut, N., Ho, H.-N., Kuo, H.-C.* , and Lin, K.-I* (2014) Suppression of the SOX2 neural effector gene by PRDM1 promotes human germ cell fate in embryonic stem cells. *Stem Cell Reports*. 2(2): 189-204. *corresponding author
 34. Lin, M.-H., Yeh, L.-T., Chen, S.-J., Chiou, H.-Y., Chu, C.-C., Yen, L. B., Lin, K.-I, Chang, D.-M., and Sytwu, H.-K. (2014) T cell-specific BLIMP-1 deficiency exacerbates experimental autoimmune encephalomyelitis in nonobese diabetic mice by increasing Th1 and Th17 cells. *Clinical Immunology*. 151: 101-113.
 35. Chen, J.-R., Yu, Y.-H., Tseng, Y.-C., Chiang, W.-L., Chiang, M.-F., Ko, Y.-A., Chiu, Y.-K., Ma, S.-H., Wu, C.-Y., Jan, J.-T., Lin, K.-I*, Ma, C.* , and Wong, C.-H*. (2014) Vaccination of monoglycosylated hemagglutinin induces cross-strain protection against Influenza virus infections. *Proc Natl Acad Sci USA*. 111(7): 2476-2481. *corresponding author ([Highlighted by PNAS](#))
 36. Liao, S.-F, Liang, C.-H., Ho, M.-Y., Hsu, T.-L., Tsai, T.-I, Hsieh, Y. S.-Y., Tsai, C.-M., Li, S.-T.,

