ICMRS Education Newsletter

September 2014

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I. Message from the President, Dr. Xu Cao

The quick expansion of musculoskeletal research in China provides a great opportunity for ICMRS to develop as one of the leading societies in the skeletal research field. To seize the opportunity and achieve our goal, we had our first summit for our 18 Collaborating Centers at Shanghai this year. This meeting provided a platform for the interaction among our centers and overseas members, and our membership has increased 13 percent to total of 1,700 now. We will continue to promote musculoskeletal research in China through international conferences, workshops, and lectures. As seen in this newsletter, we have numerous conferences and membership meetings this year. Particularly, we will have our Second ICMRS-ASBMR conference at Xiangya, Changsha on April 9-11, 2015. The preliminary program will be announced this month. This ICMRS-ASBMR conference is to further our progress of our Shanghai Collaborating Center summit. It will provide a unique opportunity for every ICMRS member to learn cutting-edge science, exhibit their own research results and interact with ICMRS members from China and the rest of the world. I am confident that through our solid steps the goals of ICMRS will be eventually accomplished.

II. Meeting Information and Updates

ICMRS-sponsored meetings

2014 Annual ICMRS-ASBMR Membership Meeting Events

September 14, 2014
Houston, Texas, USA

The annual ICMRS-ASBMR Membership Meeting will take place at the Ballroom E, Hilton Americas-Houston, Houston, on September 14, 2014 (Sunday). We will be celebrating the 20th Anniversary of ICMRS! Exciting activities, including a presidential speech, a keynote presentation by Dr. Steve Teitelbaum, Washington University School of Medicine, and Webster

Jee Young Investigator Award ceremony, are arranged for the evening. The complete agenda can be found on the ICMRS website (www.icmrs.net). In addition, there will be an ICMRS Women's Breakfast Buffet held on September 13th in Discovery C Room at the Embassy Suites Houston Downtown starting at 6:45am.

7th International Conference on Osteoporosis and Bone Research (ICOBR)

October 16-19, 2014
Xiamen, China

ICOBR is co-organized by our society (ICMRS) with Chinese Medical Association (CMA) Chinese Society of Osteoporosis and Bone Mineral Research (CSOBMR), and the International Bone and Mineral Society (IBMS). This meeting welcomes world renowned professors and researchers to share their most up-to-date findings. The program includes both educational and scientific programs, and an extensive review and update of cutting edge research in this promising field. Sessions include: Aging and Bone, Cancer and Bone, Skeletal fragility: vertebral and non-vertebral fracture, Skeletal metabolism. Webster Jee Young Investigator Awards will be given at the close of the ceremony on October 19. The abstracts will be published online BoneKey. More details can be found at: http://www.csobmr.org.cn/2014/en/.

2nd ICMRS-ASBMR International Chinese Musculoskeletal Research Conference

April 9-11, 2015
Changsha, China

The second ICMRS-ASBMR Conference is hosted by the ICMRS and ASBMR, and organized by the Second Xiangya Hospital of Central South University / Research Institute of Metabolism and Endocrinology of Central South University. Contributions are being solicited for research in the following areas:

1. Molecular basis for skeletal development and homeostasis (I)
   1a. growth factors; 1b. hormones; 1c. skeletal stem cells
2. Molecular basis for skeletal development and homeostasis (II)
   2a. transcription factors; 2b. epigenetic regulation; 2c. non-coding RNA;
3. Genetic skeletal disorders
4. Joint and spine degeneration
5. Osteoporosis
   5a. epidemiology, BMD and bone fracture; 5b. aging and osteoporosis
6. Cartilage and bone tumors
7. Biomechanics and microgravity effects on bone
8. Cross-talk between skeleton and other systems
   8a. endocrine system; 8b. vascular and hematopoietic system; 8c. nervous system
9. Emerging therapies for skeletal diseases

Paper submission deadline: January 15, 2015
Email: ICMRS2015@163.com

Other meetings of interest

3rd Annual Musculoskeletal Repair and Regeneration Symposium

October 2, 2014
Bronx, NY, USA

This symposium will address current issues in musculoskeletal repair and regeneration, diseases and cancer treatment. It seeks to expand the knowledge base within the field, and to foster inspiration, collaboration and networking between researchers throughout the region. This annual meeting will emphasize recent advances in translational research in three areas:

- Mechanisms and treatments for musculoskeletal disorders, cancer and diseases
- Tissue remodeling and interactions in musculoskeletal and other systems
- Stem cell, tissue repair and regeneration

