

PROFESSIONAL EXPERIENCES

NIUBIOMED, San Diego, USA **11/2013-12/2015**

Co-founder and self-employed

- Involved in collaborations with stake-holders to introduce an advanced diagnostic system into China to serve cancer patients with targeted treatments for better outcome. Executed very well in validation of various platforms of the system in USA but adjusted less efficiently in market making to yet bear fruits in China

UNIVERSITY OF CALGARY, Calgary, Canada **11/2011-10/2013**

Technologist II

- Independently screened out a novel regulator of the mouse NCKX4 channel through a yeast-two-hybridization system and validated it in bacterial and mammalian expression platforms.
- This finding is further confirmed by using KO mouse brain—proposing the existence of a new regulatory mechanism in intracellular calcium homeostasis. The domain involved has been trimmed down to a 25 amino acid segment with 2 residues identified as critical. The work is in the final stage for publication

NIUBIOMED, San Diego, USA **06/2011-10/2011**

Co-founder and self-employed

- Initiated activities aimed at establishment of platforms from cell membrane to signal transduction molecules to screen potential leading compounds for further optimization and evaluation. Tried and adjusted our business model to better align with market trends.

SUNDIA MEDITECH, Shanghai, China **10/2009-03/2011**

Associate Director of Biology

- Led a multi-functional group in the execution of an epigenetic project on cancer metabolism
- Evaluated and validated novel targets in the emerging field of anti-cancer therapy based on cancer metabolism
- Identified a specific lead compound series in the field and explored its mechanism, demonstrating that the compound interferes with cancer metabolism
- Executed the comprehensive evaluation project of a late stage small molecular RTK inhibitor, which is now completed and ready for filing the IND application to sFDA

PROMETHEUS LABORATORY, San Diego, USA **4/2009-7/2009**

Temporary Research Scientist

- Evaluated and validated a novel serum IgA biomarker specific to the IBD in human blood samples and developed the biomarker-targeted ELISA assays for the operational department to validate its diagnostic value in clinical settings

PHENOMIX, San Diego, USA **4/2007-2/2009**

Senior RAIII

- Evaluated the efficacy of antivirals in a virus reduction kinetics study for preclinical drug candidate selections by HCV chimeric replicon reporter and TaqMan
- Developed and validated a new radioactive based biochemical assay to screen for the HCV NS5B inhibitors

Department of Virology, PFIZER, San Diego, USA

Contract Senior RAIII

10/2006-3/2007

- Constructed HCV chimeric replicons from clinical isolates for broad-spectrum activity determination of HCV polymerase inhibitors
- Initiated functional evaluations of novel HCV targets using RNAi technology

NEUROCRINE BIOSCIENCES INC., San Diego, USA

1998 – 2006

Associate Scientist

2003 – 2006

- Purified and evaluated GPCR domains and residues critical for receptor function and distribution using both the mammalian cell-based platform and the E. coli expression system, resulting in the identification of novel drug target domains for class B GPCRs (CRFR1, GLPR, GIPR)
- Expressed and purified gram level of the ¹⁵N-labeled N-terminal extra-cellular domain of hCRFR1 for NMR studies to characterize its three-dimensional structure and enable a new, SAR-based drug design program
- Characterized the drug targets at the molecular level in a cell-signal based assay, providing supporting data for the detailed mechanism of action for a Phase III clinical drug candidate
- Evaluated the drug effect on a target receptor by FACS on kinetic change in receptor internalization and by ELISA on ATP mobilization of the cells involved

Senior Research Associate

2000 – 2003

- Developed assays with various stably-expressed GPCR cell lines that supported company drug discovery programs on MCR, MCHR, CRFR, SSTR and GnRHR
- Developed and optimized two assay systems (EGR3-Fluc and cJun-Rluc) using stable cell lines that have been applied to evaluate the potential effects of drug candidates on different signal transduction pathways in the GPCR drug discovery programs.(MCHR, CRFR and GnRHR)

Research Associate

1998– 2000

- Established multiple stable cell lines of human orphan GPCRs that were used to screen against various rat tissue extracts for the existence of potential native ligands and to de-orphanize the receptors.

Dept. of Environmental Health, Sichuan University, P.R.China

1986-1992

Lecturer

1988-1992

- Teaching, Clinical practices and Research on occupational diseases and epidemiological investigations on effect of air pollutants to local populations in Chengdu, Sichuan, China.

Assistant professor

1986-1988

- Teaching, Clinical practices and Research on occupational diseases and epidemiological investigations on effect of air pollutants to local populations in Chengdu, Sichuan, China.

RELATED SKILLS

- Protein:** Expression (E.coli, Yeast, Insect cells, Mammalian cells)
Detection (Western, south-western, ELISA, IHC, RIA, IP, FACS, Yeast two-hybrid)
Purification (IMAC, IEX, SEC, Affinity)
Modification (Ag-peptide-conjugation, ¹⁵N-labeling, Tag-conjugation)
- DNA:** Cloning (PCR, sequencing, mutagenesis, vector construction, Lentivirus vector)
Preparation (genomic, plasmid, baculo virus, oligonucleotide)
Detection (Southern, PCR)
Function (Foot printing, Band-shift, Promoter-Reporter design)
- RNA:** Preparation [Total and Poly-A(+)RNA]

Detection (Northern, RT-PCR, competitive PCR, Q-PCR, TaqMan , ISH)
RNAi (siRNA, shRNA)

- Cell:** Cultures (Primary Cardiomyocytes, Established cell lines, Insect cells, Yeast, E.coli)
Transfection (Chemical, electroporation), Stable cell line generation and screening
Infection (Lentivirus on mammalian cells, Baculovirus on insect cells)
- Assay:** ELISA, FACS, TaqMan, FLIPR, Receptor-binding, Reporter, Biochemical assay
Softagar Proliferation
- Equipments:** FPLC, HPLC, FLIPR, FACS, TaqMan, Fluorescence Microscopy, Sequencer, Plate readers

EDUCATION

- M.S.** Department of Biochemistry and Molecular Biology
University of Alberta, Canada (1993-95)
- M.D.** School of Public Health
Sichuan Medical College, China (1978-83 for a B.Med=M.D. in China, 1983-86 for an M.Sci.)

