

Chun-Hsu Yao, Ph.D.

Professor,

*Department of Biological Imaging and Radiological Science,
School of Chinese Medicine, China Medical University, Taichung, Taiwan*

Tel:886-4-22053366 ext.7806;3325

e-mail:*chyao@mail.cmu.edu.tw*

Education

1. Department of Chemistry, Chung Yuan Christian University, Taiwan

Ph.D., 1994/09~1997/09, Institute of Chemistry, Biomaterials

(Ph.D. thesis accomplished in Center for Biomedical Engineering, NTU under supervision of Prof. Feng-Huei Lin. Title of thesis: "Preparation and Evaluation of TCP Powder and Cross-linked Gelatin Composite as Bone Graft".)

2. Department of Biomedical Engineering, Chung Yuan Christian University, Taiwan

Master, 1992/09~1994/06, Institute of Biomedical Engineering, Biomaterials

(Master degree thesis accomplished in Center for Biomedical Engineering, NTU under supervision of Prof. Feng-Huei Lin.)

3. Department of Biomedical Engineering, Chung Yuan Christian University, Taiwan

Bachelor, 1985/09~1989/06, Department of Biomedical Engineering

Current Position:

Professor, Department of Biological Imaging and Radiological Science, China Medical University

Professor, School of Chinese Medicine, China Medical University

Dean, Office of Academia-Industry Cooperation, China Medical University

Career Experience:

1. Director, Department of Biological Imaging and Radiological Science, China Medical University
(2010/08-2013/07)

2. Convener, Small Business Innovation Research Program (SBIR)(2012/01-2013/12)
3. Director, Biotechnology Development Incubation Center (2009/02-2010/07)
4. Dean, Division of Research and Development, Central Taiwan University of Science and Technology(2007-2008)
5. Visiting Professor, Department of Reparative Materials, Institute for Frontier Medical Sciences, Kyoto University(2007)
5. Chairman, Institute of Biomedical Engineering and Materials Science (2004–2008)
6. Professor of Biomedical Engineering and Materials Science (2005 – 2008)
7. Director, Department of Radiological Technology (2001–2004)
8. Associate Professor of Biomedical Engineering and Materials Science (2002–2005)
9. Associate Professor of Radiological Technology (2002–2005)
10. Assistant Professor of Radiological Technology (1998 -2002)
11. Postdoctoral Fellow, Center for Biomedical Engineering, National Taiwan University (1997-1998)

Major Courses Taught :

Radiological Equipment, Advance Chinese Regenerative Medicine, Introduction on Biomedical Engineering

Research Interests :

Biomaterials, Tissue Engineering, Radiological Science

Licenses:

Biomedical Engineer

Selected Publications on Bone Tissue Regeneration :

1. Calvarial bone response to a tricalcium phosphate - genipin crosslinked gelatin composite, *Biomaterials* 2005; 26:3065~3074
2. Reconstruction of calvarial defect using a tricalcium Phosphate-oligomeric proanthocyanidins crosslinked gelatin composite, *Biomaterials* 2009; 30:1682-1688
3. Novel bone substitute composed of oligomeric proanthocyanidin cross-linked gelatin and tricalcium phosphate, *Macromol. Biosci.* 2008, 8(10):942-950
4. Rat bone marrow stromal cells-seeded porous gelatin/tricalcium phosphate/oligomeric proanthocyanidins composite scaffold for bone repair › *Journal of Tissue Engineering and Regenerative Medicine*, 2013,

5. *Journal of Biomedical Materials Research*(2006; 76A:463-469)
6. *American Journal of Chinese Medicine* (2006; 34:873-886)
7. *Journal of Biomedical Materials Research, Part A*(2008; 84A:167-177)
8. *Journal of Biomedical Materials Research, Part B* (2005; 75B:277-288)
9. *Journal of Biomedical Materials Research, Part A*(2013; 101(4):954-62)
10. *Journal of Biomedicine and Biotechnology*(2014, Article ID 853234, 10 pages) ·
11. *BONE* (SEP,2015, 78:15-22)
12. *PLOS ONE*(JUN, 2015, 10(6), e0131999)

Representative Publication in 2011~2015 :

1. Cheng-Hong Hsieh · Tien-Huang Lin · You-Liang Hsieh · Chia-Yao Shen · Sheng-Chu Kuo · Wu, Hsi-Chin · Wen-Shin Chien · Dennis Jine-Yuan Hsieh · Su-Ying Wen · Wei-Jen Ting · **Chun-Hsu Yao*** · Chih-Yang Huang (2015, Nov). Mitotic arrest induced in human DU145 prostate cancer cells in response to KHC-4 treatment. ENVIRONMENTAL TOXICOLOGY, 10.1002/tox.22189.. (SCI, 6/83, WATER RESOURCES). **Corresponding Author.**
2. **Chun-Hsu Yao**, Jen-Yu Yeh, Yueh-Sheng Chen, Ming-Hsien Li, Chiung-Hua Huang (2015, Oct). Wound Healing Effect of Electrospun Gelatin Nanofibers Containing Centella Asiatica Extract in a Rat Model. Journal of Tissue Engineering and Regenerative Medicine. (Accepted). (SCI, 5/76, ENGINEERING, BIOMEDICAL).
3. Yuan-Tsung Fu, Shi-Yuan Sheu, Yueh-Sheng Chen, Kuo-Yu Chen, **Chun-Hsu Yao*** (2015, Sep). Porous gelatin/tricalcium phosphate/genipin composites containing lumbrokinase for bone repair. BONE, 78, 15-22. (SCI, 38/128, ENDOCRINOLOGY & METABOLISM). **Corresponding Author.**
4. Wei-Ting Kuo · Yuan-Chung Tsai · Wu, Hsi-Chin · Yung-Jen Ho · Yueh-Sheng Chen · Chen-Han Yao · **Chun-Hsu Yao*** (2015, Aug). Radiosensitization of non- small cell lung cancer by kaempferol. ONCOLOGY REPORTS, 10.3892/or.2015.4204. (Accepted). NSC 100-2628-E-039-002-MY3. **Corresponding Author.**
5. Han-Chung Lee, Yuan-Man Hsu, Chin-Chuan Tsai, Cherng-Jyh Ke, **Chun-Hsu Yao**, Yueh-Sheng Chen (2015, Jun). Improved peripheral nerve regeneration in streptozotocin-induced diabetic rats by oral lumbrokinase. AMERICAN JOURNAL OF CHINESE MEDICINE, in press. (Accepted). (SCI, 4/24, INTEGRATIVE & COMPLEMENTARY MEDICINE). **Co-first Author.**
6. Wen-Ling Wang · Shi-Yuan Sheu · Yueh-Sheng Chen · Shung-Te Kao · Yuan-Tsung Fu · Tzong-Fu Kuo · Kuo-Yu Chen · **Chun-Hsu Yao*** (2015, Jun). Enhanced bone