For more information, please visit: https://www.einstein.yu.edu/departments/orthopaedic-surgery/symposium/

4th CUHK International Symposium on Stem Cell Biology and Regenerative Medicine

November 17-18, 2014
Hong Kong, China

The main topics of the symposium this year consist of biology of regenerative medicine, musculoskeletal regeneration and translational research, and musculoskeletal regeneration network sections. Prof. Shinya Yamanaka, MD, PhD, Nobel Laurent of 2012 Medicine and Physiology will be the guest of honor and give a talk on "New Era of Medicine with iPS Cells". There are other 30 plus speakers have confirmed to attend our meeting from USA, Europe, Australia, Japan, Taiwan, Hong Kong and China. For more details, please see: http://scrm.ort.cuhk.edu.hk/

The 9th International Congress of Chinese Orthopaedic Association Annual Meeting

November 20-23, 2014
Beijing, China

The Chinese Orthopaedic Association (COA) Annual Meeting is one of the largest orthopaedic events in China. It covers topics such as spine surgery, trauma, joint surgery, arthroscopy, sports medicine, bone tumors, osteoporosis, foot and ankle surgery, minimally invasive techniques, microsurgery, pediatric orthopedics, nursing, rehabilitation and traditional Chinese Medicine Applications. COA 2014 in Beijing will promise to be a world's premier orthopedic congress that brings education, research and technology under one roof. For more details, please visit: http://www.coachina.org/2014/en/

III. ICMRS Collaborating Centers

As remarked at the China Collaboration Centers Inaugural meeting on May 18-19, 2014 in Shanghai, 18 centers were established. These 18 centers are listed on the ICMRS website and listed below.

Leadership and participating members celebrate establishment of 18 China Collaborating Centers at the inaugural meeting in Shanghai on May 18-19, 2014.

- Shanghai Key Laboratory of Orthopaedic Implants-ICMRS Collaborating Center for Orthopaedic Translational Research. http://www.ortholab-snph.com/cn/index.asp
- Pharmalegacy-ICMRS MediSaint Musculoskeletal Collaborating Center. http://www.pharmalegacy.com
- Musculo-skeletal Research Laboratory in Chinese University of Hong Kong-ICMRS Collaborating Center for Musculoskeletal Disorders and Aging. http://www.ort.cuhk.edu.hk
- Naton Institute of Medical Technology -ICMRS Collaborative Center for Orthopaedic Research
- Key Laboratory for Bioscience and Biotechnology-ICMRS Collaborating Center for Bone Health Research. http://www.spacebiotech.org.cn
- Orthopaedic Center of XMU（Xinjiang Medical University-ICMRS Collaborating Center for Bone and Joint Research. http://www.xydyfy.com
- Institute for Spinal Disorders in Shanghai University of Traditional Chinese Medicine–ICMRS Research Center.
- Orthopaedic Research Institute in the Fourth Military Medical University –ICMRS International Collaborating Orthopaedic Research Center
- Collaborating Orthopaedic Translational Research Center of the Orthopaedic Research Institute in Suzhou University-ICMRS. http://gkyjs.suda.edu.cn/
- Orthopaedic Research Center in the University of Hong Kong -ICMRS Collaborating Center for Bone diseases and Aging
- Institute of Orthopaedic Research in Chinese PLA General Hospital – ICMRS Research Center.
- Joint Research Center on Anti-Osteoporosis Innovative Drugs of Guangdong Medical College and ICMRS
- Institute of Endocrinology & Metabolism of The 2nd Xiangya hospital-ICMRS Collaborating Center for Orthopaedic Translational Research
- Trauma Center of Third Military Medical University-ICMRS Collaborating Center for Bone and Bone-related Disease Research
- Guangdong Provincial Key Laboratory for Bone & Cartilage Regenerative Medicine-ICMRS Collaborating Center for Orthopaedic Translational Research

- State Key Laboratory of Oral Diseases--ICMRS Collaborating Center for Translational Research http://www.sklod.org/
- International Orthopaedic Research Center in Shihezi University-ICHTS Collaborative Center for Orthopaedic Research
- Shanghai Key Laboratory of Bone & Joint Disease and Repair-ICHTS Collaborating Center for Orthopaedic Translational Research. http://www.csito.com.cn

The newsletter has invited each center's director to introduce its center. In this issue, Dr. Tingting Tang accepted our invitation to highlight the Shanghai Key Laboratory of Orthopaedic Implants-ICMRS Collaborating Center for Orthopaedic Translational Research, which was established in 2010. In future issues, we will continue to highlight a collaborating center, and appreciate your kind contribution and support.

