SHUO WEI

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PERSONAL STATEMENT

Research scientist with outstanding basic and translational research experience in multiple disciplines including cancer biology, lupus pathogenesis, small molecule targeted therapy, high throughput screening (HTS), mice experimentation, structural biology and medicinal chemistry.

His research is focused on:
1) Repositioning old drug by shifting drug target of thiazolidinedione from a ligand of transcription factor PPARγ to an energy restriction mimetic agent (ERMA) with a well-explored anti-cancer mechanism.
2) Developing mechanism-based high throughput screening and identified multiple chemotypes of Pin1 inhibitors for targeting cancer or autoimmune disease, and validated inhibitors in mammalian cells in vitro and in mice in vivo via genetic or pharmacological approaches.

Inventor of the Pin1 inhibitors that contributed to patents and a biotech start-up, Pinteon.

Extensive collaboration experience with multiple leading scientists in the fields of drug screening, natural product, oncology, immunology, structural biology and medicinal chemistry and have great communication, writing and presentation skills. Legally authorized to work in the United States (Green Card holder).

PROFESSIONAL AREAS OF STRENGTH

- High throughput screening
- Cancer biology
- Mouse experimentation
- Protein handling
- Signal transduction
- Scientific writing
- Drug mechanism exploration
- Immunology (Lupus pathogenesis)
- Molecular and Cell biology
- Molecular modeling
- Medicinal chemistry
- Data analysis/Interpretation

EDUCATION

Ph.D. in Pharmacy, Ohio State University, OH	2009
M.S. in Life Science, Tsing-Hua University, Hsinchu, Taiwan	2001
B.S. in Chemistry, Sun Yat-Sen University, Kaohsiung, Taiwan	1999

PATENTS

1. Lu KP, **Shuo Wei**, and Zhou XZ. Methods and compositions for the treatment of proliferative disorders. US 20140086909 A1, Issued March 27, 2014. Also published as: CN103702967A, WO2012125724A1

2. Lu KP, Boxer MB, Davis ME, Pragani R, Shen M, Simeonov AM, **Shuo Wei**, and Zhou XZ. Methods and compositions for the treatment of proliferative disorders. WO2013185055 A1, Issued December 12, 2013.
3. Lu KP, Zhou XZ and **Shuo Wei**. ATRA-induced ablation of activated Pin1 selectively in cancer cell exerts potent anticancer activity by inhibiting many cancer driving pathways. Filed May 2014.
4. Lu KP, Zhou XZ and **Shuo Wei**. ATRA for modulating Pin1 activity and stability. Filed July 2014.
5. Lu KP, Zhou XZ and **Shuo Wei**. Biomarkers for Pin1-associated disorders. Filed July 2014
6. Enhanced ATRA-related compounds derived from structure-activity relationships and modeling for inhibiting Pin1. Filed Mar 2015.
7. Lu KP, Zhou XZ, **Shuo Wei**, Sun L and Hall ML. Enhanced ATRA-related compounds for the treatment of proliferative diseases, autoimmune diseases, and addiction conditions. Filed Mar 2015.

AWARDS

Susan G. Komen for the cure, Postdoctoral Fellowship ($180,000/3 years) 2011-2014
Development of Pin1 inhibitors to treat aggressive and/or drug-resistant breast cancers
Ohio State University, Pharmacy Graduate Assistantship 2005-2010
Albert H. Soloway Graduate Student Award. Ohio State University 2009
Albert H. Soloway Graduate Student Award. Ohio State University 2008
Merit Poster Award in Annual Conference of Biomedical Sciences, Taiwan 2005

LEADERSHIP

Biology Team lead, Pinteon Therapeutics 2014-Present
Committee, Boston Taiwanese Biotechnology Association 2014-2015
Committee, Boston Taiwanese Biotechnology Symposium 2015 2015

PROFESSIONAL EXPERIENCE

Scientist **2014-Present**
Pinteon Therapeutics, Inc. Cambridge, MA
(http://www.pinteon.com/) or (http://labcentral.org/resident-companies/pinteon/)

Susan G. Komen Postdoctoral Research Fellow **2010-2014**
Department of Medicine, Harvard Medical School and Beth Israel Deaconess Medical Center, Boston, MA
Lab head: Dr. Kun Ping Lu, Professor

Graduate Student **2005-2010**
College of Pharmacy, The Ohio State University, Columbus, OH
Lab head: Dr. Ching-Shih Chen, Professor

Research Assistant **2003- 2005**
Department of Clinical Biomedicine, Chen-Kung University, Tainan, Taiwan

Lab head: Dr. Pei-Jung Frank Lu, Professor

Military service in Taiwan **2001- 2003**

Master student **1999- 2001**
Department of Life Science, Tsing-Hua University, Hsin-Chu, Taiwan
Lab head: Dr. Yiu-Kay Lai, Professor

PUBLICATIONS

1. **Shuo Wei**, Kats L, Li W, Nehema M, Kondo A, Luo M, Yao Y, Moerke N, Cao S, Reschke M, Rego EM, Lococo F, Cantley L, Zhang Y, Pandolfi PP, Zhou XZ and Lu KP. Active Pin1 as a key target of anticancer drug against acute promyelocytic leukemia and breast cancer through suppression of multiple cancer-driving pathways. **Nature Medicine**. 2015; Apr 13. doi: 10.1038/nm.3839. [Epub ahead of print]

2. Kondo A, Shahpasand K, Mannix R, Qiu J, Moncaster J, Chen CH, Yao Y, Lin YM, Driver J, **Shuo Wei**, Huang P, Rotenberg A, Ryo A, Goldstein L, Pascual-Leone A, Mckee A, Meehan W, Zhou XZ and Lu KP. An early driver of traumatic brain injury that can be effectively blocked by antibody. **Nature.** Accepted. 2015.