tissue regeneration by porous gelatin composites loaded with the Chinese herbal decoction Danggui Buxue Tang. PLoS One, doi:10.1371/journal.pone.0131999. (Accepted). (SCI, MULTIDISCIPLINARY SCIENCES). NSC 102-2221-E-039-012-MY3. **Corresponding Author**.

7. Yu-Ching Lin, Chia-Hong Kao, Chung-Chia Chen, Cherng-Jyh Ke, **Chun-Hsu Yao**, Yueh-Sheng Chen (2015, Feb). Time-course effect of electrical stimulation on nerve regeneration of diabetic rats. PLoS One, 10.1371/journal.pone.0116711.. (Accepted). (SCI, MULTIDISCIPLINARY SCIENCES). NSC 102-2221-E-039-007-MY3. **Co-first Author**.

8. Benjamin Teong, Chia-Yun Lin, Shwu-Jen Chang, Gregory Cheng-Chie Niu, **Chun-Hsu Yao**, I-Fen Chen, Shyh-Ming Kuo (2015, Jan). Enhanced anti-cancer activity by curcumin-loaded hydrogel nanoparticle derived aggregates on A549 lung adenocarcinoma cells. JOURNAL OF MATERIALS SCIENCE- MATERIALS IN MEDICINE, 26:49. **Co-first Author**.

9. Han-Chung Lee, Yuan-Man Hsu, Chin-Chuan Tsai, Cherng-Jyh Ke, **Chun-Hsu Yao**, Yueh-Sheng Chen (2014, Dec). Improved peripheral nerve regeneration in streptozotocin-induced diabetic rats by oral lumbrokinase. AMERICAN JOURNAL OF CHINESE MEDICINE. (Accepted). (SCI, 3/22, INTEGRATIVE & COMPLEMENTARY MEDICINE). **Co-first Author**.

10. Yuan-Jen Chang, Jing-Quan Lin, Bor-Tsung Hsieh, **Chun-Hsu Yao***, Chin-Hsing Chen (2014, Dec). Dose evaluation of an NIPAM polymer gel dosimeter using gamma index. Radiation Physics and Chemistry. (Accepted). (SCI, 11/33, NUCLEAR SCIENCE & TECHNOLOGY). **Corresponding Author**.

11. Shwu Jen Chang, Yi-Jhen Wu, Shu Ching Tang, Hung-Yi Wang, **Chun-Hsu Yao***, Shyh Ming Kuo (2014, Sep). Hydrolyzed 5-azacytidine enhanced the differentiation of rat mesenchymal stem cells into cardiomyocytes. Journal of Medical and Biological Engineering. (Accepted). (SCI, 55/76, ENGINEERING, BIOMEDICAL). **Corresponding Author**.

12. Wen-Ling Wang, Shi-Yuan Sheu, Yueh-Sheng Chen, Shung-Te Kao, Yuan-Tsung Fu, Tzong-Fu Kuo, Kuo-Yu Chen, **Chun-Hsu Yao*** (2014, Aug). Evaluating the Bone Tissue Regeneration Capability of the Chinese Herbal Decoction Danggui Buxue Tang from a Molecular Biology Perspective. JOURNAL OF BIOMEDICINE AND BIOTECHNOLOGY. (Accepted). (SCI, 53/165, BIOTECHNOLOGY & APPLIED MICROBIOLOGY). **Corresponding Author**.

13. Yuan-Tsung Fu, Kuo-Yu Chen, Yueh-Sheng Chen, **Chun-Hsu Yao*** (2014, Aug). Earthworm (*Pheretima aspergillum*) extract stimulates osteoblast activity and inhibits osteoclast differentiation. BMC Complementary and Alternative Medicine. (Accepted). (SCI, 8/22, INTEGRATIVE & COMPLEMENTARY MEDICINE). 本人

Corresponding Author.

14. Shi-Yuan Sheu, Wen-Ling Wang, Yuan-Tsung Fu, Sheng-Chuan Lin, Yi-Chih Lei, Jeng-Hao Liao, Nou-Ying Tang, Tzong-Fu Kuo, **Chun-Hsu Yao*** (2014, May). The pig as an experimental model for mid-dermal burns. BURNS. (Accepted). (SCI, 75/204, SURGERY). **Corresponding Author.**

15. **Chun-Hsu Yao**, Wang-Ting Hsu, Jia-Jung Lee, Shih-Ming Hsu, Patrick Yuk-lun Ma, Bor-Tsung Hsieh, Yuan-Jen Chang (2014, Apr). A Characteristic Study on NIPAM Gel Dosimetry Using Optical-CT Scanner. Journal of Medical and Biological Engineering. (Accepted). (SCI, 55/76, ENGINEERING, BIOMEDICAL).

16. **Chun-Hsu Yao**, WT Hsu, SM Hsu, PYL Ma, BT Hsieh, YJ Chang (2014, Mar). NIPAM polymer gel dosimetry for IMRT four-field box irradiation using optical- CT scanner. Journal of Physics D: Applied Physics, 444(2013):012030.

