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EDUCATION:

- Ph.D., Pharmacology (minor in Bioinformatics), University of Minnesota, Minneapolis, USA (2002) (With Dr. Horace Loh)
- MPhil., Jiamusi Medical College, China (1989)

RESEARCH AND TEACHING EXPERIENCE:

June 2014 – Present	Associate Professor (with tenure), Department of Paediatrics and Adolescent Medicine, The University of Hong Kong
Sep. 2008 – June 2014	Assistant Professor Department of Paediatrics and Adolescent Medicine, The University of Hong Kong
Jan. 2006 – Aug. 2008	Research Assistant Professor and Honorary Assistant Professor Department of Paediatrics and Adolescent Medicine, The University of Hong Kong
Jul. 2002 – Jan. 2006	Postdoctoral Research Fellow (with Dr. John D. Hildebrandt) Department of Pharmacology, Medical University of South Carolina, Charleston, South Carolina, USA
May 1995 – Jan. 1997	WHO Research Fellow in Neurobiology Department of Pharmacology, University of Minnesota, Minneapolis, Minnesota, USA
Jul. 1989 – Apr. 1995	Lecturer in Pathophysiology, Jiamusi Medical College, P. R. China

REPRESENTATIVE PUBLICATIONS

- 1: **Yang W**, Shen N, Ye DQ, Liu Q, Zhang Y, Qian XX, Hirankarn N, Ying D, Pan HF, Mok CC, Chan TM, Wong RW, Lee KW, Mok MY, Wong SN, Leung AM, Li XP, Avihingsanon Y, Wong CM, Lee TL, Ho MH, Lee PP, Chang YK, Li PH, Li RJ, Zhang L, Wong WH, Ng IO, Lau CS, Sham PC, Lau YL; Asian Lupus Genetics Consortium. Genome-wide association study in Asian populations identifies variants in ETS1 and WDFY4 associated with systemic lupus erythematosus. *PLoS Genet.* 2010 Feb 12;6(2):e1000841. doi: 10.1371/journal.pgen.1000841. PubMed PMID: 20169177; PubMed Central PMCID: PMC2820522.
- 2: **Yang W**, Tang H, Zhang Y, Tang X, Zhang J, Sun L, Yang J, Cui Y, Zhang L, Hirankarn N, Cheng H, Pan HF, Gao J, Lee TL, Sheng Y, Lau CS, Li Y, Chan TM, Yin X, Ying D, Lu Q, Leung AM, Zuo X, Chen X, Tong KL, Zhou F, Diao Q, Tse NK, Xie H, Mok CC, Hao F, Wong SN, Shi B, Lee KW, Hui Y, Ho MH, Liang B, Lee PP, Cui H, Guo Q, Chung BH, Pu X, Liu Q, Zhang X, Zhang C, Chong CY, Fang H, Wong RW, Sun Y, Mok MY, Li XP, Avihingsanon Y, Zhai Z, Rianthavorn P, Deekajorndej T, Suphapeetiporn K, Gao F, Shotelersuk V, Kang X, Ying SK, Zhang L, Wong WH, Zhu D, Fung SK, Zeng F, Lai WM, Wong CM, Ng IO, Garcia-Barceló MM, Cherny SS, Shen N, Tam PK, Sham PC, Ye DQ, Yang S, Zhang X, Lau YL. Meta-analysis followed by replication identifies loci in or near CDKN1B, TET3, CD80, DRAM1, and ARID5B as associated with systemic lupus erythematosus in Asians. *Am J Hum Genet.* 2013 Jan 10;92(1):41-51. doi: 10.1016/j.ajhg.2012.11.018. Epub 2012 Dec 27. PubMed PMID: 23273568; PubMed Central PMCID: PMC3542470.
- 3: Ying D, Sham PC, Smith DK, Zhang L, Lau YL, ***Yang W**. HaploShare: identification of extended haplotypes shared by cases and evaluation against controls. *Genome Biol.* 2015 May 9;16:92. doi: 10.1186/s13059-015-0662-9. PubMed PMID: 25956955; PubMed Central PMCID: PMC4432975.
- 4: Huang Y, Yang J, Ying D, Zhang Y, Shotelersuk V, Hirankarn N, Sham PC, Lau YL, ***Yang W**. HLAreporter: a tool for HLA typing from next generation sequencing data. *Genome Med.* 2015 Mar 16;7(1):25.

doi: 10.1186/s13073-015-0145-3. eCollection 2015. PubMed PMID: 25908942; PubMed Central PMCID: PMC4407542.

