CURRICULUM VITAE

PERSONAL INFORMATION

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| Full name: | Zhansong Lin (林湛松) |
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| Date of Birth | 06/23/1986 |
| Nationality | China |
| Current Institute | Ragon Institute of MGH, MIT and Harvard  Laboratory of Integrative Cancer Immunology, NCI/NIH (as a guest researcher) |
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EDUCATION

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| Ph.D. Medical Sciences  Kumamoto University, Kumamoto, Japan | 2017 |
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| M.S. Molecular Virology  Hainan University, Hainan, China | 2011 |
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| B.S. Bio-engineering  Southwest University of Science and Technology, Sichuan, China | 2008 |
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RESEARCH SKILLS

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| 1. | Cell culture: cell lines, CD4 T cells, NK cells, Monocytes/Macrophages etc. |
| 2. | Molecular and protein: PCR, QT-PCR, SDS-PAGE, Western blot, ELISA etc. |
| 3. | Flow cytometry: multi-channel cell staining and analysis, cell sorting, clustering/population analysis |
| 4. | Viral infection: HIV-1, HCMV |
| 5. | Immune cell functional assay: Cytotoxicity and/or cytokine secretion in NK cells, CD8 T cells |
| 6. | Data analysis: Prism, Origin, SnapGene, FlowJo, FlowLogic, Python/Pandas |
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RESEARCH EXPERIENCES

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| Research Scientist, Ragon Institute of MGH, MIT and Harvard  Visiting Research Fellow, NCI/NIH  Dr. Mary Carrington Lab  Investigation of the influence of HLA class I signal peptide polymorphism on NKG2A recognition and NK cell education | 2023-Current |
| Postdoctoral Fellow, Ragon Institute of MGH, MIT and Harvard  Visiting Postdoctoral Fellow, NCI/NIH  Dr. Mary Carrington Lab  Investigation of the influence of HLA class I signal peptide polymorphism on HLA-E expression and NKG2A cell recognition | 2018-2023 |
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| Research associate, Center for AIDS research, Kumamoto University  Dr. Masafumi Takiguchi Lab  Investigation of (1) HIV-1 derived HLA-E binding peptides; (2) Effect of HLA and KIR polymorphisms on HIV-1 infection in Vietnamese | 2017-2018 |
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| PhD course project, Center for AIDS research, Kumamoto University  Dr. Masafumi Takiguchi Lab  Investigation of (1) HLA and KIR synergistic effect on HIV-1 infection in Japanese; (2) HIV-1 sequence variations (escape mutations) driven by HLA-C restricted CD8+ T cells | 2011-2017 |
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TEACHING EXPERIENCE

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| Mentor for postbaccalaureate students, NCI, USA  Teaching experimental techniques in cell culture and FACS for postbac students. Also, help them improve presentation quality. | 2021-present |
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| Training Assistant, Hainan University, China  Teaching experimental techniques in molecular biology for undergraduate and graduate students in Dr. Zhixin Liu’s lab | 2009-2011 |
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| Teaching Assistant, Hainan University, China  Helping answer after-class questions from undergraduate students and reviewing their reports for Dr. Chao Wang’s lecture | 2008-2009 |
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| Training Assistant, Southwest University of Science and Technology, China  Giving basic training on lab works of microbiology for undergraduate students in Dr. Ling Zhang’s lab | 2008 |
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AWARDS

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| International communication and traveling award, graduate school of medical sciences, Kumamoto University | 2017 |
| Best paper award, Center for AIDS research, Kumamoto University | 2016 |
| International communication and traveling award, graduate school of medical sciences, Kumamoto University | 2013 |
| Japanese Government (MEXT) Scholarship Program for PhD students in Medical Sciences | 2011-2016 |
| Best graduate thesis, Hainan University | 2011 |
| Outstanding Graduates, Hainan University | 2011 |

