

南加州華裔教授會

CHINESE AMERICAN FACULTY ASSOCIATION
SOUTHERN CALIFORNIA
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44th Annual Convention

第四十四屆年會



March 7, 2015

Quiet Cannon Conference Center
Second floor, Newmark conference room
901 Via San Clemente, Montebello, CA 90640

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Chinese American Faculty Association of *Southern California*

Forty-Fourth Annual Convention

Saturday, March 7th, 2015

Quite Cannon Restaurant, 2nd floor, Newmark conference room

901 Via San Clemente, Montebello, CA 90640

Social Hour and Registration	11:30 am
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Luncheon	12:00 pm
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Welcome	Elizabeth Budde	潘莉華
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President Report	Yi Cheng	鄭 怡
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Inauguration of New President & Officers	Kirk Shung	熊克平
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CAFA Foundation President Report	Shiuan Chen	陳 瑄
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Introduction to Keynote Speaker	Dah-Ning Yuan	袁大寧
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Keynote Speech

Dr. Lee-Lueng Fu, 傅立倫

Jet Propulsion Laboratory

Monitoring the Ocean and Climate from Space

Awards Presentation

Achievement Award Presentation	Tu-nan Chang	張圖南
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Achievement Award Presentation	Wei-Chiang Shen	沈維強
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Service Award Presentation	Andy Yao	姚其川
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Faculty Grant Presentation	Lianlian Lin	林連連
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Scholarship Presentation	Thomas Lin	林文雄
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Master of Ceremony	Elizabeth Budde	潘莉華
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Keynote Speech

Monitoring the Ocean and Climate from Space



Dr. Lee-Lueng Fu

傅立倫 博士

Dr. Lee-Lueng Fu is a Jet Propulsion Laboratory (JPL) Fellow and Senior Research Scientist at the Jet Propulsion Laboratory, California Institute of Technology. He has been the Project Scientist for JPL's satellite altimetry missions since 1988, including TOPEX/Poseidon, Jason, and Ocean Surface Topography Mission/Jason-2. He received a B.S. degree in Physics from National Taiwan University (1972) and a Ph.D. in Oceanography from Massachusetts Institute of Technology and Woods Hole Oceanographic Institution (1980).

Dr. Fu's research has been focused on the dynamics of ocean waves and currents ranging from small-scale internal gravity waves to ocean basin-scale circulation. He is a member of the U.S. National Academy of Engineering, and a Fellow of the American Geophysical Union and the American Meteorological Society. Recently he was awarded the COSPAR International Cooperation Medal for his leadership in the development and continuation of satellite altimetry missions.

2014 ACHIEVEMENT AWARD RECIPIENT



Dr. Yun Yen

閻雲 博士

Dr. Yun Yen, president of Taipei Medical Center, who has over 20 years of experience in new drug discovery and therapeutic drug development in cancer, and experience in leading phase 1/2 clinical trials and translational studies. Dr. Yen has studied inhibitors to target ribonucleotide reductase for many years and current focus is on using nanoparticle technology or small molecule to inhibit tumorigenesis.

Dr. Yen also has accumulated many years of experiences in improving the pharmacokinetics and genomic driven pharmacodynamics in cancer therapy. Dr. Yen was Cancer center associate director of City of Hope National Medical Center as well as Director of the Translational Research Laboratory, he have the ability to analyze whole genome sequencing of circulating tumor cells from patients.

Dr. Yen currently holds position as President of Taipei Medical University and adjunct professors at Caltech, National Taiwan University and Academic Sinica of Taiwan. He is also honored Endowed Chair of Zhejiang University, China. He is current International Affair Committee Chair of America Society of Cancer Organization and leads the consortium of global cancer medicine. Dr. Yen published 250 papers in prestigious journals such as Nature, Science, PNAS, and Cancer Research. He also wrote many books and chapters in cancer medicine.