PUBLICATIONS

1. Robert E. Petroski; Jordan E. Pomeroy; Ronnie Das; Heath Bowman; **Weidong Yang**; Adele P. Chen; Alan C. Foster (2006)
Indiplon is a high-affinity positive allosteric modulator with selectivity for alpha1 subunit containing GABAA receptors
J. Pharmacol. Exp. Ther. 317(1):369-77
2. Fleck BA, Chen C, **Yang W**, Huntley R, Markison S, Nickolls SA, Foster AC, Hoare SR (2005)
Molecular interactions of nonpeptide agonists and antagonists with the melanocortin-4 receptor.
Biochemistry. Nov 8; 44(44):14494-508
3. P.B.Simpson, M.S.Mistry, R.A.Maki, **W.Yang**, D.A.Schwarz, E.B.Johnson, F.M.Lio, D.G.Alleva (2003)
Cutting Edge: Diabetes-Associated Quantitative Trait Locus, *idd4*, Is Responsible for the IL-12p40 Over expression Defect in Nonobese Diabetic (NOD) Mice
J. Immunology, 171:3333-3337
4. P. Besson, F. Rachibinski, **W.Yang** and L.Fliedel (1998).
Regulation of Na⁺/H⁺ Exchanger Gene Expression: Mitogenic Stimulation Increases NHE1 Promoter Activity Am.
J. Physiol., 274(Cell Physiol.):C831-839.
5. S.B. Nicholas, **W.Yang**, S.Lee, H.Zhu, D.D.Philipson, J.Lytton (1998)Alternative Promoters and Cardiac Cell-Specific Expression of the Na⁺/Ca⁺⁺ Exchanger Gene (NCX1)
Am. J. Physiol., 274(Heart Circ. Physiol. 43):H217-232.
6. H.Wang, **W.Yang** and L.Fliedel (1997). Identification of an HMG-like Protein Involved in Regulation of Na⁺/H⁺ Exchanger Expression
Mol. and Cell. Biochem., 176:99-106
7. H.Wang, D.Singh, **W.Yang**, J.Dyck and L.Fliedel (1996)Structure and Analysis of the Mouse Na⁺/H⁺ Exchanger (NHE1) Gene: Homology and Conservation of Splice Sites
Mol. and Cell. Biochem., 165:155-59

8. **W.Yang**, H.Wang and L.Fliegel (1996)
Regulation of Na⁺/H⁺ Exchanger Gene Expression: Role of a Novel Poly(dA:dT) Element in Regulation of the NHE-1 Promoter
J.B.C., 271(34):20444-20449
9. **W.Yang**, J.R.B.Dyck, H.Wang and L.Fliegel (1996)
Regulation of the NHE-1 Expression in L6 Muscle Cell
Biochem. Biophys. Acta, 1306:107-113
10. **W.Yang**, J.R.B.Dyck, H.Wang and L.Fliegel (1996)
Regulation of the NHE-1 Promoter in Mammalian Myocardium
Am. J. Physiol., 270(Heart Circ. Physiol. 39):H259-266
11. L.Fliegel, H.Wang, **W.Yang** and J.R.B.Dyck (1994)
Regulation of Myocardial Na/H Exchanger Expression in Different Models of Acidosis and Development
The Canadian J. Cardiol. V10 (supl C):82C
12. **W.Yang** and H. Zhang (1992)
Time Series Prediction of Communicable Disease Mortality of Population in East District of Chengdu City
Preventive Medicine in West China, 19(4):42
13. J.Wang, **W.Yang** and J.Guo (1991)
The Effect of Air Pollutants of an Electrometallurgical Plant on Human Immune Response & Respiratory Function
Preventive Medicine in West China, 18(1):13
14. J.Wang and **W.Yang** (1989)
Study of Relationship between Air Pollution and Human Immune Response & Respiratory Function in Population in Chengdu.
Journal of Environment and Health, 6(2):1
15. J.Wang, **W.Yang** and J.Guo (1989)
Effect of the Air Pollutants from a Nickel Plant on Cellular & Humoral Immune Response of Surrounding Residents.
Chengdu Environmental Protection, 13(4):41
16. J.Wang, **W.Yang** and J.Guo (1988)
Biochemical & Immunological Effect of Air Pollutants on Residents in Chengdu
Chengdu Environmental Protection, 12(1):42
17. **W.Yang** and J.Guo (1987)
Antipyrone T_{1/2e} in Saliva---a Simple, Effective Parameter in Reflecting Effect of Benzo(a)pyrene on Activity of Human Mixed Function Oxygenases (Review)
Foreign Medicine—Section of Hygiene, 14(2):85
18. J.Wang and **W.Yang** (1987)
Study of Effect of Some Air Pollutants on Human Immune Response & Respiratory Function in Population in Chengdu
Sichuan Environment, 6(3):22
19. **W.Yang** and J.Guo (1987)
Influence of Air Pollution on Human Immune Response & Aromatic Hydrocarbon Hydroxylase Activity in Chengdu
Public Health of China, 6(5):257