Shanghai Key Laboratory of Orthopaedic Implants-ICMRS Collaborating Center for Orthopaedic Translational Research

Shanghai Key Laboratory of Orthopaedic Implants is affiliated to Orthopedic Department of Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine. It was founded by Prof. Ke-rong Dai in 1986, when it was one of the earliest institutions that carried out biomechanical research on musculoskeletal system. For years of development, the lab has become an influential R&D center of orthopedic research in China. Meanwhile, the lab is an important training center of postdoctoral, Doctor and Master students in both clinical and basic orthopaedic research. Headed by Prof. Ting-ting Tang, the lab owns an academic research team comprised of orthopedic surgeons, full-time researchers, engineers and technicians, featuring its cross-disciplinary research in medicine and engineering. The Shanghai Key Laboratory of Orthopaedic Implants-ICMRS Collaborating Center for Orthopaedic Translational Research was established in 2010.

The lab has been actively carrying out clinical-oriented medical research on orthopedic translation, including the biomechanical and biomedical engigeering research, orthopaedic implants and biomaterials, cell and gene therapy, musculoskeletal degeneration and bone tumor, with great achievements in optimization design and application of artificial joint, stem cells-based therapy for bone and cartilage regeneration, development and evaluation of functional bone substitutes, prevention of periprosthetic osteolysis and implant associated

infections, osteoporotic fractures and fracture healing, etc. The lab also emphasizes the translation and clinical application of scientific findings. The products of individualized prosthesis and bone allograft had been approved by SFDA for the industrialization and clinical application. Clinical trial had demonstrated that the enriched stem cells from bone marrow could promote spinal fusion and treat bone nonunion.

During the year 2009-2013, the lab has acquired over 100 grants with the total funds of 463.5 million Yuan, including 2 subprojects supported by the National 973 Program, 28 projects (with 1 key project) supported by the National Natural Science Foundation of China. The lab also wins the Second Prize for Science & Technology Development/Achievement of the Ministry of Education of China, and the Third Prize of Shanghai Science and Technology Progress Award. The lab has applied or acquired 78 national invention, utility, design patents. The lab has published over 300 papers in international and domestic journals, 151 of which are included by SCI or EI. In 2013, the number of published SCI papers is 44. In terms of talent training, the lab has received funding at municipal level or above, such as Program for New Century Excellent Talents in University, New Century Hundred, Thousand, Ten Thousand Talent Project, Shanghai Cultivation Program for Academic Leaders, Shanghai Science and Technology Committee Rising-Star Program and Rising-Star Tracking Program, Shanghai Pujiang Talent Program, Shanghai Dawn Program and Dawn Tracking Program, China Scholarship Council Program for Constructing High-level Universities, etc. During the 5 years, 38 PhD students, 23 postgraduate students and 4 postdoctoral students have been recruited and trained in the lab.

IV. ICMRS-Sponsored Journals

Bone Research

Bone Research was founded in 2013 as collaboration between Chinese and US bone scientists, and is supported by ICRMS. The aim of the Journal is to foster the worldwide dissemination of research in bone-related physiology, pathology, disease, and treatment, particularly between Chinese and other bone scientists. The Editor-in-Chief is Professor Zhou Xue-dong of Sichuan University, China. The founding editor is ICMRS president Xu Cao. The Executive Editor-in-Chief is Thomas L. Clemens from Johns Hopkins University.

In 2014, Bone Research is officially co-published with Nature Publishing Group. Below are the latest publications in Bone Research. For more details, please check the journal website at: http://www.nature.com/boneres

The latest publications in Bone Research

- **Reduced EGFR signaling enhances cartilage destruction in a mouse osteoarthritis model**
  Xianrong Zhang, Ji Zhu, Fei Liu, Yumei Li, Abhishek Chandra, L Scott Levin, Frank Beier, Motomi Enomoto-Iwamoto & Ling Qin. Bone Research (2014)2, 14015.
  Full Text: http://www.nature.com/articles/boneres201415
- **The heterodimeric structure of heterogeneous nuclear ribonucleoprotein C1/C2 dictates 1,25-dihydroxyvitamin D-directed transcriptional events in osteoblasts**
  Thomas S Lisse, Kanagasabai Vadivel, S Paul Bajaj, Rui Zhou, Rene F Chun, Martin Hewison & John S Adams. Bone Research (2014)2, 14011.
  Full Text: http://www.nature.com/articles/boneres201411