2014 ACHIEVEMENT AWARD RECIPIENT



Dr. Thomas Lin

林文雄 博士

Dr. Thomas W. Lin is a professor of Accounting at the University of Southern California (USC) Leventhal School of Accounting for 40 years and the Marshall School of Business MBA Pacific RIM Education (PRIME) Program China Country Desk Officer for 18 years. He has also served as Director of Doctoral Program in Accounting for 5 years. During past 18 years, he has taught PRIME course and every year has accompanied about 40 Marshall MBA Program students to visit and doing research projects for 8 to 10 firms in China. His students have learned Chinese culture, history, China economic and political situations as well as doing business in China.

Dr. Lin's research interests focus on cost management and greater China accounting. He is an internationally known scholar in the development of management accounting and control systems for improving business and management decisions. He has published more than 110 papers, and four papers received best paper awards. He has published two co-authored textbooks: (1) Cost Management: A Strategic Emphasis, McGraw-Hill Irwin, 3rd ed., 2005, and (2) Advanced Auditing: Fundamentals of EDP and Statistical Audit Technology, Addison-Wesley, 1988.

Over the years, Dr. Lin has consistently served his school, the broader accounting profession and, in particular, the American Accounting Association (AAA). He has served on more than ten AAA committees and four editorial boards of AAA journals. His most enduring contribution resides in the relationships he has built with the Chinese academic accounting community. In 1995, he helped accounting professors in sixty China universities to establish the Chinese Accounting Professors Association (“CAPA”), and conducted several management accounting research and teaching seminars during CAPA’s annual conferences. He has been the key link between AAA and CAPA. He has invited more than fifteen AAA Presidents and famous accounting researchers as CAPA annual conference keynote speakers. In recognition of his contribution, he received the AAA Outstanding Service Award in 2012. He also established the Chinese-American Accounting Professors

Association of North America (CAPANA) in 1976 and helped to grow from about 30 members to more than 500 members. In 2013, he received the CAPANA's first Honorary Fellow Award.

Dr. Lin is an active life member of CAFA, and has served as President, President-Elect, Secretary, Treasurer, Campus Liaison Officer, Student Scholarship Committee Chair, and on the Board of CAFA Scholarship Foundation. He received 2003 CAFA Service Award.

Dr. Lin has a B.A. degree in business administration from National Taiwan University (1966), MBA degree from National Chengchi University in Taiwan (1970), M.S. degree in accounting and information systems from UCLA (1971), and Ph.D. degree in accounting from the Ohio State University (1975). He has experience as an internal auditor, a systems analyst, and a special assistant to the Chairman of the Board Mr. Yong-Ching Wang at Formosa Plastics Group in Taiwan, an auditor at KPMG Peat Marwick in Los Angeles, and an Independent Board of Director at First Commercial Bank (USA). Dr. Lin resides in Hacienda Heights; he has son William & daughter-in-law Claire with grandchildren Sally and Bradley as well as daughter Margaret & son-in-law Randy. They are all Christians.

2014 SERVICE AWARD RECIPIENT



Dr. Shiu-an Chen

陳瑄 博士

Shiu-an Chen, Ph.D., professor at Beckman Research Institute City of Hope medical center, who has studied breast cancer for 26 years. He is one of the three investigators who originally determined the gene structure of aromatase. Aromatase is an enzyme that converts androgen to estrogen. It has been found that abnormal expression of aromatase in breast cancer cells and/or surrounding adipose stromal cells has a significant influence on tumor development and growth. Dr. Chen is the Chair of the Department of Cancer Biology at City of Hope. Several translational research projects are being carried out in his laboratory. Cell culture and animal models have been developed to identify the most effective ways to use aromatase inhibitors (AIs), and to evaluate new strategies in combination of AIs and other types of drugs that will improve efficacy and reduce side effects associated with the treatment. Extensive research has been carried out to study why some patients fail in the treatment of AIs, and collaborations with clinical colleagues at City of Hope have been established to develop mechanism-based clinical trials with preclinical data generated in Dr. Chen's laboratory. Results from major clinical trials on AIs indicate that the use of AIs can prevent recurrence. Dr. Chen's laboratory has found that grape seed extract, mushrooms, and pomegranate contain anti-aromatase phytochemicals. Clinical trials designed based Dr. Chen's findings are being carried out at City of Hope.

