



Ivy Tsz-Lo Wong

Basic Life Research Scientist, Pathology Sponsored Projects

Bio

HONORS AND AWARDS

- Graduate Student Travel Scholarship 2017, Tigris Educational Fund (2017)

EDUCATION AND CERTIFICATIONS

- PhD, The University of Hong Kong , Pathology (2017)
- Visiting Research Student, King's College London (2015)
- MSc, The University of Hong Kong , Medical Science (2012)
- BSc, The Hong Kong University of Science and Technology , Biochemistry (Major), Bioengineering and Social Science (Double Minor) (2011)

Publications

PUBLICATIONS

- **A recipe for chaos: Extrachromosomal DNA and the hallmarks of cancer.** *Cell*
Wong, I. T., Bailey, C., Wu, S., Henssen, A. G., Cravatt, B. F., Chen, Z. J., Bafna, V., Jamal-Hanjani, M., Swanton, C., Chang, H. Y., Mischel, P. S.
2026; 189 (8): 2307-2321
- **Targeting extrachromosomal DNA in human cancers.** *Nature reviews. Drug discovery*
Wong, I. T., Yi, H., Melillo, B., Cravatt, B. F., Chang, H. Y., Mischel, P. S.
2026
- **Breakage fusion bridge cycles drive high oncogene number with moderate intratumoural heterogeneity.** *Nature communications*
Raeisi Dehkordi, S., Wong, I. T., Ni, J., Luebeck, J., Zhu, K., Prasad, G., Krockenberger, L., Xu, G., Chowdhury, B., Rajkumar, U., Caplin, A., Muliaditan, D., Gnanasekar, et al
2025; 16 (1): 1497
- **Coordinated inheritance of extrachromosomal DNAs in cancer cells.** *Nature*
Hung, K. L., Jones, M. G., Wong, I. T., Curtis, E. J., Lange, J. T., He, B. J., Luebeck, J., Schmargon, R., Scanu, E., Bruckner, L., Yan, X., Li, R., Gnanasekar, et al
2024; 635 (8037): 201-209
- **High-depth whole genome sequencing of premalignant breast lesions reveals rearrangement hotspots and personalized management opportunities.** *Nature communications*
Chmelova, L., Davies, H. R., Degasperi, A., Rinaldi, G., Wils, L., Black, D., Memari, Y., Koh, G. C., Shooter, S., Mulder, L., Kristel, P., Szuhai, K., Prasad, et al
2026
- **Accurate prediction of ecDNA in interphase cancer cells using deep neural networks.** *Communications biology*
Prasad, G., Rajkumar, U., Curtis, E. J., Wong, I. T., Yan, X., Zhang, S., Brückner, L., Turner, K., Wiese, J., Wahl, J., Hemmati, H., Wu, S., Theissen, et al