- **Stability of unicortical locked fixation versus bicortical non-locked fixation for forearm fractures**
  Timothy J Pater, Steve I Grindel, Gregory J Schmeling & Mei Wang. Bone Research (2014)2, 14014.
  Full Text: http://www.nature.com/articles/boneres201414
- **Insulin exerts direct, IGF-1 independent actions in growth plate chondrocytes**
  Fengjie Zhang, Qiling He, Wing Pui Tsang, W Timothy Garvey, Wai Yee Chan & Chao Wan. Bone Research (2014)2, 14012.
  Full Text: http://www.nature.com/articles/boneres201412
- **The Chinese skeleton: insights into microstructure that help to explain the epidemiology of fracture**
  Elaine Cong & Marcella D Walker. Bone Research (2014)2, 14009.
  Full Text: http://www.nature.com/articles/boneres20149
- **TGF-β signaling and the development of osteoarthritis**
  Jie Shen, Shan Li & Di Chen. Bone Research (2014)2, 14002.
  Full Text: http://www.nature.com/articles/boneres20142
- **Wnt7b can replace Ihh to induce hypertrophic cartilage vascularization but not osteoblast differentiation during endochondral bone development**
  Kyu Sang Joeng & Fanxin Long. Bone Research (2014)2, 14004.
  Full Text: http://www.nature.com/articles/boneres20144
- **Kartogenin induces cartilage-like tissue formation in tendon–bone junction**
  Jianying Zhang & James H-C Wang. Bone Research (2014)2, 14008.
  Full Text: http://www.nature.com/articles/boneres20148
- **In vivo evidence of IGF-I–estrogen crosstalk in mediating the cortical bone response to mechanical strain**
  Subburaman Mohan, Chetan Girijanand Bhat, Jon E Wergedal & Chandrasekhar Kesavan. Bone Research (2014)2, 14007.
  Full Text: http://www.nature.com/articles/boneres20147
- **LRP6 in mesenchymal stem cells is required for bone formation during bone growth and bone remodeling**
  Changjun Li, Bart O Williams, Xu Cao & Mei Wan. Bone Research (2014)2, 14006.
  Full Text: http://www.nature.com/articles/boneres20146
- **Osteoporosis in men: a review**
  Robert A Adler. Bone Research (2014)2, 14001.
  Full Text: http://www.nature.com/articles/boneres20141

Journal of Orthopaedic Translation

The Journal of Orthopaedic Translation (*JOT*) is the official peer-reviewed publication of the Chinese Speaking Orthopaedic Society (CSOS) and the International Chinese Musculoskeletal Research Society (ICMRS). The *JOT* aims to focus on the rapidly growing field of orthopaedic translational research, and is devoted to research and issues of strong interest in translational medicine regarding musculoskeletal and related themes. The editors-in-chief are Dr. Chih-Hwa Chen and Dr. Ling Qin. Since its launch in 2013, 4 issues have been published. Based on Dr. Ling Qin, listed below are the top 10 most viewed and downloaded articles in June 2014 from *JOT*. For more information, please check: http://www.journals.elsevier.com/journal-of-orthopaedic-translation/

Top 10 Most Viewed and Downloaded Articles in June 2014 from the Journal of Orthopaedic Translation