17. Yu-Ching Lin, Chia-Hong Kao, Yu-Kai Cheng, Jia-Jin J. Chen, **Chun-Hsu Yao**, Yueh-Sheng Chen (2014, Feb). Current-modulated electrical stimulation as a treatment for peripheral nerve regeneration in diabetic rats. RESTORATIVE NEUROLOGY AND NEUROSCIENCE, 32(3):437-446. **Co-first Author.**

18. Chao-Hung Lai, Chien-Kuo Han, Marthandam Asokan Shibu, Pei-Ying Pai, Tsung-Jung Ho, Cecilia Hsuan Day, Fuu-Jen Tsai, Chang-Hai Tsai, **Chun-Hsu Yao***, Chih-Yang Huang (2014, Jan). Lumbrokinase from earthworm extract ameliorates second-hand smoke induced cardiac fibrosis. ENVIRONMENTAL TOXICOLOGY. (Accepted). (SCI, 14/81, WATER RESOURCES). **Corresponding Author.**

19. Bo-Yin Yang, Tzung-Chi Huang, Yueh-Sheng Chen, **Chun-Hsu Yao*** (2013, Nov). Reconstructive Effects of Percutaneous Electrical Stimulation Combined with GGT Composite on Large Bone Defect in Rats, Evidence-based Complementary and Alternative Medicine.. Evidence-based Complementary and Alternative Medicine. (Accepted). (SCI, 1/22, INTEGRATIVE & COMPLEMENTARY MEDICINE).

Corresponding Author.

20. Chia-Hong Kao, Jia-Jin J. Chen, Yuan-Man Hsu, Da-Tian Bau, **Chun-Hsu Yao**, Yueh-Sheng Chen (2013, Nov). High-frequency electrical stimulation can be a complementary therapy to promote nerve regeneration in diabetic rats. the journal of PLOS ONE. (Accepted). (SCI, 8/55, MULTIDISCIPLINARY SCIENCES). **Co-first Author.**

21. Kuo-Yu Chen, Kuen-Cherng Lin, Yueh-Sheng Chen, **Chun-Hsu Yao***. (2013, Oct). A Novel Porous Gelatin Composite Containing Naringin for Bone Repair.. Evidence-based Complementary and Alternative Medicine. (Accepted). (SCI, 1/22, INTEGRATIVE & COMPLEMENTARY MEDICINE). **Corresponding Author.**

22. **Chun-Hsu Yao**, Wang-Ting Hsu, Jia-Jung Lee, Shih-Ming Hsu, Patrick Yuk-lun Ma, Bor-Tsung Hsieh, Yuan-Jen Chang*. (2013, Sep). A Characteristic Study on

NIPAM Gel Dosimetry Using Optical-CT Scanner.. Journal of Medical and Biological Engineering. (Accepted). (SCI).

23. Kuo-Yu Chen 、 Chia-Mei Chung 、 Yueh-Sheng Chen 、 Da-Tian Bau 、 **Chun-Hsu Yao*** (2013, Sep). Rat bone marrow stromal cells-seeded porous gelatin/tricalcium phosphate/oligomeric proanthocyanidins composite scaffold for bone repair. Journal of Tissue Engineering and Regenerative Medicine, 7:708-719. (SCI, 5/76, ENGINEERING, BIOMEDICAL). NSC 96-2628-E-166- 008-MY3. **Corresponding Author.**

24. Yao-Te Huang, **Chun-Hsu Yao** (co-first author), Chia-Li Way, Kung-Wei Lee, Cheng-Yen Tsai, Hsiu-Chung Ou, Wei-Wen Kuo*. (2013, Jun). Diallyl trisulfide and diallyl disulfide ameliorate cardiac dysfunction by suppressing apoptotic and enhancing survival pathways in experimental diabetic rats.. JOURNAL OF APPLIED PHYSIOLOGY, 1(1) : 1-10. (SCI, 7/81, SPORT SCIENCES). **Co-first Author.**

25. Kuo-Yu Chen 、 Guo-Chung Dong 、 Chin-Yin Hsu 、 Yueh-Sheng Chen 、 **Chun-Hsu Yao*** (2013, Apr). Autologous bone marrow stromal cells loaded onto porous gelatin scaffolds containing Drynaria fortunei extract for bone repair. JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A. (Accepted). (SCI, 17/72, ENGINEERING, BIOMEDICAL). NSC 98-2221-E-039-005-MY3. **Corresponding Author.**

26. Kuo-Yu Chen, Kuen-Cherng Lin, Yueh-Sheng Chen, **Chun-Hsu Yao*** (2013, Mar). A novel porous gelatin composite containing naringin for bone repair. Evidence-based Complementary and Alternative Medicine. (Accepted). (SCI, 1/22, INTEGRATIVE & COMPLEMENTARY MEDICINE). NSC 96-2628-E-166-008-MY3. **Corresponding Author.**

27. Chiung-Hua Huang 、 Chin-Ying Chi 、 Yueh-Sheng Chen 、 Kuo-Yu Chen 、 Pei-Lain Chen 、 **Chun-Hsu Yao*** (2012, Dec). Evaluation of proanthocyanidin-crosslinked electrospun gelatin nanofibers for drug delivering system. Materials Science & Engineering C-Materials for Biological Applications. (Accepted). (SCI, 15/32, MATERIALS SCIENCE, BIOMATERIALS). NSC 99-2622-E-039-003-CC3. **Corresponding Author.**

28. Chung-Chia Chen 、 Chu-Ying Cha 、 Li-Shu Chen 、 Fuu-Jen Tsai 、 **Chun-Hsu Yao*** 、 Chin-Chuan Tsai 、 Yueh-Sheng Chen* (2012, May). Investigating neurochemical techniques for assessment of nerve regenerates within polymer guides. Journal of Medical and Biological Engineering, 32(2):131-138. (SCI, 61/72, ENGINEERING, BIOMEDICAL). **Corresponding Author.**