5: Zhang J, Zhang L, Zhang Y, Yang J, Guo M, Sun L, Pan HF, Hirankarn N, Ying D, Zeng S, Lee TL, Lau CS, Chan TM, Leung AM, Mok CC, Wong SN, Lee KW, Ho MH, Lee PP, Chung BH, Chong CY, Wong RW, Mok MY, Wong WH, Tong KL, Tse NK, Li XP, Avihingsanon Y, Rianthavorn P, Deekajorndej T, Suphapeetiporn K, Shotelersuk V, Ying SK, Fung SK, Lai WM, Garcia-Barceló MM, Cherny SS, Sham PC, Cui Y, Yang S, Ye DQ, Zhang XJ, Lau YL, ***Yang W**. Gene-based meta-analysis of genome-wide association study data identifies independent single-nucleotide polymorphisms in ANXA6 as being associated with systemic lupus erythematosus in Asian populations. **Arthritis Rheumatol**. 2015 Nov;67(11):2966-77. doi: 10.1002/art.39275. PubMed PMID: 26202167.

6: Zhang Y, Yang J, Zhang J, Sun L, Hirankarn N, Pan HF, Lau CS, Chan TM, Lee TL, Leung AM, Mok CC, Zhang L, Wang Y, Shen JJ, Wong SN, Lee KW, Ho MH, Lee PP, Chung BH, Chong CY, Wong RW, Mok MY, Wong WH, Tong KL, Tse NK, Li XP, Avihingsanon Y, Rianthavorn P, Deekajorndej T, Suphapeetiporn K, Shotelersuk V, Ying SK, Fung SK, Lai WM, Wong CM, Ng IO, Garcia-Barcelo MM, Cherny SS, Cui Y, Sham PC, Yang S, Ye DQ, Zhang XJ, Lau YL, ***Yang W**. Genome-wide search followed by replication reveals genetic interaction of CD80 and ALOX5AP associated with systemic lupus erythematosus in Asian populations. **Ann Rheum Dis**. 2016 May;75(5):891-8. doi: 10.1136/annrheumdis-2014-206367. Epub 2015 Apr 10. PubMed PMID: 25862617.

7: Chen R, Lau YL, Zhang Y, ***Yang W**. SRinversion: a tool for detecting short inversions by splitting and re-aligning poorly mapped and unmapped sequencing reads. **Bioinformatics**. 2016 Dec 1;32(23):3559-3565. Epub 2016 Aug 8. PubMed PMID: 27503227.

8: Morris DL, Sheng Y, Zhang Y, Wang YF, Zhu Z, Tomblinson P, Chen L, Cunninghame Graham DS, Bentham J, Roberts AL, Chen R, Zuo X, Wang T, Wen L, Yang C, Liu L, Yang L, Li F, Huang Y, Yin X, Yang S, Rönnblom L, Fürtrohr BG, Voll RE, Schett G, Costedoat-Chalumeau N, Gaffney PM, Lau YL, Zhang X, ***Yang W**, *Cui Y, *Vyse TJ. Genome-wide association meta-analysis in Chinese and European individuals identifies ten new loci associated with systemic lupus erythematosus. **Nat Genet**. 2016 Aug;48(8):940-946. doi: 10.1038/ng.3603. Epub 2016 Jul 11. PubMed PMID: 27399966; PubMed Central PMCID: PMC4966635.

9: Wang YF, Zhang Y, Zhu Z, Wang TY, Morris DL, Shen JJ, Zhang H, Pan HF, Yang J, Yang S, Ye DQ, Vyse TJ, Cui Y, Zhang X, Sheng Y, Lau YL, ***Yang W**. Identification of ST3AGL4, MFHAS1, CSNK2A2 and CD226 as loci associated with systemic lupus erythematosus (SLE) and evaluation of SLE genetics in drug repositioning. **Ann Rheum Dis**. 2018 Jul;77(7):1078-1084. doi: 10.1136/annrheumdis-2018-213093. Epub 2018 Apr 6. PubMed PMID: 29625966.

10. Shen JJ, Yang C, Wang YF, Wang TY, Guo M, Lau YL, Zhang X, *Sheng Y, ***Yang W**. HLA-IMPUTER: an easy to use web application for HLA imputation and association analysis using population-specific reference panels. **Bioinformatics**. 2018 Aug 31. doi: 10.1093/bioinformatics/bty730. [Epub ahead of print] PubMed PMID: 30169743.