Furthermore, Dr. Chen has found that blueberry has the potential to slow down cancer metastasis. This line of research will help us find effective ways to reduce the incidence of breast cancer through dietary intervention and has received recognition nation-wide. It is Dr. Chen's goal that he will be able to characterize a group of superfood with defined protective effects. He feels strongly that such knowledge is critically needed for the development of novel prevention strategies against cancer, such as breast cancer and prostate cancer. Furthermore, Dr. Chen's laboratory has developed a high throughput screening assay for identifying and testing environmental chemicals that

can target aromatase and estrogen receptor, including certain industrial pollutants, pesticides, and detergents that can mimic hormones and stimulate breast cancer growth.

Dr. Chen has shared his expertise in numerous study sections for the National Institutes of Health, U.S. Army Breast Cancer Research Program, Susan G. Komen for the Cure and the Environmental Protection Agency. In addition, he has served as the Chair of a 2007 Gordon Research Conference on Hormone Action in Development & Cancer, the Chair of the Ninth International Aromatase (2008) conference, a co-organizer of the Taiwan Aromatase Conference, and a member of the National Breast Cancer Coalitions's Summit on Primary Prevention of Breast Cancer 2011. He is a recipient of the Gallery of Achievement Award of Science (City of Hope), a Featured Research of the California Breast Cancer Research Program, and a recipient to the City of Hope Portrait Gallery of Scientific Achievement. He was also the President of the Chinese-American Faculty Association, Southern California and a Board Director of the Chinese-American Engineers and Scientists Association of Southern California in 2007. Currently, he is the President of the CAFA Foundation. Dr. Chen has published 234 papers and has mentored 10 graduate students, 25 research and surgical fellows, and several junior faculty members.

2014 CAFA Faculty Development Grant

The Robert T. Poe and the CAFA Faculty Development Grants are aimed to support CAFA faculty members in their scholarly pursuit. The grants cover a range of expenses: minor equipment, materials, student hires, manuscript preparation, and proposal preparation. The amount awarded to each grant will depend on the proposal and can be a maximum of \$2,500. Preference will be given to junior faculty members.

This year CAFA received excellent proposals covering several fields. All the proposals deserve recognition and financial assistance. Due to funding limitation, we are only able to fund the following three most meritorious proposals.

The CAFA Faculty Development Grant

1. **“Toward the Roles of PARP-14 in Cancer Pathogenesis”** by Yong Zhang, 張勇 PhD, Assistant Professor, Department of Pharmacology and Pharmaceutical Sciences, School of Pharmacy, University of Southern California

ADP-ribosylation has been shown to be essential in regulating a variety of biological processes, including cell proliferation, apoptosis, DNA methylation, and signaling transduction. Aberrant ADP-ribosylation catalyzed by ADP-ribosyltransferase (ART) has been implicated in cancer initiation and progression. Nonetheless, the oncogenic functions of ART and its molecular mechanisms in promoting tumor cell survival, growth and development have remain elusive. To elucidate the roles of ART in cancer pathogenesis, a comprehensive and systematic understanding of the ART-associated interaction network in the context of proliferating cancer cells is required. Our proposed study is aimed at delineating ART-mediated signaling pathways on a cell-type specific basis, which will provide knowledge for understanding the importance and roles of ART in cancer biology and lead to the development of new anti-cancer drugs. The long-term goals include discovery of novel therapeutic targets, elucidation of the post-translational modification network regulated by ART enzymes, and generation of new chemotherapeutic agents targeting ART and its interaction partners.

2. **“Rational Design of Bone Morphogenetic Protein Receptor Inhibitors”** by Lyna Luo, 羅蘊 PhD, Assistant Professor, Department of Pharmaceutical Sciences, College of Pharmacy, Western University of Health Sciences

The formation and growth of bones and cartilages are tightly controlled by several growth factors called “bone morphogenetic proteins” (BMP). Mutations in the genes coding for BMP receptors are linked to severe pathologies including cancer, Cowden’s disease, and pulmonary hypertension. Among them, mutations affecting a subtype of BMP receptor, ALK2 (Activin-Like Kinase-2), are responsible for the development of fibrodysplasia ossificans progressiva (FOP), also called Stone Man syndrome, in which muscles are slowly replaced by hard bone tissue. There is presently no treatment to prevent or cure this disease. In this project, we will apply computational molecular dynamics simulations and free energy calculations to investigate 1) how the FOP mutations affect the structure and function of ALK2 kinase and 2) how to design novel and selective ALK2 inhibitor to block the overactive BMP signaling that causes the aberrant bone formation in FOP. Successful

completion of this project is expected to guide the development of ALK2 inhibitors with high selectivity and pharmaceutical properties for the treatment of FOP and other heterotopic ossification disorders.