29. Li-Chun Lin 、 Shwu Jen Chang 、 Chia Yun Lin 、 Yi Ting Lin 、 Chin Wen Chuang 、 **Chun-Hsu Yao*** 、 Shyh Ming Kuo* (2012, Apr). Repair of Chondral Defects with Allogeneous Chondrocyte-seeded Hyaluronan/Collagen II Microspheres

in a Rabbit Model. ARTIFICIAL ORGANS, 36(4):E102-E109. (SCI, 31/72, ENGINEERING, BIOMEDICAL). **Corresponding Author.**

30. Yu-Li Lin 、 Yueh-Sheng Chen 、 Yuan-Man Hsu 、 **Chun-Hsu Yao*** 、 Tien-Jye Chang* (2012, Apr). Proteomic Analysis and Antibacterial Effects of Lithospermi Radix against Common Bacteria from Human Infected Wounds. Biomedical Engineering - Applications, Basis and Communications, 24(1): 37-45. (SCI, 70/72, ENGINEERING, BIOMEDICAL). NSC 98-2221-E-039-005-MY3. **Corresponding Author.**

31. **Chun-Hsu Yao** 、 Ruey-Lin Chang 、 Shih-Liang Chang 、 Chin-Chuan Tsai 、 Fuu-Jen Tsai 、 Yueh-Sheng Chen (2012, Mar). Electrical stimulation improves peripheral nerve regeneration in streptozotocin-induced diabetic rats. JOURNAL OF TRAUMA-INJURY INFECTION AND CRITICAL CARE, 72(1) :199-205. (SCI, 44/199,SURGERY).

32. Shih-Ching Wu, Wei-Hong Chang, Guo-Chung Dong, Kuo-Yu Chen, Yueh-Sheng Chen, **Chun-Hsu Yao*** (2011, Dec). Cell adhesion and proliferation enhancement by gelatin nanofiber scaffolds. JOURNAL OF BIOACTIVE AND COMPATIBLE POLYMERS, 26(6) 565–577. (SCI, 15/79, POLYMER SCIENCE). NSC 98-2622-E-039-002-CC3. **Corresponding Author.**

33. Shih-Wei Hsiang 、 Han-Chung Lee 、 Fuu-Jen Tsai 、 Chin-Chuan Tsai 、 **Chun-Hsu Yao*** 、 Yueh-Sheng Chen (2011, Dec). Puerarin accelerates peripheral nerve regeneration. AMERICAN JOURNAL OF CHINESE MEDICINE, 39(6) : 1207-1217. (SCI, 3/22, INTEGRATIVE & COMPLEMENTARY MEDICINE). **Corresponding Author.**

34. Shyh Ming Kuo 、 Shwu Jen Chang 、 Cheng-Wen Lan 、 Yueh-Sheng Chen 、 Guo-Chung Dong 、 **Chun-Hsu Yao*** (2011, Dec). Effects of Collagen Nano-Spheres on Cell Cultures. Current Nanoscience, 7(6):938-942. (SCI, 76/232, MATERIALS SCIENCE, MULTIDISCIPLINARY). **Corresponding Author.**

35. Walter Wang 、 Chih-Yang Huang 、 Fuu-Jen Tsai 、 Chin-Chuan Tsai 、 **Chun-Hsu Yao*** 、 Yueh-Sheng Chen* (2011, Nov). Growth-promoting effects of quercetin on peripheral nerves in rats. INTERNATIONAL JOURNAL OF ARTIFICIAL ORGANS. (SCI, 35/72, ENGINEERING, BIOMEDICAL). **Corresponding Author.**

36. Pei-Leun Kang, Shwu Jen Chang, Ioannis Manousakas, Chen Wei Lee, **Chun-Hsu Yao***, Feng-Huei Lin*, Shyh Ming Kuo* (2011, Aug). Development and Assessment of Hemostasis Chitosan Dressings. CARBOHYDRATE POLYMERS. (Accepted). (SCI, 12/79, POLYMER SCIENCE). **Corresponding Author.**

37. Walter Wang 、 Jia-Horng Lin 、 Chin-Chuan Tsai 、 Hao-Che Chuang 、 Chien-Yi Ho 、 **Chun-Hsu Yao*** 、 Yueh-Sheng Chen (2011, Jul). Biodegradable glutaraldehyde-cross-linked casein conduit promotes regeneration after peripheral

nerve injury in adult rats. MACROMOLECULAR BIOSCIENCE, 11(7):914-926. (SCI, 14/82, POLYMER SCIENCE). **Corresponding Author**.

38. Shih-Wei Hsiang、Chin-Chuan Tsai、Tin-Yun Ho、**Chun-Hsu Yao***、Yueh-Sheng Chen (2011, Jun). Novel use of biodegradable casein conduits for guided peripheral nerve regeneration. Journal of the Royal Society Interface, 00, 1 – 13. (SCI, 7/55, MULTIDISCIPLINARY SCIENCES). **Corresponding Author**.

39. Wei-Ting Kuo、Yung-Jen Ho、Shyh-Ming Kuo、Feng-Huei Lin、Fuu-Jen Tsai、Yueh-Sheng Chen、Guo-Chung Dong、**Chun-Hsu Yao*** (2011, May). Induction of the mitochondria apoptosis pathway by phytohemagglutinin erythroagglutinating in human lung cancer cells. ANNALS OF SURGICAL ONCOLOGY, 18(3): 848-856. (SCI, 13/204, SURGERY). NSC 100-2628-E-039-002-MY3. **Corresponding Author**.

40. Kun-Shan Huang、Jaung-Geng Lin、Han-Chung Lee、Fuu-Jen Tsai、Da-Tian Bau、Chih-Yang Huang、**Chun-Hsu Yao***、Yueh-Sheng Chen* (2011, Jan). Paeoniae alba Radix Promotes Peripheral Nerve Regeneration. Evidence-based Complementary and Alternative Medicine, 2011(0): 109809-109817. (SCI, 1/22, INTEGRATIVE & COMPLEMENTARY MEDICINE). **Corresponding Author**.