- Cheng, Y.-Y., Tsao, S.-M., Lin, T.-Y., Lin, Z.-Y., Yang, W.-B., Ren, C.-T., Lin, K.-I, Khoo, K.-H., Lin, C.-H., Hsu, H.-Y., Wu, C.-Y., and Wong, C.-H. (2013) Immunization of fucose-containing polysaccharides from Reishi mushroom induces antibodies to tumor-associated Globo H-series epitopes. *Proc Natl Acad Sci USA*. 110(34): 13809-13814. ([Highlighted by PNAS](#))
37. Huang, H.-W., Chen, C.-H., Lin, C.-H., Wong, C.-H.* and Lin, K.-I*. (2013) B cell maturation antigen is modified by a single N-glycan chain that modulates ligand binding and surface retention. *Proc Natl Acad Sci USA* 110(27): 10928-10933. *corresponding author
38. Tu, Z., Hsieh, H.-W., Tsai, C.-M., Hsu, C.-W., Wang, S.-G., Wu, K.-J., Lin, K.-I*, and Lin, C.-H*. (2013) Synthesis and characterization of sulfated Gal- β -1,3/4-GlcNAc disaccharides via consecutive Protection/glycosylation Steps. *Chemistry-An Asian Journal* 8 (7): 1536-1550. *corresponding author
39. Wang, S.-H., Tsai, C.-M., Lin, K.-I* and Khoo, K.-H.* (2013) Advanced mass spectrometry and chemical analyses reveal the presence of terminal disialyl motif on mouse B cells. *Glycobiology*. 23(6): 677-689. *corresponding author
40. Chiang, M.-F., Yang, S.-Y., Lin, I-Y., Hong, J.-B., Lin, S.-J., Ying, H.-Y., Chen, C.-M., Wu, S.-Y., Liu, F.-T., and Lin, K.-I* (2013) Inducible deletion of Blimp-1 gene in adult epidermis causes granulocyte-dominated chronic skin inflammation in mice. *Proc Natl Acad Sci USA* 110 (16): 6476-6481. *corresponding author ([Highlighted by Nature Reviews Immunology and Nature Immunology, Academia Sinica Significant Research Publication](#))
41. Lin, M.-H., Chou, F.-F., Yeh, L.-T., Fu, S.-H., Chiou, H.-Y., Lin, K.-I, Chang, D.-M. and Sytwu H.-K. (2013) B lymphocyte-induced maturation protein 1 (BLIMP-1) attenuates autoimmune diabetes in NOD mice by suppressing Th1 and Th17 cells. *Diabetologia* 56: 136-146.
42. Lin, F.-R., Huang, S.-Y., Hung, K.-H., Su, S.-T., Chung, C.-H., Matsuzawa, A., Hsiao, M., Ichijo, H. and Lin, K.-I* (2012) ASK1 promotes apoptosis of normal and malignant plasma cells. *Blood* 120 (5): 1039-1047. *corresponding author ([Academia Sinica Significant Research Publication](#))
43. Ying, H.-Y., Su, S.-T., Hsu, P.-H., Chang, C.-C., Lin, I-Y., Tseng, Y.-H., Tsai, M.-D., Shih, H.-M. and Lin, K.-I* (2012) SUMOylation of Blimp-1 is critical for plasma cell differentiation. *EMBO Reports*. 13 (7): 631-637. *corresponding author ([Cover story and highlighted by A-IMBN](#))
44. P., Ho, H.-N., and Kuo, H.-C. (2012) Meiotic competent human germ cell-like cells derived from human embryonic stem cells induced by BMP4/WNT3A signaling and OCT4/EpCAM selection. *Journal of Biological Chemistry*. 287: 14389-14401.
45. 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.
46. Hsu, Y., Lu, X.-A.; Zulueta, M., Tsai, C.-M., Lin, K.-I, Hung, S.-C. and Wong, C.-H. (2012) Acyl and Silyl group effects in reactivity-based one-pot glycosylation: synthesis of embryonic stem cell surface carbohydrates Lc4 and IV2Fuc-Lc4. *Journal of the American Chemical Society*. 134: 4549-4552.
47. Tsai, C.-M., Guan, C.-H., Hsieh, H.-W., Hsu, T.-L., Tu, Z., Wu, K.-J., Lin, C.-H*. and Lin, K.-I* (2011) Galectin-1 and galectin-8 have redundant roles in promoting plasma cell formation. *J. Immunol.* 187(4): 1643-1652. *corresponding author
48. Chan, Y.-H., Chiang, M.-F., Tsai, Y.-C., Su, S.-T., Chen, M.-H., Hou, M.-S. and Lin, K.-I* (2009) Absence of the transcriptional repressor Blimp-1 in hematopoietic lineages reveals its role in the conventional dendritic cell homeostatic development and function. *J. Immunol.* 183: 7039-7046. *corresponding author ([Highlighted by Journal of Immunology](#))
49. Su, S.-T., Ying, H.-Y., Chiu, Y.-K., Lin, F.-R., Chen, M.-Y. and Lin, K.-I* (2009) Involvement of LSD1 in Blimp-1-mediated gene repression during plasma cell differentiation. *Mol Cell Biol.* 29: 1421-1431. *corresponding author
50. Tsai, C.-M., Chiu, Y.-K., Hsu, T.-L., Lin, I-Y., Hsieh, S.-L. and Lin, K.-I* (2008) Galectin-1 promotes immunoglobulin production during plasma cell differentiation. *J. Immunol.* 181: 4570-4579. *corresponding author ([Highlighted by Consortium for Functional Glycomics](#))

51. Lin, F.-R., Kuo, H.-K., Ying, H.-Y., Yang, F.-H. and Lin, K.-I* (2007) Induction of apoptosis in plasma cells by Blimp-1 knockdown. *Cancer Research*. 67: 11914-11923. *corresponding author
52. Lin, K.-I*, Kao, Y.-Y., Kuo, H.-K., Yang, W.-B., Chou, A., Lin, H.-H., Yu, A.L. and Wong, C.-H. (2006) Reishi polysaccharides induce immunoglobulin production through the TLR4/TLR2-mediated induction of transcription factor blimp-1. *J. Biol. Chem.* 281: 24111-24123. *corresponding author

(Ph.D. and Postdoctoral Research Work)