3. **“Development of a therapeutic platform for management of relapsed acute myeloid leukemia after allogeneic stem cell transplantation”** by Matthew Mei, 梅敬業, MD, Assistant Professor, Department of Hematology and Hematopoietic Cell Transplantation, City of Hope

Acute myeloid leukemia (AML) is a highly morbid disease with a poor long-term outcome. While allogeneic stem cell transplantation (allo-SCT) represents a potentially curative treatment, the relapse rate after allo-SCT remains substantial. Unfortunately, the outcome of patients with AML who have relapsed after allo-SCT is dismal with the vast majority of patients succumbing to their illness within a few months. At the moment, there is no standard approach for AML which has relapsed after allo-SCT. We are aiming to explore the biology of AML which has relapsed after allo-SCT as well as develop a post-transplant therapeutic platform based on hypomethylating agents (HMA) which can be expanded upon in the future with the addition of other novel agents. First, we are planning a retrospective study with an aim towards establishing a baseline for clinical outcomes including overall survival and amount of time on therapy for patients who have received HMA post allo-SCT. We are also in the process of designing a prospective study featuring a HMA backbone in conjunction with novel agents for patients with relapsed disease. As part of the prospective study, a number of biological correlative studies will be conducted focusing on the mutational landscape and gene expression of AML prior to transplant and then subsequently after relapse. In particular, acquired mutations and changes in gene expression profiling found post relapse will help us understand the biological mechanisms which lie behind relapse and immune escape.

2014 CAFA Scholarship Recipients

1. CAFA GingYing Chu Wu Memorial Scholarship

Recipient: Zhennan Summer Zhang 章真楠

Zhennan (Summer) is a senior at USC. She has double majors in Business Administration and Economics with a GPA of 3.9. She is a student worker at Dornsife Advancement. She has served as a USC Orientation Program Advisor to advise Chinese freshmen, an active member of the USC Chinese Student Association, Treasurer of the USC Alpha Chapter, a member of the Club USC Undergraduate Student Governance Committee, Marshall Case team, Trojan Investing Society, and Marshall career Advantage program. She was Vice President of External Affairs at the Wuhan University Manager Club and Financial Analyst at Focus Advisory Services. She also had an internship at the Big-4 accounting firm PricewaterhouseCoopers.

2. CAFA TAWA Supermarket Inc. Scholarship

Recipient: Jiayi Claire Xu 徐嘉屹

Jiayi (Claire) is a senior at USC. She has double majors in Business Administration and Accounting with a GPA of 3.91. She is very active in various activities. She is the Public Relations member at USC International Student Assembly, Chair of Special Event & Membership at USC Accounting Society, Member of USC Trojan Investing Society, Project Co-Leader at USC Student in Free Enterprise, Activity Host during USC Marshall International Case Competition, Certified Volunteer, USC VITA Free Income Tax Preparation, member of USC Asian American Business Association, member of USC Global China Connection, Member of USC Chinese Student Association, and Student Mentee of USC Marshall Career Advantage Program.

3. CAFA TAWA Supermarket Inc. Scholarship

Recipient: Ling Zeng 曾翊

Ling is a sophomore at USC. She is Business Administration major and Computer Science & Mathematics minor with a GPA of 4.0. She has served in several organizations. She is Vice President of External Relations at LA Community Impact, Mentor at USC Marshall Global Leadership Program to teach Chinese language & culture, Director of Human Resources at USC Marshall Business Student Government, Member of Chinese American Student Association, and Instructional Assistant for an Accounting Course. She also has a business internship in a Shanghai firm.

