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Professor Emeritus, Pharmacology and Toxicology

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National Health Research Institutes, Zhunan, Taiwan.

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China Medical University, Taichung, Taiwan.

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Academica Sinica, Taipei, Taiwan.

Academician

Dr. Ho received his Ph.D. degree in Biochemistry from University of California, San Francisco Medical Center. He served as the first dean of School of Graduate Studies in Health Sciences, the University of Mississippi Medical Center and was former Vice President of National Health Research Institutes before joining the China Medical University and Hospital. Professor Ho's research interests are in neuropharmacology, neurotoxicology and drugs of abuse.

HONORS & AWARDS

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| 2003-2006 | Member, Center for Disease Control Advisory Committee on Childhood Lead Poisoning Prevention, USA. |
| 2000-2001 | President, Society of Chinese Bioscientists in America. |
| 2000 | Member of Merit of the Pharmaceutical Society of Japan. |
| 1999 | Fellow, The Academy of Toxicological Sciences. |
| 1999 | The highest honor awarded in the health sciences, Department of Health, Taiwan. |
| 1998 | Award in Excellence in Basic Pharmacology, The Pharmaceutical Research and Manufacturers Association Foundation, USA. |
| 1997-2000 | Councilor and Auditor, Asian Society of Toxicology. |
| 1996 | Elected Member, Academia Sinica, Taiwan. |
| 1992 | Outstanding Scientific Achievement Award in Toxicology, Environmental Health and Sciences, Cheng Hsing Medical Foundation and Society of Chinese Bioscientists in America. |

PUBLICATIONS (2011-present)

1. Chieh-Liang Huang, I-Ju Tsai, Wen-Chi Lin, Cheng-Li Lin, Ing-Kang Ho, Ruey-Yun Wang, Cynthia Wei-Sheng Lee. Reduced mortality in patients with extended duration of methadone maintenance treatment: A five-year retrospective nationwide study. *Psychol Med.* 2023;53(3):722-730.
2. Huang CL, Chiang YC, Chang WC, Su YT, Yang JC, Cheng WC, Lane HY, Ho IK, Ma WL. Add-On Selective Estrogen Receptor Modulators for Methadone Maintenance Treatment. *Front Endocrinol (Lausanne).* 2021 Aug 5;12:638884.
3. Chieh-Liang Huang, Ping-Ho Chen, Hsien-Yuan Lane, Ing-Kang Ho, Chia-Min Chung. 'Risk Assessment for heroin use and craving score using polygenic risk score', *Journal of Personalized Medicine.* Apr 1, 11(4):259. doi: 10.3390. (2021)
4. Huang CL, Tsai IJ, Lin WC, Ho IK, Wang RY, Cynthia Lee WS. 'Augmentation in Healthcare Utilization of Patients with Opioid Use Disorder after Methadone Maintenance Treatment: A Retrospective Nationwide Study', *Adv Ther.* Jun, 38(6): 2908-2919. (2021)
5. Chiang YC, Wang RY, Huang CL, Chen SH, Ho WJ, Lane HY, Ho IK, Yang HT, Ma WL. 'Reduced Dosing and Liability in Methadone Maintenance Treatment by Targeting Estrogen Signal for Morphine Addiction', *J Cell Mol Med.* Jul 12. (2017)
6. Ho TJ, Lee CW, Lu ZY, Lane HY, Tsai MH, Ho IK, Huang CL, Chiang YC. 'Effects of Electroacupuncture on Methamphetamine-Induced Behavioral Changes in Mice', *Evid Based Complement Alternat Med.* 2017;5642708. (2017)
7. Yang HC, Chu SK, Huang CL, Kuo HW, Wang SC, Liu SW, Ho IK, Liu YL, 'Genome-Wide Pharmacogenomic Study on Methadone Maintenance Treatment Identifies SNP rs17180299 and Multiple Haplotypes on CYP2B6, SPON1, and GSG1L Associated with Plasma Concentrations of Methadone R- and S-enantiomers in Heroin-Dependent Patients', *Plos Genetics*, Mar 24, 12(3):e1005910 (2016)
8. Chiang YC, Ye LC, Hsu KY, Liao CW, Hung TW, Lo WJ, Ho IK, Tao PL. 'Beneficial effects of co-treatment with dextromethorphan on prenatally methadone-exposed offspring', *Journal of Biomedical Science*, 20: 22-19 (2015)
9. Fang SY, Huang N, Lin T, Ho IK, Chen CY*. 'Health insurance coverage and healthcare utilization among infants of mothers in national methadone maintenance treatment program in Taiwan', *Drug and Alcohol Dependence*, 153: 86-93 (2015)
10. Wang PC, Ho IK, Lee CW*. 'Buprenorphine-elicited alteration of adenylate cyclase activity in human embryonic kidney 293 cells coexpressing κ -, μ -opioid and nociceptin receptors', *Journal of Cellular and Molecular Medicine*, 19: 2587-96 (2015)
11. Sheng-Wen Liu, Yu-Li Liu, Ling-Ling Hwang, Sheng-Chang Wang, Hsiang-Wei Kuo, Shiow-Ling Wu, Yu-Wen Dai, Shu Chih Liu, Ing-Kang Ho, Andrew Chen, Chin-Fu Hsiao, and Hsiao-Hui Tsou. 'Chemokine IP-10 is correlated with cardiac responses and status of infection with HIV and HCV in methadone maintenance patients', *Int J Cardiol*,