53. Shapiro-Shelef, M., Lin, K.-I, Savitsky, D., Liao, J. and Calame, K. (2005) Blimp-1 is required for maintenance of long-lived plasma cells in the bone marrow. *J. Exp. Med.* 202:1471-1476
54. Johnson, K., Pflugh, D.L., Yu, D., Hesslein, D.G.T., Lin, K.-I, Bothwell, A.L., Thomas-Tikhonenko, A., Schatz, D.G. and Calame K. (2004) B-cell specific loss of histone 3 Lysine 9 methylation in the V_H locus depends on Pax5. *Nature Immunology*. 5: 853-861.
55. Lin, K.-I and Calame, K. (2004) Introduction of genes into primary murine splenic B cells using retrovirus vectors. *Methods Mol Biol.* 271: 139-148.
56. Shapiro-Shelef, M., Lin, K.-I, McHeyzer –Williams, L.J., Liao, J., McHeyzer-Williams, M.G. and Calame, K. (2003) Blimp-1 is required for the formation of immunoglobulin secreting plasma cells and pre-plasma memory B cells. *Immunity*. 19: 607-620.
57. Lin, K.-I, Tunyaplin, C. and Calame, K. (2003) Transcriptional regulatory cascades controlling plasma cell differentiation. *Immunological Review*. 194, 19-28.
58. Calame, K., Lin, K.-I and Tunyaplin, C. (2003). Regulatory mechanisms that determine the development and function of plasma cells. *Annu Rev Immunol.* 21: 205-230.
59. Angelin-Duclos, C., Johnson, K., Liao, J., Lin, K.-I and Calame K. (2002) An interfering form of Blimp-1 increases IgM secreting plasma cells and blocks maturation of peripheral B cells. *Eur. J. of Immunol.* 32: 3765-3775.
60. Shaffer, A.L. #, Lin, K.-I#, Kuo T. C., Yu, X., Hurt, E.M., Rosenwald, A., Giltnane, J.M., Yang, L., Zhao, H., Calame K. and Staudt, L.M. (2002) Blimp-1 orchestrates plasma cell differentiation by extinguishing the mature B cell gene expression program. *Immunity*. 17: 51-62. #co-first authors
61. Lin, K.-I, Angelin-Duclos, C., Kuo, T.C. and Calame K. (2002) Blimp-1-dependent repression of Pax-5 is required for differentiation of B cells to IgM secreting plasma cells. *Mol Cell Biol.* 22: 4771-4780.
62. Lin, K.-I, Lin, Y. and Calame K. (2000) Repression of c-myc is necessary but not sufficient for terminal differentiation of B lymphocytes in vitro. *Mol Cell Biol.* 20: 8684-8695.
63. Angelin-Duclos, C., Cattoretti, G., Lin, K.-I, and Calame K. (2000) Commitment of B lymphocytes to a plasma cell fate is associated with Blimp-1 expression in vivo. *J. Immunol.* 165: 5462-5471.
64. Piskurich, J. F.#, Lin, K.-I#, Lin, Y., Wang, Y., Ting, J. P.-Y. and Calame K. (2000) BLIMP-1 mediates extinction of major histocompatibility class II transactivator expression in plasma cells. *Nature Immunology*. 1: 526-532. #co-first authors
65. Angelin-Duclos, C., Cattoretti, G., Chang, D.H., Lin, K.-I, Lin, Y., Yu, J. and Calame K. (1999) The role of B lymphocyte induced maturation protein-1 (BLIMP-1) in terminal differentiation of B cells and other cell lineages. *Cold Spring Harb Symp Quant Biol* 64: 61-70.
66. Zaman K., Ryu, H., Hall, D., O'Donovan, K., Lin, K.-I, Miller, M.P., Marquis, J.C., Baraban, J.M., Semenza, G.L. and Ratan, R.R. (1999) Protection from oxidative stress-induced apoptosis in cortical neuronal cultures by iron chelators is associated with enhanced DNA binding of hypoxia-inducible factor-1 and ATF-1/CREB and increased expression of glycolytic enzymes, p21waf1/cip1, and erythropoietin. *J. Neurosci.* 19: 9821-9830.
67. Lin, K.-I, Pulsinelli P. Brown, R. H., Hardwick, J. M. and Ratan, R. R. (1999) Decreased