2026

- **EcDNA-derived structural variants: A common pathway to oncogenic fusion transcript amplification in cancer**
Zhang, S., Yi, H., Swinderman, J., Wang, Y., Kanakaviti, V., Hung, K. L., Wong, I., Srinivasan, S., Curtis, E. J., Bhargava-Shah, A., Li, R., Jones, M. G., Luebeck, et al
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- **EcDNA-borne structural variants drive oncogenic fusion transcript amplification.** *Cell*
Yi, H., Zhang, S., Swinderman, J., Wang, Y., Kanakaviti, V., Hung, K. L., Tsz-Lo Wong, I., Srinivasan, S., Curtis, E. J., Bhargava-Shah, A., Li, R., Jones, M. G., Luebeck, et al
2026
- **Genetic elements promote retention of extrachromosomal DNA in cancer cells.** *Nature*
Sankar, V., Hung, K. L., Gnanasekar, A., Wong, I. T., Shi, Q., Kraft, K., Jones, M. G., He, B. J., Yan, X., Belk, J. A., Liu, K. J., Agarwal, S., Wang, et al
2025
- **Extrachromosomal DNA-Driven Oncogene Spatial Heterogeneity and Evolution in Glioblastoma.** *Cancer discovery*
Noorani, I., Haughey, M., Luebeck, J., Rowan, A., Grönroos, E., Terenzi, F., Wong, I. T., Pradella, D., Lisi, M., Kittel, J., Sharma, N., Bailey, C., Weeden, et al
2025: OF1-OF18
- **Accurate Prediction of ecDNA in Interphase Cancer Cells using Deep Neural Networks.** *bioRxiv : the preprint server for biology*
Rajkumar, U., Prasad, G., Curtis, E. J., Wong, I. T., Yan, X., Zhang, S., Brückner, L., Turner, K., Wiese, J., Wahl, J., Wu, S., Theissen, J., Fischer, et al
2025
- **Oncogene Silencing via ecDNA Micronucleation.** *bioRxiv : the preprint server for biology*
Brückner, L., Xu, R., Tang, J., Herrmann, A., Wong, I. T., Zhang, S., Tu, F., Pilon, M., Kukalev, A., Pardon, K., Sidorova, O., Atta, J., Yu, et al
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- **EcDNA-borne PVT1 fusion stabilizes oncogenic mRNAs.** *bioRxiv : the preprint server for biology*
Yi, H., Zhang, S., Swinderman, J., Wang, Y., Kanakaviti, V., Hung, K. L., Wong, I. T., Srinivasan, S., Curtis, E. J., Bhargava-Shah, A., Li, R., Jones, M. G., Luebeck, et al
2025
- **Enhancing transcription-replication conflict targets ecDNA-positive cancers.** *Nature*
Tang, J., Weiser, N. E., Wang, G., Chowdhry, S., Curtis, E. J., Zhao, Y., Wong, I. T., Marinov, G. K., Li, R., Hanoian, P., Tse, E., Mojica, S. G., Hansen, et al
2024; 635 (8037): 210-218
- **Extrachromosomal DNA driven oncogene spatial heterogeneity and evolution in glioblastoma.** *bioRxiv : the preprint server for biology*
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2024
- **Disparate pathways for extrachromosomal DNA biogenesis and genomic DNA repair.** *Cancer discovery*
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2024
- **CoRAL accurately resolves extrachromosomal DNA genome structures with long-read sequencing.** *Genome research*
Zhu, K., Jones, M. G., Luebeck, J., Bu, X., Yi, H., Huang, K. L., Wong, I. T., Zhang, S., Mischel, P. S., Chang, H., Bafna, V.
2024
- **CoRAL accurately resolves extrachromosomal DNA genome structures with long-read sequencing.** *bioRxiv : the preprint server for biology*
Zhu, K., Jones, M. G., Luebeck, J., Bu, X., Yi, H., Hung, K. L., Wong, I. T., Zhang, S., Mischel, P. S., Chang, H. Y., Bafna, V.
2024
- **CoRAL Accurately Resolves Extrachromosomal DNA Genome Structures with Long-Read Sequencing**
Zhu, K., Jones, M. G., Luebeck, J., Bu, X., Yi, H., Hung, K. L., Wong, I., Zhang, S., Mischel, P. S., Chang, H. Y., Bafna, V.
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- **Breakage fusion bridge cycles drive high oncogene copy number, but not intratumoral genetic heterogeneity or rapid cancer genome change.** *bioRxiv : the preprint server for biology*
Dehkordi, S. R., Wong, I. T., Ni, J., Luebeck, J., Zhu, K., Prasad, G., Krockenberger, L., Xu, G., Chowdhury, B., Rajkumar, U., Caplin, A., Muliaditan, D., Coruh, et al
2023
- **Circular extrachromosomal DNA promotes tumor heterogeneity in high-risk medulloblastoma.** *Nature genetics*
Chapman, O. S., Luebeck, J., Sridhar, S., Wong, I. T., Dixit, D., Wang, S., Prasad, G., Rajkumar, U., Pagadala, M. S., Larson, J. D., He, B. J., Hung, K. L., Lange, et al
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- **Disparate pathways for extrachromosomal DNA biogenesis and genomic DNA repair.** *bioRxiv : the preprint server for biology*
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- **Coordinated inheritance of extrachromosomal DNA species in human cancer cells.** *bioRxiv : the preprint server for biology*
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- **Targeted profiling of human extrachromosomal DNA by CRISPR-CATCH.** *Nature genetics*
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2022
- **ecDNA hubs drive cooperative intermolecular oncogene expression.** *Nature*
Hung, K. L., Yost, K. E., Xie, L., Shi, Q., Helmsauer, K., Luebeck, J., Schopflin, R., Lange, J. T., Chamorro Gonzalez, R., Weiser, N. E., Chen, C., Valieva, M. E., Wong, et al
2021
- **Targeting glioblastoma signaling and metabolism with a re-purposed brain-penetrant drug.** *Cell reports*
Bi, J., Khan, A., Tang, J., Armando, A. M., Wu, S., Zhang, W., Gimple, R. C., Reed, A., Jing, H., Koga, T., Wong, I. T., Gu, Y., Miki, et al
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- **THE LANDSCAPE OF EXTRACHROMOSOMAL CIRCULAR DNA IN MEDULLOBLASTOMA SUBGROUPS**
Chapman, O., Luebeck, J., Wang, S., Garancher, A., Larson, J., Lange, J., Wong, I., Crawford, J., Pomeroy, S., Mischel, P., Fraenkel, E., Wechsler-Reya, R., Bafna, et al
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- **NANOG sustains ovarian cancer cell survival and disrupts ER stress signaling through BiP/PERK under glutamine depletion**
Suen, A., Wong, I., Tse, C., Chan, K., Wong, O., Cheung, A.
AMER ASSOC CANCER RESEARCH.2020
- **NUAK2 is highly overexpressed in ovarian cancer and the overexpression of its nuclear form correlates with tumor aggressiveness**
Chen, L., Wong, O., Wong, I., Cheung, A.
AMER ASSOC CANCER RESEARCH.2020
- **Overexpression of iASPP is required for autophagy in response to oxidative stress in choriocarcinoma.** *BMC cancer*
Chan, K. K., Wong, E. S., Wong, I. T., Cheung, C. L., Wong, O. G., Ngan, H. Y., Cheung, A. N.
2019; 19 (1): 953
- **Genome-wide profiling of PAK4 DNA-binding sites and transcriptome reveals its potential transcriptional control on DNA repair-related genes in ovarian cancer cells**
Wong, I., Wong, O., Qin, Y., Wang, J., Cheung, A.
AMER ASSOC CANCER RESEARCH.2017
- **THE MIR-143 TARGET TARDBP AS A MARKER FOR CERVICAL CANCER**
Wong, O. W., Wong, I. L., Wong, C. W., Tsun, O. L., Cheung, A. Y.
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