4. CAFA Hung-To Chen Scholarship

Recipient: Xuefeng Serena Li 李雪凤

Xuefeng (Serena) is a junior at CSU San Bernardino. She is a Finance major with a GPA of 3.8. As a transfer student from China's Xinjiang University of Finance and Economics three quarters ago, she has been on Dean's list every quarter at CSUSB, and plays very well in badminton, Ping-Pong and volleyball. She is Vice President of CSUSB Chinese Student Association, Member of CSUSB International Connect and Member of CSUSB Toastmasters. She received 2014 Most Valuable Player Award in Asian Cup Volleyball.

5. CAFA Lois and Henry Chi Scholarship

Recipient: Lyndon Liang Yin Yu

Lyndon is a junior at USC. She is Biology major and Biotechnology minor with a GPA of 3.57. She likes to work with underprivileged children, and has served as Philanthropy Chair at USC Alpha Phi Omega to feed the homeless and to tutor children living in housing projects, Experiment Manager at Science Outreach, Research Assistant at Weiming Yuan Lab, and USC Trojan Health Volunteer. She created USC KEDS event to bring over one hundred kids from neighborhood to campus for one day education activities.

6. CAFA General Li-Jen Fang Memorial Scholarship

Recipient: Julie Ngo 吳潔俐

Julie is a senior at UC Riverside. She is Chinese Literatures and Languages major with a GPA of 3.53. She has been on the Dean's List and received scholarships for studying abroad at National Taiwan Normal University. She is working on her Honors thesis titled "Global Shift of Opportunity between America and China." She is a volunteer at UC Riverside Conversion Partner Program, and is a tutor for international students. She is doing her Internship at Singular Plus Education that aims to provide services for international students.

7. CAFA Chi-Yue Lin Memorial Scholarship

Recipient: Jazmyn Tanski 莉薇

Jazmyn is a senior at USC who has double majors in East Asian Languages and Cultures, and Cinematics Arts & Film Studies with a GPA of 3.5. As a non-Chinese native speaking student, Jazmyn has studied mandarin for six years, and has spent time in China and Taiwan. She started the USC Chinese-English Language Tutoring Program, and is USC Triathlon team member. She is also Member of USC Thematic Option Honors program, and Member of Trojan Vision - USC

Research Reports of Year 2014 Faculty Grant Recipients

1. Clinical Development of Botanical Drug Products

ZHANG Jing, PhD,^{1,2} Frances Richmond, PhD,^{2,3} and C. Benson Kuo, PhD^{2,3*}

¹ Editorial Office of Chinese Journal of Natural Medicines, China Pharmaceutical University, Nanjing 210009, China

² International Center for Regulatory Science, School of Pharmacy, University of Southern California, Los Angeles, CA 90033, USA

³ Titus Family Department of Clinical Pharmacy and Pharmaceutical Economics & Policy Faculty, School of Pharmacy, University of Southern California, Los Angeles, CA 90033, USA

Objectives: To understand the contemptuous status of clinical research of botanical drug products in the U.S. To describe the disease types which botanical drugs can be used to treat. To identify the potential candidates for regulatory approval in the near future.

Introduction/Background: The purpose of this study was to assess recent clinical trial information associated with botanical drugs and to identify the emerging trends for treatment and drug approvals. The study described these trials by various correlates and assessed changes in significant variables in the past 15 years.

Methods: Data queried from the public Clinicaltrials.gov registry and database were first gathered and analyzed to assess its usefulness as a benchmark. Disease type information was first classified according to the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10). Drugs, treatment methods, as well as date and sponsor/collaborator information were first evaluated to establish content validity prior to analysis. The data were then examined to analyze the distribution of sponsors for the studies and the sites at which such studies are conducted. Development trends were identified by comparing correlates associated with sponsors in three 5-year periods from 1998-2013.