3. Nechama M, Kwon J, **Shuo Wei**, Tun Kyi A, Welner RS, Simo AM, Asara JM, Chen CH, Nelson KF, Kobayashi KS, Israel E, Zhou XZ, Nicholson LK and Lu KP. A critical signaling axis for type 2 immunity in allergic asthma that can effectively blocked by Pin1 inhibition. **Nature Medicine.** In Revision. 2015.

4. Mayfield J, Fan S, **Shuo Wei**, Zhang M, Li B, Ellington A, Etzkorn F and Zhang Y. Chemical tools to decipher the regulation of phosphatases by proline isomerization on eukaryotic RNA polymerase II. **Nature Chemical Biology**. In Revision. 2015

5. Luo M, Gong C, Chen CH, Hu H, Huang P, Zheng M, Yao Y, **Shuo Wei**, Wulf G, Lieberman J, Zhou XZ, Song E, Lu KP. The Rab2A GTPase Promotes Breast Cancer Stem Cells and Tumorigenesis via Erk Signaling Activation. **Cell Reports**. 2015; Mar 24. pii: S2211-1247(15)00244-2.

6. Chen CH, Chang CC, Lee TH, Luo M, Huang P, Liao PH, **Shuo Wei**, Chen RH, Allis CD, Zhou XZ, Shih HM and Lu KP. SENP1 deSUMOylates and regulates Pin1 protein activity and cellular function. **Cancer Res**. 2013; 73(13):3951-3962.

7. **Shuo Wei**, Chu PC, Chuang HC, Hung WC, Kulp SK and Chen CS. Targeting the oncogenic E3 ligase Skp2 in prostate and breast cancer cells with a novel energy restriction-mimetic agent. **PLoS ONE.** 2012; 7(10):e47298-e47298.

8. Min SH, Lau AW, Lee TH, Inuzuka H, **Shuo Wei**, Huang P, Shaik S, Lee DY, Finn G, Balastik M, Chen CH, Luo M, Tron AE, Decaprio JA, Zhou XZ, Wei W and Lu KP. Negative regulation of the stability and tumor suppressor function of Fbw7 by the Pin1 prolyl isomerase. **Mol. Cell.** 2012; 2012; 46(6):771-783.

9. **Shuo Wei**, Kulp SK and Chen CS. Energy restriction as an anti-tumor target of thiazolidinediones. **J Biol. Chem.** 2010; 285(13):9780-91.

10. Guh JW, Chang WL, Yang J, **Shuo Wei**, Kulp SK and Chen CS. Development of novel adenosine monophosphate-activated protein kinase activators. **J Med. Chem.** 2010; 53(6):2552-61.

11. Huang PH, Wang DS, Chuang HC, **Shuo Wei**, Kulp SK and Chen CS. α-Tocopheryl succinate and derivatives mediate the transcriptional repression of androgen receptor in prostate cancer cells by targeting the PP2A-JNK-Sp1 signaling axis. **Carcinogenesis.** 2009; 30(7):1125-31.

12. **Shuo Wei**, Chuang HC, Tsai WC, Yang HC, Ho SR, Paterson AJ, Kulp SK and Chen CS. Thiazolidinediones mimic glucose starvation in facilitating Sp1 degradation through the upregulation of β-TrCP. **Mol. Pharmacol.** 2009; 76(1):1-11.

13. **Shuo Wei**, Yang J, Lee SL, Kulp SK and Chen CS. PPARγ-independent antitumor effects of thiazolidinediones. **Cancer Lett.** 2009; 276:119-124.

14. **Shuo Wei**, Yang HC, Chuang HC, Yang J, Kulp SK, Lu PJ, Lai MD and Chen CS. A novel mechanism by which thiazolidinediones facilitate the proteasomal degradation of cyclin D1. **J. Biol. Chem.** 2008; 283(39):26759-26770.

15. Yang J, **Shuo Wei**, Wang DS, Wang YC, Kulp SK, and Chen CS. Pharmacological exploitation of the PPARγ agonist ciglitazone to develop a novel class of androgen receptor-ablative agents. **J. Med. Chem.** 2008; 51:2100-2107.

16. Yang CC, Wang YC, **Shuo Wei**, Lin LF, Chen CS, Lee CC, Lin CC, Chen CS. Peroxisome proliferator-activated receptor gamma-independent suppression of androgen receptor expression by troglitazone mechanism and pharmacologic exploitation. **Cancer Res.** 2007; 67(7):3229-3238.

17. **Shuo Wei**, Lin LF, Yang CC, Wang YC, Chang GD, Chen H, Chen CS. Thiazolidinediones modulate the expression of β-catenin and other cell-cycle regulatory proteins by targeting the SCF complex independently of PPARγ. **Mol Pharmacol.** 2007; 72(3):725-733.

18. Yang CC, Ku CY, **Shuo Wei**, Shiau CW, Chen CS, Pinzone JJ, Ringel MD, Chen CS. PPARγ-independent repression of prostate-specific antigen expression by thiazolidinediones in prostate cancer cells. **Mol Pharmacol.** 2006; 69(5):1564-1570.

19. Sun FC, **Shuo Wei**, Li CW, Chang YS, Chao CC, Lai YK. Localization of GRP78 to mitochondria under the unfolded protein response. **Biochem J.** 2006; 396(1):31-39.

REFERENCES

Available upon request.