Assistant Professor, Department of Biomedical Imaging and Radiological Science, College of Medicine

Ph.D., National Yang-Ming University (Taiwan), 2013

Phone: (886)-4-22053366 ext7808

Email: cywu@mail.cmu.edu.tw

URL: http://webap.cmu.edu.tw/TchEportfolio/index_1/cywu



Research Interests: Radiochemistry, Molecular Imaging, and Nuclear Medicine

Academic Distinctions:

Distinguished Assistant Professor, College of Medicine, CMU (2016)

Appointments:

2013-2014: Operator / Research Fellow, Cyclotron Center, Global Medical Solutions Taiwan, Ltd.

2014-present: Assistant Professor: Department of Biomedical Imaging and Radiological Science, CMU

Research Interests:

Molecular imaging is a field that needs integration of various scientific bases; it not only speeds up the progress of basic biological research, but also leads people to “see” what a molecular can do in a living system and how it interacts with others. The research themes in my lab aim to establish versatile molecular imaging platforms for translational research. We have develop various radiotracers to detect cancer, inflammation, and neurodegenerative diseases. We also labeled nanoparticles with radioisotope to noninvasively determine their pharmacokinetics via imaging.

Representative Publications:

[STAT3/NF-κB-regulated lentiviral TK/GCV suicide gene therapy for cisplatin-resistant triple-negative breast cancer.](#)

Wei-Ying Kuo, Luen Hwu, **Chun-Yi Wu**, Jhih-Shian Lee, Chi-Wei Chang, Ren-Shyan Liu. **Theranostics** **2017**;7(3):647-663

[Enhancement of tumor initiation and expression of KCNMA1, MORF4L2, and ASPM genes in the adenocarcinoma of lung xenograft after vorinostat treatment.](#)

*Wei-Ying Kuo, ***Chun-Yi Wu (co-first author)**, Luen Hwu, Jhih-Shian Lee, Cheng-Han Tsai, Kang-Ping Lin, Hsin-Ell Wang, The-Ying Chou, Chun-Ming Tsai, Juri Gelovani, Ren-Shyan Liu. **Oncotarget** **2015**;6(11):8663-8675.

[Monitoring tumor response after histone deacetylase inhibitor treatment using 3'-deoxy-3'-\[18F\]-fluorothymidine PET.](#)

*Pei-Chia Chan, ***Chun-Yi Wu (co-first author)**, Lin-Shan Chou, Chung-Hsien Ho, Chi-Wei Chang, Shih-Hwa Chiou, Wu-Jyh Lin, Fu-Du Chen, C. Allen Chang, Jeng-Jong Hwang, Ren-Shyan Liu, Hsin-Ell Wang. **Mol Imag Biol** **2015**;17:394-402.

[Pulsed focused ultrasound enhances boron drug accumulation in a human head and neck cancer xenograft-bearing mouse model.](#)

***Chun-Yi Wu**, *Pei-Chia Chan, Lin-Shan Chou, Chi-Wei Chang, Feng-Yi Yang, Ren-Shyan Liu, Shih-Hwa Chiou, Sang-Hue Yen, Yi-Wei Chen, Hsin-Ell Wang. **Mol Imag Biol** **2014**;16:95-101.

[Monitoring tumor response with radiolabeled nucleoside analogues in a hepatoma-bearing mouse model early after Doxisome® treatment.](#)

Chun-Yi Wu, Lin-Shan Chou, Pei-Chia Chan, Chung-Hsien Ho, Ming-Hsien Lin, Chih-Chieh Shen, Ren-Shyan Liu, Wu-Jyh Lin, Hsin-Ell Wang. **Mol Imag Biol** **2013**;15:326-335.

WEN-TAU JUAN

Associate Professor, Department of Biomedical Imaging and Radiological Science,
College of Medicine
Ph.D. in Physics, National Central University (Taiwan), 2000

Phone: (886)-4-22052121 ext7729

Email: wtjuan@mail.cmu.edu.tw

URL: http://webap.cmu.edu.tw/TchEportfolio/index_1/wtjuan



Research Interests: Active and Biological Systems, Experimental Biophysics, Mechanobiology, Single-molecule Polymer Physics, Complex System, Non-linear Dynamics

Appointments:

2000-2001: Postdoctoral fellow: Physics Department, National Central University (Taiwan)

2001-2005: Postdoctoral fellow: Physics Department, Stanford University (U.S.A)

2005-2013: Assistant Research Fellow: Institute of Physics, Academia Sinica (Taiwan)

2006-2013: Adjunct Assistant Professor: Dept. of Physics and Institute of Biophysics, National Central University (Taiwan)

2013-2015: Visiting Scientist: Institute of Physics, Academia Sinica (Taiwan)

2015-present: Associate Research Fellow: Integrative Stem Cell Center, CMUH

2017-present: Associate Professor: Department of Biomedical Imaging and Radiological Science, CMU

Research Interests:

The research themes in my lab aim to uncover mechanisms of the cell fate determination under physical stimuli. We have developed a novel platform to analysis the cell morphology and set up an innovative mechanical-optical hybrid microscopy to investigate the stem cell dynamics. With the collaboration with experts in diverse fields, several topics of the stem cell research are interdisciplinarily studied in my group.

Representative Publications:

[Anomalous diffusion of DNA adsorbed on a supported cationic lipid membrane.](#) Chang CM, Lau YG, Ou SC, Lin TY, and **Juan WT***. *EPL* **2015** Feb 11:109: 38002.

[Ratcheting and transitions: Short granular chains in a gradient of vibration.](#) Lin WT, Sun YC, Chang CC, Lin YC, Peng CW, **Juan WT***, and Tsai JC*. *Phys. Rev. Lett.* **2014** Feb 5: 112: 058001.

[Relaxation of DNA on a supported lipid membrane.](#) Chang CM, Lau YG, Tsai JC*, **Juan WT***. *EPL* **2012** Aug 29: 99: 48008.