Results: The content from a total of 989 clinical trials were downloaded for analysis from the clinicaltrials.gov database on February 22, 2014. The US had the largest number of sponsors (35%) and the single sponsor with the most trials – the National Institutes of Health with 83 trials (8.4%). The 588 products studied in the trials were analyzed, and green tea extract was found to be the leading product under investigation (in 101 studies). While “Neoplasms” would be the disease type studied the most in the trials and in Phase 2 studies; but “Diseases of the respiratory system” replaced it and became the number one leading disease type studied in Phase 3 studies. Two candidates had completed Phase 3 studies – including Lindioil developed by a Chung Gung University group in Taiwan.

Conclusions: While there is much scientific attention to cancer applications for botanical drugs, breakthroughs might come from drugs holding promise of treating other disease types with encouraging Phase 3 results.

2. “BMP signaling and chemoresistance of prostate cancer” by Jijun Hao, Assistant Professor, Western University of Health Sciences

Background

Prostate cancer is the second most common cause of cancer deaths in men in the United States [1]. Its development is initially driven by androgen signaling, and androgen-deprivation therapy is effective for most patients with advanced prostate cancer [2-4]. However, it is inevitable that the disease will eventually progress to androgen-independent prostate cancer, also called castration-resistant prostate cancer (CRPC). Lately, docetaxel has been developed as a mainstay of chemotherapy for patients with metastatic CRPC. Nevertheless, survival benefit of the docetaxel therapy is marginal and transient as almost all the patients who initially respond to the docetaxel will develop chemo-resistance within about one year. However, the mechanism underlying docetaxel-resistance prostate cancer is poorly understood, and effective therapies to overcome the chemoresistance are lacking.

Bone morphogenetic proteins (BMPs) are members of the TGF- β superfamily, and their biological activity is mediated through the formation of heteromeric complexes of BMP type I and type II receptors followed by the intracellular Smad1/5/8 protein phosphorylation for signaling activation [5, 6] (**Figure 1**). Previously, it has been showed that BMP signaling is activated in the early-stage androgen-sensitive prostate cancer and is inactivated in the subsequent CRPC-stage prostate cancer [7-14]. However, to date, *no studies* of this signaling in the more advanced chemoresistant prostate cancer have been reported in literature. In the current research, we have examined effects BMP signaling alterations on chemoresistance of prostate cancer and the achieved result are summarized below.

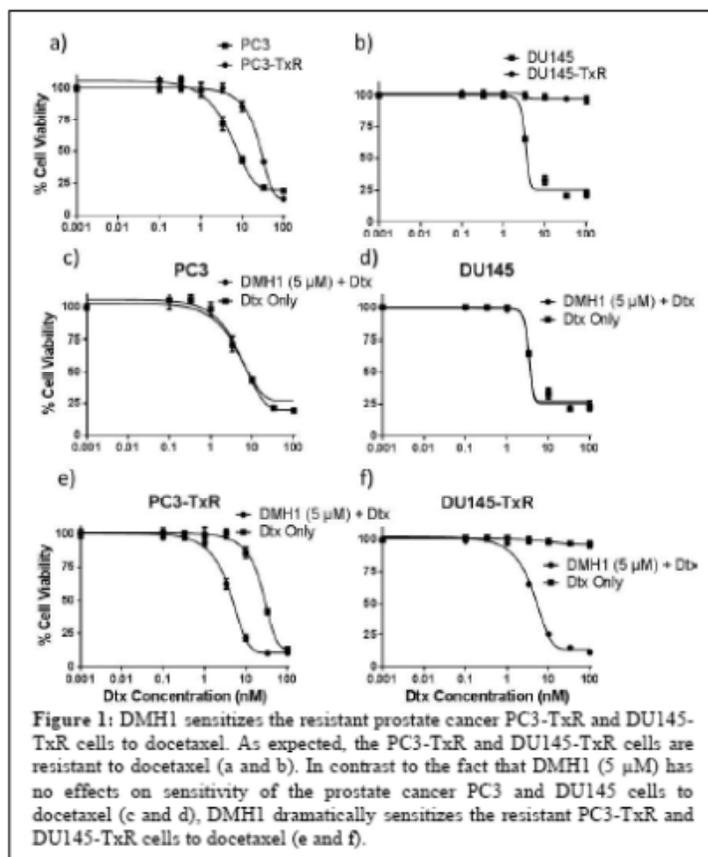


Figure 1: DMH1 sensitizes the resistant prostate cancer PC3-TxR and DU145-TxR cells to docetaxel. As expected, the PC3-TxR and DU145-TxR cells are resistant to docetaxel (a and b). In contrast to the fact that DMH1 (5 μ M) has no effects on sensitivity of the prostate cancer PC3 and DU145 cells to docetaxel (c and d), DMH1 dramatically sensitizes the resistant PC3-TxR and DU145-TxR cells to docetaxel (e and f).