PUBLICATIONS

1. Cross-Najafi, A. A., Farag, K., Isidan, A., Li, W., Zhang, W., Lin, Z., Walsh, J., Lopez, K., Park, Y. J., Higgins, N., Cooper, D., Ekser, B., & Li, P. (2023). Co-Expression of HLA-E and HLA-G on Genetically Modified Porcine Endothelial Cells Attenuates Human NK Cell-Mediated Degranulation. Front Immunol, 14. <https://doi.org/10.3389/fimmu.2023.1217809>
2. Lin, Z., Bashirova, A. A., Viard, M., Garner, L., Quastel, M., Beiersdorfer, M., Kasprzak, W. K., Akdag, M., Yuki, Y., Ojeda, P., Das, S., Andresson, T., Naranbhai, V., Horowitz, A., McMichael, A. J., Hoelzemer, A., Gillespie, G. M., Garcia-Beltran, W. F., & Carrington, M. (2023). HLA class I signal peptide polymorphism determines the level of CD94/NKG2-HLA-E-mediated regulation of effector cell responses. Nat Immunol. <https://doi.org/10.1038/s41590-023-01523-z>
3. Kulkarni, S., Lied, A., Kulkarni, V., Rucevic, M., Martin, M. P., Walker-Sperling, V., . . . Carrington, M. (2019). CCR5AS lncRNA variation differentially regulates CCR5, influencing HIV disease outcome. Nature Immunology, 20(7), 824-834. doi:10.1038/s41590-019-0406-1
4. Hannoun, Z., Lin, Z., Brackenridge, S., Kuse, N., Akahoshi, T., Borthwick, N., . . . Hanke, T. (2018). Identification of novel HIV-1-derived HLA-E-binding peptides. Immunology Letters, 202, 65-72. doi:10.1016/j.imlet.2018.08.005
5. Borthwick, N., Lin, Z., Akahoshi, T., Llano, A., Silva-Arrieta, S., Ahmed, T., Dorrell, L., Brander, C., Murakoshi, H., Takiguchi, M., et al. (2017). Novel, in-natural-infection subdominant HIV-1 CD8+ T-cell epitopes revealed in human recipients of conserved-region T-cell vaccines. PLoS One 12, e0176418.
6. Lin, Z., Kuroki, K., Kuse, N., Sun, X., Akahoshi, T., Qi, Y., Chikata, T., Naruto, T., Koyanagi, M., Murakoshi, H., et al. (2016). HIV-1 Control by NK Cells via Reduced Interaction between KIR2DL2 and HLA-C \*12:02/C \*14:03. Cell Rep 17, 2210-2220.
7. Yu, N.T., Zhang, Y.L., Feng, T.C., Wang, J.H., Kulye, M., Yang, W.J., Lin, Z.S., Xiong, Z., and Liu, Z.X. (2012). Cloning and sequence analysis of two banana bunchy top virus genomes in Hainan. Virus Genes 44, 488-494.
8. Gong, D., Wang, J.H., Lin, Z.S., Zhang, S.Y., Zhang, Y.L., Yu, N.T., Xiong, Z., and Liu, Z.X. (2011). Genomic sequencing and analysis of Chilli ringspot virus, a novel potyvirus. Virus Genes 43, 439-444

ORAL PRESENTATIONS

1. The effect of one amino acid difference outside of peptide binding groove of HLA-C molecules on NK cell function and HIV-1 control, the 45th Annual Meeting of the Japanese Society for Immunology (Naha, Japan), December 2016
2. The effect of a single CTL escape -mutation on HIV-1 control by NK cell functions, the 30th Annual meeting of the Japanese Society for AIDS Research (Kagoshima, Japan), November 2016
3. The effect of one amino acid difference outside of peptide binding groove of HLA-C molecules on HIV-1 control via KIR-2DL2 (oral presentation), the 63rd Annual Meeting of the Japanese Society for Virology (Fukuoka, Japan), November 2015
4. The impact of one amino-acid substitution outside the binding groove between HLA-C\*03 subtypes in binding of HIV-1 peptide to the HLA molecules, the 44th Annual Meeting of the Japanese Society for Immunology (Sapporo, Japan), November 2015
5. The effect of co-expression of KIRs and their HLA ligands on HIV-1 control, the 43rd Annual Meeting of the Japanese Society for Immunology (Kyoto, Japan), December 10-12, 2014
6. The effect of two SNPs related to the expression of HLA-C molecules on the HIV-1 clinical outcome, the 41st Annual Meeting of the Japanese Society for Immunology (Kobe, Japan), December 2012

POSTER PRESENTATIONS

1. The influence of HLA class I signal peptide polymorphism on HLA-E mediated regulation of NK cells, The 19th Meeting of the Society for Natural Immunity (Bonita Springs, FL, USA), May 2022
2. Control of HIV-1 by NK cells via KIR2DL2, Keystone Symposia Conference, X7: HIV Persistence: Pathogenesis and Eradication (Olympic Valley, CA, USA), March 2016
3. The effect of co-expression of KIRs and their HLA ligands on HIV-1 control, Keystone Symposia: X3, HIV Vaccines: Adaptive Immunity and Beyond (Banff, Canada), March 2013