[The chicken frizzle feather is due to an \$\alpha\$ -keratin \(KRT75\) mutation that causes a defective rachis.](#) Ng CS, Wu P, Foley J, Foley A, McDonald M, Leal SM, **Juan WT**, Huang CJ, Lai YT, Lo WS, Chen CF, Zhang H, Widelitz RB, Patel PI, Li WH*, Chuong CM*. *PLoS Genet.* **2012** Jul 19:8: e1002748.

[Fabrication of Monolayer of Polymer/Nanospheres Hybrid at a Water-Air Interface.](#) Ho CC, Chen PY, Lin KH, **Juan WT***, Lee WL*. *ACS Appl. Mater. Interfaces* **2011** Jan 10: 3: 204.

CMU Faculty Profile

SHIN-LEI PENG

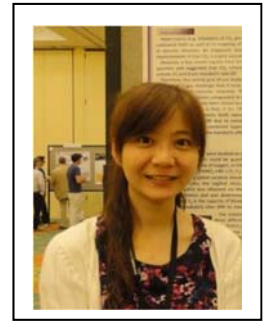
Assistant Professor, Department of Biomedical Imaging and Radiological Science, College of Medicine

Ph.D., National Tsing Hua University (Taiwan), 2014

Phone: (886)-4-22053366 ext7710

Email: speng@mail.cmu.edu.tw

URL: http://webap.cmu.edu.tw/TchEportfolio/index_1/speng



Research Interests: Magnetic resonance imaging

Appointments:

2003-2009: Technician: Chang Gung Memorial Hospital, Kaohsiung Branch

2013-2014: Postdoctoral fellow: UT Southwestern Medical Center

2014-2015: Postdoctoral fellow: Johns Hopkins University

2015-present: Assistant Professor: Department of Biomedical Imaging and Radiological Science, College of Medicine, CMU

Research Interests:

Our research has been focused on the implementation of MRI techniques to explore the brain function and networks in human as well as in animal models. With aim of the MRI techniques, we hope we can shed more light on the brain pathophysiology and diseases.

Representative Publications:

[Searching for a truly "iso-metabolic" gas challenge in physiological MRI.](#) Peng SL, Ravi H, Sheng M, Thomas BP, Lu H. *J Cereb Blood Flow Metab.* 2017 Feb ;37(2):715-725.

[Phase-contrast magnetic resonance imaging for the evaluation of wall shear stress in the common carotid artery of a spontaneously hypertensive rat model at 7 T: Location-specific change, regional distribution along the vascular circumference, and reproducibility.](#) Peng SL, Wang FN, Yang TC, Hsu JC, Wu YC, Peng HH. *Magn Reson Imaging.* 2016 Jul ;34(5):624-31.

[Optimization of phase-contrast MRI for the quantification of whole-brain cerebral blood flow.](#) Peng SL, Su P, Wang FN, Cao Y, Zhang R, Lu H, Liu P. *J Magn Reson Imaging.* 2015 Oct;42:1126-33.

[Age-related increase of resting metabolic rate in the human brain.](#) Peng SL, Dumas JA, Park DC, Liu P, Filbey FM, McAdams CJ, Pinkham AE, Adinoff B, Zhang R, Lu H. *Neuroimage.* 2014 Sep ;98:176-83.

[Using microbubbles as an MRI contrast agent for the measurement of cerebral blood volume.](#) Peng SL, Wang FN, Wang CH, Peng HH, Lu CT, Yeh CK. *NMR Biomed.* 2013 Nov; 26(11):1540-6

[Analysis of parametric histogram from dynamic contrast-enhanced MRI: application in evaluating brain tumor response to radiotherapy.](#) Peng SL, Chen CF, Liu HL, Lui CC, Huang YJ, Lee TH, Chang CC, Wang FN. *NMR Biomed.* 2013 Apr;26(4):443-50.

[Spatial-temporal clustering analysis in functional magnetic resonance imaging.](#) Peng SL, Chuang CC, Chuang KS, Kwan WC, Kuo YT, Chen CF, Chen CY, Chen SC. *Phys Med Biol.* 2009 Dec 21;54(24):7301-14.

DA-CHUAN CHENG

Director, Department of Biomedical Imaging and Radiological Science
Associate Professor

Ph.D., National Cheng Kung University (Taiwan), 2003

Phone: (886)-4-22053366 ext 7803

Email: <mailto:dccheng@mail.cmu.edu.tw>

URL: http://webap.cmu.edu.tw/TchEportfolio/index_1/dccheng



Research Interests: Medical image processing, computer vision, optimization, neural network.

Academic Distinctions:

Distinguished Teaching Professor, College of Health Care, CMU (2014)

Distinguished Teaching Professor, College of Health Care, CMU (2015)

Appointments:

1999-2004: Research assistant: Institute of Computer Science, University of Freiburg, Germany

2004-2007: Postdoctoral fellow: Institute of Mathematics and Computer Science, University of Muenster, Germany

2007-2012: Assistant Professor: Department of Biomedical Imaging and Radiological Science, CMU

2012-present: Associate Professor: Department of Biomedical Imaging and Radiological Science, CMU

2017-present: Director: Department of Biomedical Imaging and Radiological Science, CMU

Research Interests:

The research themes in my lab aim to develop the computer assisted diagnosis on many fields of applications such as automated clustered micro calcification on mammograms, automated polyps detection in colonoscopy images, automated detection of vessel boundary and quantification of the vessel cross-sectional areas, the optimal parameter determination in cross-linking process etc.

Representative Publications:

Using snakes to detect the intimal and adventitial layers of the common carotid artery wall in sonographic images. Cheng DC*, Schmidt-Trucksass A, Cheng KS, Burkhardt H, COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, 2002, 1(67):27-37.

Detections of Arterial Wall in Sonographic Artery Images Using Dual Dynamic Programming. Cheng DC*, Jiang X, · IEEE TRANSACTIONS ON INFORMATION TECHNOLOGY IN BIOMEDICINE, 2008 Nov, 12(6):792-799.