Accomplishments

BMP inhibitor, DMH1, dramatically re-sensitized the resistant prostate cancer cells to docetaxel. We previously developed a selective BMP inhibitor DMH1, and DMH1 can effectively block BMP signaling by selectively targeting BMP type I receptors [15]. In docetaxel-resistant PC3- TxR cells, our western blotting studies demonstrated that treatment with DMH1 at 3 μ M significantly down-regulated the p-Smad1/5/8 protein level, indicating that DMH1 can effectively inhibit BMP signaling in the chemoresistant prostate cancer cells (data not shown). We further examined the effects of DMH1 on sensitizing response of chemoresistant prostate cancer cells to docetaxel. In the control experiments, the docetaxel-resistant PC3-TxR and DU145-TxR cells, as expected, were significantly resistant to docetaxel treatment in contrast to the docetaxel-sensitive CRPC-stage PC3 and DU145 cells (**Fig 1a** and **1b**), and treatment with the combination of DMH1 and docetaxel didn't show any additive effect on parent PC3 and DU145 cells verse docetaxel treatment alone (**Fig 1c** and **1d**). However, DMH1 remarkably restored sensitization of the resistant PC3-TxR and DU145-TxR cells to docetaxel in the appropriately similar levels to the sensitive parental cells (**Fig 1e** and **1f**), suggesting that DMH1 can re-sensitize chemoresistant prostate cancer cells to docetaxel.

BMP inhibitor DMH1, in combination with docetaxel, suppresses migration of docetaxel-resistant prostate cancer cells *in vitro*. We treated the parental PC3 cells and chemo-resistant PC3-TxR prostate cancer cells with DMH1, and then measured the compound's effects on cell migration by scratch-wound assay. As shown in **Figure 2**, docetaxel at 1 nM, the concentration which doesn't cause cell toxicity, didn't have significant effect on the migration of both PC3 and PC3-TxR cells, but the combination of both docetaxel and DMH1 dramatically suppressed the resistant PC3-TxR cells, but not the PC3 cells, suggesting DMH1, in combination with docetaxel, suppresses migration of docetaxel-resistant prostate cancer cells *in vitro*.

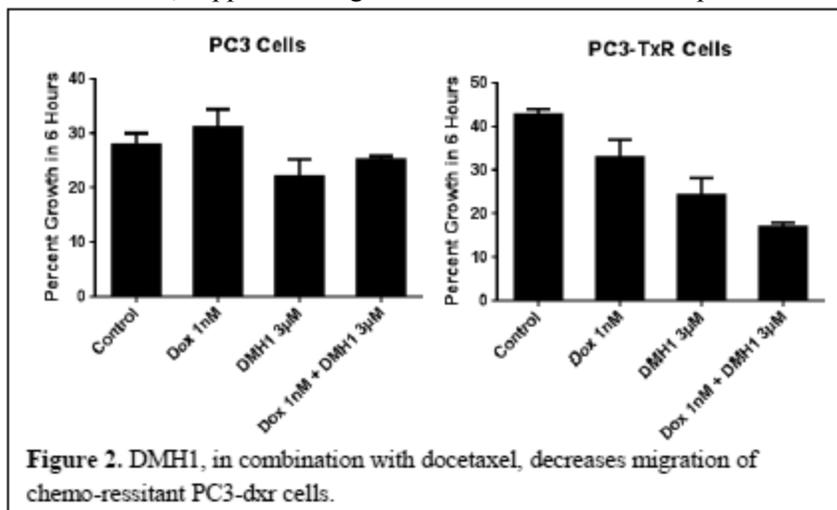


Figure 2. DMH1, in combination with docetaxel, decreases migration of chemo-resistant PC3-dxr cells.