- intracellular superoxide levels activate Sindbis virus-induced apoptosis: a role for reductive stress in modulating cell death. *J. Biol. Chem.* 274: 13650-13655.
68. **Lin, K.-I**, Chattopadhyay, N., Bei, M., Alvarez, R., Dang, C. V., Baraban, J. M., Brown, E. M. and Ratan, R. R. (1998) Elevated extracellular calcium can prevent apoptosis via the calcium-sensing receptor. *Biochem. Biophys. Res. Commun.* 249: 325-331.
 69. **Lin, K.-I**, Baraban, J. M. and Ratan, R. R. (1998) Inhibition versus induction of apoptosis by proteasome inhibitors depends on concentration. *Cell Death and Differentiation*. 5: 577-583.
 70. **Lin, K.-I**, DiDonato, J. A. Hoffmann, A., Hardwick, J. M. and Ratan, R. R. (1998) Suppression of steady-state, but not stimulus-induced NF-kappa B activity inhibits alphavirus-induced apoptosis. *J. Cell Biol.* 141: 1479-1487.
 71. Esch, F., **Lin, K.-I**, Hills, A., Zaman, K., Chatterjee, S., Rubin, L., Ash, D. E. and Ratan, R. R. (1998) Purification of a multipotent antideath activity from bovine liver and its identification as arginase: nitric oxide-independent inhibition of neuronal apoptosis. *J. Neurosci.* 18: 4083-4095.
 72. Irani, D. N., **Lin, K.-I** and Griffin, D. E. (1997) Regulation of brain-derived T cells during acute central nervous system inflammation. *J. Immunol.* 158: 2318-2326.
 73. Irani, D. N., **Lin, K.-I** and Griffin, D. E. (1996) Brain-derived gangliosides regulates the cytokine production and proliferation of activated T cells. *J. Immunol.* 157: 4333-4340.
 74. **Lin, K.-I**, Lee, S.-H., Narayanan, R., Baraban, J. M., Hardwick, J. M. and Ratan, R. R. (1995) Thiol agents and Bcl-2 identify an alphavirus-induced apoptotic pathway that requires activation of the transcription factor NF-kappa B. *J. Cell Biol.* 131: 1149-1161.
 75. Lin, S. B., Chang, G. W., The, G.-W., **Lin, K.-I** and Au, L.-C. (1993). A simple and rapid method for purification of oligodeoxyribonucleoside methylphosphonates. *Biotechniques*. 14: 795-798.

PATENTS

1. **Lin, K.-I**, Angata, T., Chang, Y.-H., Chen, W.-N., and Ma, S.-T. Human monoclonal antibodies possess protective efficacy against various SARS-CoV-2 variants 具保護性之抗多重新冠病毒變異株的人源單株抗體 (2021). Serial number: 63/267,163.
2. **Lin, K.-I**, Wong, C.-H., Wang, S.-W. and Chang, Y.-H. Monoglycosylated Spike protein-elicited monoclonal antibodies in mice possess protective activity against various SARS-CoV-2 variants 自單醣化棘蛋白免疫小鼠分離出具保護性之抗多重新冠病毒變異株的嵌合體單株抗體 (2021). Serial number: 63/266,008.
3. **Lin, K.-I**, Ma, C., Wong, C.-H., Wang, S.-W., Chang, Y.-H., Chen, X., and Huang, H.-Y. A chimera monoclonal antibody possesses protective activity against various SARS-CoV-2 variants 具保護性之抗多重新冠病毒變異株的嵌合體單株抗體 (2021). Serial number: 63/251,472.
4. Liao, H.-Y., Wang, S.-C., Ko, Y.-A. **Lin, K.-I**, Ma, C., Cheng, R. T.-J., and Wong, C.-H. A designer chimeric hemagglutinin elicits broad-protective CD4 and CD8 T-cell responses 可引發廣效保護力及 T 細胞反應的流感血凝素疫苗 (2020). PCT/US2021/031406.
5. **Lin, K.-I**, Hung, S.-C., and Liu, C.-H. A biomarker and target for diagnosis, prognosis and treatment of ankylosing spondylitis. PCT/US2019/041157 (2019), 108124397 Taiwan 用於診斷，評估預後及治療僵直性脊椎炎的生物標記及標的 (2019).
6. Yu, A.L., Yu, J., **Lin, K.-I**, Yang, W.-B. and Wong, C.-H. Fungal immunostimulatory compositions. US Patent No. 11, 549, 215 (2006); TW Patent No. 095137640 (2006), TW No. I 386220 (2013)
7. Wong, C.-H., Hsu, H.-Y., Hua, K.-F., Lin, C-H., Hsu, J., Chen, S.-T., **Lin, K.-I**, Yang, W.-B., Yu, J. and Yu, A.L. Methods and compositions associated with administration of an extract of Ganoderma lucidum. PCT Patent No. PCT/US2005/036961 (2005); TW Patent No. 095131055 (2005).