Three-Dimensional Expansion of a Dynamic Programming Method for Boundary Detection and its Application to Sequential Magnetic Resonance Imaging (MRI). Cheng DC*, Lin JT, SENSORS, 2012 Apr, 12(0):5195-5211

Accurate Measurement of Cross-sectional Area of Femoral Artery on MRI Sequences of Transcontinental Ultramarathon Runners Using Optimal Parameters Selection. Cheng DC, Wu JF, Kao YH, Su CH, Liu SH*, JOURNAL OF MEDICAL SYSTEMS, 2016 Dec, 40(0):1-8

Optimal Focusing and Scaling Law for Uniform Photo-Polymerization in a Thick Medium Using a Focused UV Laser. Lin JT, Cheng DC*, Polymers, 2014 Feb, 6(2):552-564.

Professor, Department of Biomedical Imaging and Radiological Science

Phone: (886)-4-22053366 ext7805

Email: tzungchi.huang@mail.cmu.edu.tw

URL: <http://mrt.cmu.edu.tw/english/faculty.html>



Research Interests: Medical Imaging, Medical Physicist, Radiotherapy

Academic Distinctions:

Excellent Researcher, China Medical University (2016)

Best Paper Reward, IMRT treatment plans and functional planning with functional lung imaging from 4D-CT for thoracic cancer patients, Taiwan Society of Medical Imaging and Radiological Sciences (2014)

Excellent Young Researcher Grant, National Science Council Taiwan (2013)

Best Paper Reward, Red Blood Cell Velocity Measurement in Rodent Tumor Model : An in vivo Microscopic Study, Journal of Medical and Biological Engineering (2012)

Excellent Teaching Faculty, China Medical University (2012)

Excellent Researcher, China Medical University (2011)

Appointments:

2007-2008: Postdoctoral fellow: I H. Lee Moffitt Cancer Center & Research Institute, Florida, USA

2005-2007: Postdoctoral fellow: Department of Molecular and Cellular Oncology, University Texas M.D. Anderson Cancer Center

2008-2011: Assistant Professor: Department of Biomedical Imaging and Radiological Science, CMU

2011-2014: Associate Professor: Department of Biomedical Imaging and Radiological Science, CMU

2014-present: Professor: Department of Biomedical Imaging and Radiological Science, CMU

2015-2015: Associate Dean: Office of Graduate Student Affairs, CMU

2015-2016: Director: Mater program in Biomedical Engineering, CMU

2015-2016: Dean: Office of Student Affairs, CMU

Research Interests:

Research interests include Ventilation calculation using 4DCT and deformable image registration, Four-dimensional (4D) dosimetry in radiotherapy, Medical image texture analysis, Image guided radiotherapy and Radiation dose delivery measurement in radiotherapy.

Representative Publications:

[IMRT treatment plans and functional planning with functional lung imaging from 4D-CT for thoracic cancer patients.](#)

Huang TC*, Hsiao CY, Chien CR, Liang JA, Shih TC, Zhang GG. *Radiat Oncol.* 2013 Jan 2;8:3.

[Improvement of internal tumor volumes of non-small cell lung cancer patients for radiation treatment planning using interpolated average CT in PET/CT.](#) Wang YC, Tseng HL, Lin YH, Kao CH, Huang WC, Huang TC*. *PLoS One.* 2013 May 16;8(5):e64665.

[Motion freeze for respiration motion correction in PET/CT: a preliminary investigation with lung cancer patient data.](#)

Huang TC*, Chou KT, Wang YC, Zhang G. *Biomed Res Int.* 2014;167491.

[Left ventricular ejection fraction estimation using mutual information on technetium-99m multiple-gated SPECT scans.](#)

Yang SN, Sun SS, Zhang G, Chou KT, Lo SW, Chiou YR, Li FJ, Huang TC*. *Biomed Eng Online.* 2015 Dec 23;14:119.

[Kinetic Curve Type Assessment for Classification of Breast Lesions Using Dynamic Contrast-Enhanced MR Imaging.](#)

Yang SN, Li FJ, Chen JM, Zhang G, Liao YH, Huang TC*. *PLoS One.* 2016 Apr 7;11(4):e0152827.

Assistant professor, Department of Biomedical Imaging and Radiological
Science, CMU

Visiting Staff, Department of Radiation Oncology , CMUH

Phone: (886)-4-22052121 ext7450

Email: snyang@mail.cmu.edu.tw

URL: <http://mrt.cmu.edu.tw/english/faculty.html>



Research Interests: Cancer Biology, Radiation Biology and Physics , Radiotherapy and Cancer Treatment

Education:

1981-1988: MD, School of Medicine, CSMU

1988-1991: Resident, Department of Radiation Oncology , Chang Gung memorial Hospital

1991-1992 : Chief Resident, Department of Radiation Oncology , Chang Gung memorial Hospital

Appointments:

1992-1996: Attending physician : Department of Radiation Oncology ,Kuang Tien General Hospital

1992-2000: Attending physician: Department of Radiation Oncology ,Shin Kong Wu Ho-Su memorial Hospital

1995-present: Visiting Staff : Department of Radiation Oncology , CMUH

2007-2010: Lecturer, Department of Biomedical Imaging and Radiological Science, CMU

2012-present: Assistant professor: Department of Biomedical Imaging and Radiological Science, CMU

Representative Publications:

1. Yo-Liang Lai, **Shih-Neng Yang**, Ji-An Liang, Yao-Ching Wang, Chun-Yen Yu, Ching-Shiung Su, Shang-Wen Chen. Impact of body-mass factors on setup displacement in patients with head and neck cancer treated with radiotherapy using daily on-line image guidance. *Radiation Oncology*. 2014 Jan; 9(19) : 1-8(SCI)
2. Shang-Wen Chen, Te-Chun Hsieh, Kuo-Yang Yen, **Shih-Neng Yang**, Yao-Ching Wang, Chun-Ru Chien, Ji-An Liang, Chia-Hung Kao. Interim FDG PET/CT for predicting the outcome in patients with head and neck cancer. *Laryngoscope*. 2014 Dec; 124(12) : 2732-2738(SCI)
3. Tzungchi Huang, Kuei-Ting Chou, **Shih-Neng Yang**, Chih-Kai Chang, Ji-An Liang, Geoffrey Zhang. Fractionated Changes in Prostate Cancer Radiotherapy Using Cone-Beam CT. *Medical Dosimetry*. 2015 Autumn; 40(3) : 222-225(SCI)
4. Shih-Chieh Lin, Shang-Wen Chen, Te-Chun Hsieh, Kuo-Yang Yen, **Shih-Neng Yang**, Yao-Ching Wang, Chia-Hung Kao. Risk Stratification of Metastatic Neck Nodes by CT and PET in Patients with Head and Neck Cancer Receiving Definitive Radiotherapy. *Journal of Nuclear Medicine*. 2015 Feb; 56(2) : 183-189(SCI)
5. **Shih-Neng Yang**, Fang-Jing Li, Chun-Han Liao, Yueh-Sheng Chen, Tzungchi Huang. Identification of breast cancer using integrated information from MRI and mammography. *PLoS One*. 2015 June; 10(6): e0128404 (SCI)
6. **Shih-Neng Yang**, Shung-Shung Sun, Geoffrey Zhang, Kuei-Ting Chou, Shih-Wen Lo, Yu-Rou Chiou, Fang-Jing Li, Tzungchi Huang. Left ventricular ejection fraction estimation using mutual information on technetium-99m multiple-gated SPECT scans. *Biomedical Engineering Online*. 2015 Dec(SCI)
7. **Shih-Neng Yang**, Fang-Jing Li, Chun-Ming Chen, Geoffrey Zhang, Yen-Hsiu Liao, Tzungchi Huang. Kinetic curve

CMU Faculty Profile

type assessment for classification of breast lesions using dynamic contrast-enhanced MR imaging. PLoS One. 2016 Apr; 11(4): e0152827 (SCI)

8. 23. Shang-Wen Chen, Ying-Chun Lin, Chen Rui-Yun, Te-Chun Hsieh, Kuo-Yang Yen, Ji-An Liang, **Shih-Neng Yang**, Yao-Ching Wang, Ya-Huey Chen, Nan-Haw Chow, Chia-Hung Kao. Immunohistochemical overexpression of hypoxia-induced factor 1 α associated with slow reduction in 18fluoro-2-deoxy-D-glucose uptake for chemoradiotherapy in patients with pharyngeal cancer. European journal of nuclear medicine and molecular imaging. 2016 Dec; 43(13) : 2343-2352(SCI)
9. 24. **Shih-Neng Yang**, Mu-Pai Chang, Geoffrey Zhang, Chou, Kuei-Ting, Shung-Shung Sun, Louis Lui, Tsung-Jung Ho, Tzungchi Huang. Dose verification for tumor motion with different treatment planning systems: A dynamic thorax phantom study. Journal of Medical and Biological Engineering.(SCI)

Assistant Professor, Department of Biomedical Imaging and Radiological Science, College of Medicine

Ph.D., National Taiwan University (Taiwan), 2012

Phone: (886)-4-22053366 ext7809

Email: byhsieh@mail.cmu.edu.tw

URL: <http://mrt.cmu.edu.tw/english/faculty.html>



Research Interests: Biomedical Imaging, Biophotonics, Ultrasound/Photoacoustic Imaging, Laser Ultrasound, Elasticity Imaging

Academic Distinctions:

Certificate High Distinction, Symposium of Annual Conference of the Biomedical Engineering Society Poster Paper Competition, Taiwan. (2011)

Appointments:

- 2005-2012: Radiologist, Minsheng Clinical Laboratory, Taipei, Taiwan
- 2013-2013: Postdoctoral Research Associate, Ultrasonic Imaging Laboratory, National Taiwan University, Taipei, Taiwan
- 2014-2014: Postdoctoral Research Associate, Micro/Nano Engineering Lab (MNEL), Department of Mechanical and Aerospace Engineering, North Carolina State University, USA
- 2015-2016: Senior Research Fellow, Department of Bioengineering, University of Washington, USA
- 2016-present: Assistant Professor: epartment of Biomedical Imaging and Radiological Science, CMU

Research Interests:

The research themes in my lab aim to develop new imaging techniques, either ultrasound, optical, integrated imaging, to effectively differentiate normal/diseased tissues, such as vessel, intraocular tissues using either ultrasound, photoacoustic or elasticity imaging. The ultrasound-mediated drug delivery system for cancer therapy was investigated as well in my lab. Several interesting fields of the research are actively studied in my lab.

Representative Publications:

[Moving-source elastic wave reconstruction for high-resolution optical coherence elastography.](#) Hsieh BY*, Song S, Nguyen TM, Yoon SJ, Shen TT, Wang RK, O'Donnell M. **J. Biomed. Opt.** **2016**, 21(11), 116006.

[A laser ultrasound transducer using carbon nanofibers-polydimethylsiloxane composite thin film.](#) Hsieh BY*, Kim J, Zhu J, Li S, Zhang X., Jiang X. **Appl. Phys. Lett.** **2015**, 106(2), 021902.

[Stably doped conducting polymer nanoshells by surface initiated polymerization.](#) Li J, Yoon SJ, Hsieh BY*, Tai W, O'Donnell M, Gao X. **Nano Lett.** **2015**, 15(12), 8217-8222.

[All-optical scanhead for ultrasound and photoacoustic imaging: imaging-mode switching by dichroic filtering.](#) Hsieh BY*, Chen SL, Ling T, Guo LJ, Li PC. **Photoacoustics** **2014**, 2(1), 39-46.

[All-optical scanhead for ultrasound and photoacoustic dual-modality imaging.](#) Hsieh BY*, Chen SL, Ling T, Guo LJ, Li PC. **Opt. Express** **2012**, 20(2), 1588-1596.

[Integrated intravascular ultrasound and photoacoustic imaging scan head.](#) Hsieh BY*, Chen SL, Ling T, Guo LJ, Li PC. **Opt. Lett.** **2010**, 35(17), 2892-2894.