- 194: 36-8 (2015)
12. Chen CY*, Lien YT, Yeh HH, Su LW, Ho IK. 'Comparison of adverse obstetric outcomes and maternity hospitalization among heroin-exposed and methadone-treated women in Taiwan', *J Drug Policy*, 26: 191-8 (2015)
 13. Hung YJ, Shih TT, Chen BB, Hwang YH, Ma LP, Huang WC, Liou SH, Ho IK, Guo YL, 'The dose-response relationship between cumulative lifting load and lumbar disk degeneration based on magnetic resonance imaging findings', *Phys Ther*, 94:1582-93 (2014)
 14. Tsai HJ, Wang SC, Liu SW, Ho IK, Chang YS, Tsai YT, Lin KM, Liu YL, 'Assessment of CYP450 genetic variability effect on methadone dose and tolerance', *Pharmacogenomics*, May, 15(7): 977-86 (2014)
 15. Wang SC, Tsou HH, Chung RH, Chang YS, Fang CP, Chen CH, Ho IK, Kuo HW, Liu SC, Shih YH, Wu HY, Huang BH, Lin KM, Chen AC, Hsiao CF, Liu YL. The Association of Genetic Polymorphisms in the κ -Opioid Receptor 1 Gene With Body Weight, Alcohol Use, and Withdrawal Symptoms in Patients With Methadone Maintenance. *Journal of Clinical Psychopharmacology*. Apr, 34(2): 205-11 (2014)
 16. Wong CS, Lee YJ, Chiang YC, Fan LW, Ho IK, Tien LT, 'Effect of prenatal methadone on reinstated behavioral sensitization induced by methamphetamine in adolescent rats', *Behav Brain Res*. Jan 1, 258: 160-5 (2014)
 17. Lee CW, Ho IK, 'Sex differences in opioid analgesia and addiction: interactions among opioid receptors and estrogen receptors', *Mol Pain*. Sep 8, 9(1):45 (2013)
 18. SL Wu, SC Wang, HH Tsou, HW Kuo, IK Ho, SW Liu, YT Hsu, YS Chang, YL Liu, 'Hepatitis C Virus Infection Influences the S-Methadone Metabolite Plasma Concentration', *PLOS ONE*, 8(7), e69310 (2013)
 19. SC Wang, IK Ho, HH Tsou, SW Liu, CF Hsiao, CH Chen, Happy KL Tan, LN Lin, CS Wu, LW Su, CL Huang, YH Yang, ML Liu, KM Lin, SC Liu, HY Wu, HW Kuo, Andrew CH Chen, YS Chang, YL Liu, 'Functional Genetic Polymorphisms in CYP2C19 Gene in Relation to Cardiac Side Effects and Treatment Dose in a Methadone Maintenance', *OMICS: A Journal of Integrative Biology*, Oct; 17(10):519-26 (2013)
 20. Y. C. Chiang, T. W. Hung, and I. K. Ho, 'Development of Sensitization to Methamphetamine in Offspring Prenatally Exposed to Morphine, Methadone and Buprenorphine', *Addict Biol* (2013)
 21. K. C. Wang, Y. J. Lee, L. W. Fan, P. P. Yang, P. L. Tao, I. K. Ho, and L. T. Tien, 'Mu-Opioid Receptor Knockout Mice Are More Sensitive to Chlordiazepoxide-Induced Anxiolytic Behavior', *Brain Res Bull*, 90: 137-41 (2013)
 22. H. J. Tsai, S. C. Wang, J. N. Tian, T. K. Chang, I. K. Ho, C. F. Hsiao, C. H. Chen, H. K. L. Tan, L. E. Lin, C. S. Wu, L. W. Su, C. L. Huang, Y. H. Yang, M. L. Liu, K. M. Lin, and Y. L. Liu, 'Pxr Polymorphisms Interacted with Cyp2b6 Polymorphisms on Methadone Metabolites', *Journal of Clinical Psychopharmacology*, 33: 137-40 (2013)