Full list of Dr. Yang's publications can be found at <http://wyanglab.org/publication.html>

BIO-SKETCH

Dr. Yang had training in medicine in China and received his Ph.D. from the University of Minnesota, majoring in Pharmacology and with a minor in Bioinformatics. He did his postdoctoral training in Medical University of South Carolina, before joining the University of Hong Kong in 2006. He is currently an Associate Professor in the Department of Paediatrics and Adolescent Medicine, and also a research scientist in the Centre for Genomic Sciences, the University of Hong Kong.

His research interest includes finding genetic factors predisposing for systemic lupus erythematosus. Through genome-wide association studies on a local population, together with collaborations with scientists in the mainland, UK and the US, he has played a major role in identifying several dozen susceptibility genes for this prototype autoimmune disease.

Another research area for Dr. Yang is making molecular diagnosis for Mendelian diseases. He is working on improving sequencing platforms and analysis methodologies for detection of disease causal mutations using next generation sequencing.

Dr. Yang leads a laboratory with multidisciplinary expertise including genetics, genomics and bioinformatics. He is interested in analyzing various omics data to gain biological insight, thus bridging big data and biomedical applications.

HONORS AND AWARDS:

- World Health Organization Fellowship, Neurobiology (1995);
- LM. Nutter Research Award, University of Minnesota (2001)
- Buccaneer Research Award, Minnesota Medical Foundation (2002).
- **Faculty Outstanding Research Output Award, LKS Faculty of Medicine, HKU (2017)**

RESEARCH POSTGRADUATE STUDENTS I HAVE SUPERVISED AS A PRIMARY SUPERVISOR:

1. **Ng Ping**, MPhil. Thesis title: STAT4 and BLK, but not PXX, are associated with Systemic lupus erythematosus (SLE) in Hong Kong Chinese, 2006-2008. Publication: #13.
2. **Zhang Lu**, MPhil. Thesis title: identification and prioritization of single nucleotide variation for Mendelian disorders from whole exome sequencing data, 2010-2012. Publications: #27, #36
3. **Zhang Yan** Ph.D., Thesis title: Association studies of systemic lupus erythematosus (SLE) : from novel susceptibility loci to gene-gene interaction, 2009-2012. Publications: #28, #39, #47, #54, #55, #62, #80, #84
4. **Zhang Jing**, Ph.D., Thesis title: Identification of susceptibility loci for systemic lupus erythematosus (SLE) in Asians and functional characterization of the related genes, 2009-2013. Publications: #30, #39, #41, #42, #59
5. **Ying Dingge**, Ph.D., Thesis title: Identification of shared extended haplotypes in both population-based studies of complex disease and family-based studies of mendelian disorders, 2009-2013. Publications: #57
6. **Zeng Shuai**, Ph.D., Thesis title: Predicting functional impact of nonsynonymous mutations by quantifying conservation information and detect indels using split-read approach, 2010-2014. Publications: #34, #44
7. **Huang Yazhi**, Ph.D., Thesis title: HLA typing from next generation sequencing data: strategies, methods and applications, 2012-2015. Publication: #56
8. **Wang Yong-Fei**, Ph.D., Thesis title: Functional and evolutionary properties of the genomic regions associated with multiple phenotypic traits identified in genome-wide association studies, 2012-2016. Publications: #62, #80
9. **Chen Ruoyan**, Ph.D., Thesis title: A new tool for detecting short inversions using next generation sequencing (NGS) data and a systematic comparison of different NGS platforms on detection sensitivities, 2012-2017. Publications: #65, #86
10. **Wang Tingyou**, Ph.D., Thesis title: Integrative analysis of transcriptional regulation unveils regulatory modules that stratify lupus transcriptome, 2013-2017. Publication: under review
11. **Shen Jiangshan (Jane)**, Ph.D., Thesis title: Study of susceptibility for systemic lupus erythematosus: from sex differences to the polymorphic human leukocyte antigen region, 2014-2018. Publications: #76, #89
12. **Guo Mengbiao**, Ph.D., Thesis title: In-depth analysis of differential DNA methylation for systemic lupus erythematosus. 2015-2018 Publication: under review

POSTDOCTORAL FELLOWS SUPERVISED/SUPERVISING AS A PRIMARY SUPERVISOR:

1. **Zhang Yan**, 2013-2017 (currently an Associate Professor in Guangzhou Medical University)
2. **Wang Yong-Fei**, 2016-present
3. **Shen Jiangshan Jane**, 2018-present