In addition, we are also working on invasion assay of DMH1 for docetaxel-resistant prostate cancer cells, and chemo-sensitizing efficacy of DMH1 will be evaluated in a mouse xenograft model of chemoresistant prostate cancer soon.

References

1. Jemal, A., et al., *Global cancer statistics*. CA Cancer J Clin, 2011. **61**(2): p. 69-90.
2. *Leuprolide versus diethylstilbestrol for metastatic prostate cancer*. The Leuprolide Study Group. N Engl J Med, 1984. **311**(20): p. 1281-6.
3. Huggins, C. and C.V. Hodges, *Studies on prostatic cancer - I. The effect of castration, of estrogen and of androgen injection on serum phosphatases in metastatic carcinoma of the prostate*. Journal of Urology, 2002. **168**(1): p. 9-12.
4. Huggins, C., *The Hormone-Dependent Cancers*. Jama-Journal of the American Medical Association, 1963. **186**(5): p. 481-483.
5. Attisano, L. and J.L. Wrana, *Signal transduction by the TGF-beta superfamily*. Science, 2002. **296**(5573): p. 1646-1647.
6. Miyazono, K., S. Maeda, and T. Imamura, *BMP receptor signaling: Transcriptional targets, regulation of signals, and signaling cross-talk*. Cytokine & Growth Factor Reviews, 2005. **16**(3): p. 251-263.

7. Horvath, L.G., et al., *Loss of BMP2, Smad8, and Smad4 expression in prostate cancer progression*. Prostate, 2004. **59**(3): p. 234-42.
8. Kim, I.Y., et al., *Expression of bone morphogenetic protein receptors type-IA, -IB and -II correlates with tumor grade in human prostate cancer tissues*. Cancer Res, 2000. **60**(11): p. 2840-4.
9. Kim, I.Y., et al., *Loss of expression of bone morphogenetic protein receptor type II in human prostate cancer cells*. Oncogene, 2004. **23**(46): p. 7651-9.
10. Yang, S., et al., *Diverse biological effect and Smad signaling of bone morphogenetic protein 7 in prostate tumor cells*. Cancer Res, 2005. **65**(13): p. 5769-77.
11. Ye, L., et al., *Bone morphogenetic proteins and their receptor signaling in prostate cancer*. Histology and Histopathology, 2007. **22**(10): p. 1129-1147.
12. Lee, G.T., et al., *Bone morphogenetic protein-6 induces castration resistance in prostate cancer cells through tumor infiltrating macrophages*. Cancer Sci, 2013. **104**(8): p. 1027-32.
13. Barnes, J., et al., *Bone morphogenetic protein-6 expression in normal and malignant prostate*. World J Urol, 1995. **13**(6): p. 337-43.
14. Hamdy, F.C., et al., *Immunolocalization and messenger RNA expression of bone morphogenetic protein-6 in human benign and malignant prostatic tissue*. Cancer Res, 1997. **57**(19): p. 4427-31.
15. Hao, J., et al., *In Vivo Structure-Activity Relationship Study of Dorsomorphin Analogues Identifies Selective VEGF and BMP Inhibitors*. Acs Chemical Biology, 2010. **5**(2): p. 245-253.

CAFA PAST PRESIDENTS

1969-1970	Theodore His-En Chen 陳錫恩	Asian Studies, USC
1969-1971	Sunney I. Chan 陳長謙	Chemistry, CIT
1969-1972	William Young	
1975-1977	Albert H. Yee	
1977-1979	Wellington K. Chan 陳錦江	History, Occidental
1979-1981	Chi-yuan Lin 林基源	Management, USC
1981-1982	Kwang-Wen Chu 朱光文	Economics, CSUF
1983-1984	Harry Hsiung 熊先智	Physics, USC
1984-1985	Lois Wong Chi 戚王樂爾	Biology, CSUDH
1985-1986	Henry H. Tsee 鐵鴻業	Asian Language, USC
1986-1987	Tung-Po Lin 林同坡	Mathematics, CSUN
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