23. Y. T. Chen, H. H. Tsou, H. W. Kuo, C. P. Fang, S. C. Wang, I. K. Ho, Y. S. Chang, C. H. Chen, C. F. Hsiao, H. Y. Wu, K. M. Lin, ACh Chen, J. J. Tsai-Wu, and Y. L. Liu, 'Oprm1 Genetic Polymorphisms Are Associated with the Plasma Nicotine Metabolite Cotinine Concentration in Methadone Maintenance Patients: A Cross Sectional Study', *J Hum Genet*, 58: 84-90 (2013)
24. S. C. Wang, H. H. Tsou, C. H. Chen, Y. T. Chen, I. K. Ho, C. F. Hsiao, S. Y. Chou, Y. F. Lin, K. C. Fang, C. L. Huang, L. W. Su, Y. C. Fang, M. L. Liu, H. Y. Wu, K. M. Lin, S. C. Liu, H. W. Kuo, I. C. Chiang, A. C. Chen, J. N. Tian, and Y. L. Liu, 'Genetic Polymorphisms in the Opioid Receptor Mu1 Gene Are Associated with Changes in Libido and Insomnia in Methadone Maintenance Patients', *Eur Neuropsychopharmacol*, 22: 695-703 (2012)
25. J. N. Tian, I. K. Ho, H. H. Tsou, C. P. Fang, C. F. Hsiao, C. H. Chen, H. K. Tan, L. Lin, C. S. Wu, L. W. Su, C. L. Huang, Y. H. Yang, M. L. Liu, Y. T. Chen, S. C. Liu, Y. T. Hsu, H. W. Kuo, C. T. Liu, Y. T. Yang, ACh Chen, Y. H. Shih, and Y. L. Liu, 'Ugt2b7 Genetic Polymorphisms Are Associated with the Withdrawal Symptoms in Methadone Maintenance Patients', *Pharmacogenomics*, 13: 879-88 (2012)
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27. C. C. Chien, Y. J. Lee, L. W. Fan, I. K. Ho, and L. T. Tien, 'Naloxonazine, a Specific Mu-Opioid Receptor Antagonist, Attenuates the Increment of Locomotor Activity Induced by Acute Methamphetamine in Mice', *Toxicol Lett*, 212: 61-5 (2012)
28. S. C. Wang, I. K. Ho, H. H. Tsou, J. N. Tian, C. F. Hsiao, C. H. Chen, H. K. Tan, L. Lin, C. S. Wu, L. W. Su, C. L. Huang, Y. H. Yang, M. L. Liu, K. M. Lin, C. Y. Chen, S. C. Liu, H. Y. Wu, H. W. Chan, M. H. Tsai, P. S. Lin, and Y. L. Liu, 'Cyp2b6 Polymorphisms Influence the Plasma Concentration and Clearance of the Methadone S-Enantiomer', *J Clin Psychopharmacol*, 31: 463-9 (2011)
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30. F. S. Shie, Y. H. Chen, C. H. Chen, and I. K. Ho, 'Neuroimmune Pharmacology of Neurodegenerative and Mental Diseases', *J Neuroimmune Pharmacol*, 6: 28-40 (2011)
31. Y. Y. Liao, S. F. Teng, L. C. Lin, S. Kolczewski, E. P. Prinssen, L. J. Lee, I. K. Ho, and L. C. Chiou, 'Functional Heterogeneity of Nociceptin/Orphanin Fq Receptors Revealed by (+)-5a Compound and Ro 64-6198 in Rat Periaqueductal Grey Slices', *Int J Neuropsychopharmacol*, 14: 977-89 (2011)
32. C. W. Lee, J. Y. Yan, Y. C. Chiang, T. W. Hung, H. L. Wang, L. C. Chiou, and I. K. Ho, 'Differential Pharmacological Actions of Methadone and Buprenorphine in Human Embryonic Kidney 293 Cells Coexpressing Human Mu-Opioid and Opioid Receptor-Like 1 Receptors', *Neurochem Res*, 36: 2008-21 (2011)

33. C. H. Chen, S. C. Wang, H. H. Tsou, I. K. Ho, J. N. Tian, C. J. Yu, C. F. Hsiao, S. Y. Chou, Y. F. Lin, K. C. Fang, C. L. Huang, L. W. Su, Y. C. Fang, M. L. Liu, K. M. Lin, Y. T. Hsu, S. C. Liu, ACh Chen, and Y. L. Liu, 'Genetic Polymorphisms in Cyp3a4 Are Associated with Withdrawal Symptoms and Adverse Reactions in Methadone Maintenance Patients', *Pharmacogenomics*, 12: 1397-406 (2011)