1	**Clinical translation of autologous cell-based tissue engineering techniques as Class III therapeutic** Wei Zhang, Boon Chin Heng, Yang-Zi Jiang, Hong-Wei Ouyang Full Text: http://www.e-jot.com/article/S2214-031X(14)00021-7/fulltext
2	**Both unilateral and bilateral pedicle screw fixation are effective for lumbar spinal fusion** Jiaquan Luo, Min Gong, Manman Gao, Sheng Huang, Ting Yu, Xuenong Zou Full Text: http://www.e-jot.com/article/S2214-031X(14)00022-9/fulltext
3	**Clinical translation of biomedical materials and the key factors towards product registration** Yuan Yuan, Dan Lin, Fangping Chen, Changsheng Liu Full text: http://www.e-jot.com/article/S2214-031X(13)00053-3/fulltext
4	**Role of nutritional supplementation in elderly patients with hip fractures** Megan Grigg, Manit Arora, Ashish D. Diwan Full text: http://www.e-jot.com/article/S2214-031X(13)00050-8/fulltext
5	**Circulating mesenchymal stem cells and their clinical implications** Liangliang Xu, Gang Li Full text: http://www.e-jot.com/article/S2214-031X(13)00048-X/fulltext
6	**Cyrotherapy suppresses tendon inflammation in an animal model** Jianying Zhang, Tiffany Pan, James H.-C. Wang Full text: http://www.e-jot.com/article/S2214-031X(14)00016-3/fulltext
7	**Quaternised chitosan-loaded polymethylmethacrylate bone comment: Biomechanical and histological evaluation** Honglue Tan, Haiyong Ao, Rui Ma, Tingting Tang Full text: http://www.e-jot.com/article/S2214-031X(13)00003-X/fulltext
8	**Surface coating reduces degradation rate of magnesium alloy developed for orthopaedic applications** Jian Tangemail address, Jiali Wang, Xinhui Xie, Peng Zhang, Yuxiao Lai, Yangde Li, Ling Qin Full text: http://www.e-jot.com/article/S2214-031X(13)00005-3/fulltext
9	**Translational medicine in orthopaedics** Ling Qin Full text: http://www.e-jot.com/article/S2214-031X(13)00009-0/fulltext
10	**Virtual Interactive Musculoskeletal System (VIMS) in orthopaedic translational research** Edmund Y.S. Chao, Jonathan Lim Full text: http://www.e-jot.com/article/S2214-031X(13)00010-7/fulltext

V. Message from the Chair of ICMRS Education Committee

Dear ICMRS members,

We are very excited to present to you the first issue of the ICMRS Education Newsletter. The goal of this quarterly newsletter is to share the exciting news and events, progress from and related to our society, and to facilitate communication among ICMRS members. This is your newsletter and we are here to serve you, the ICMRS members!

In order to reach our goal, we appreciate your participation, contribution, and support, in particular with the following:

- Meeting information and progress
- News and updates from ICMRS collaborating centers and ICMRS-sponsored journals
- Members' research highlights, which includes, but is not limited to: major publications of high scientific and/or social impact, reports from principal investigators, and/or grant awards.
- Member recognition and achievements
- Education opportunities and mentoring requests
- Job opportunities
- Any information that may be interesting and important to share among our members
- Any comments, suggestions, feedback regarding our service and the newsletter.

Please send this information to: herb.sun@einstein.yu.edu. You are welcome to contact us anytime. We look forward to hearing from you.

I would like to express my sincere thanks to the members of our committee for their dedicated work, and thanks to the leadership and the ICMRS members for their support and contributions that have made this newsletter possible.

Sincerely,

Herb Sun, PhD
Chair, ICMRS Education Committee

VI. ICMRS Members' Research Highlights

Our members have been extremely productive. As an example, we present to you here the *Report from Principal Investigators* with news on recent publications in their laboratories from Dr. Di Chen, Bin Li and Xiaoling Zhang, the PIs who are members of ICMRS. We hope you find these exciting and interesting. We appreciate the contribution of reports from all the PIs and ICMRS members to share their exciting new research progress, and look forward to your contribution for the Members Research Highlights section.

Report from Principal Investigators

Dr. Di Chen, Rush University

1. Shen J, Li J, Wang B, Jin H, Wang M, Zhang Y, Yang Y, Im H-J, O'Keefe RJ, and Chen D (2013) Deletion of the type II TGF-β receptor gene in articular chondrocytes leads to progressive OA-like phenotype in mice. **Arthritis Rheum** 65(12):3107-19. (PMC 3928444)

2. Wang B, Jin H, Zhu M, Li J, Zhao L, Zhang Y, Tang D, Xiao G, Xing L, Boyce BF, and Chen D (2014) Chondrocyte β-catenin signaling regulates postnatal bone remodeling through modulation of osteoclast formation in a murine model. **Arthritis Rheumatol** 66(1):107-120. (PMC 3932359) (Featured in "Bone Science in the News" in the ASBMR)
3. Li S, Shu B, Zhang Y, Li J, Wang Y, Ren F, Xiao G, Chang Z, and Chen D (2014) CHIP/STUB1 regulates osteoclast formation through degradation of TRAF6. **Arthritis Rheumatol** 66(7):1854-1863. (PMC 4077927)
4. Chen M, Li S, Xie W, Wang B, and Chen D (2014) *Col2-CreER*: A mouse model for chondrocyte-specific and inducible gene deletion. **Eur Cells Mater** (Accepted)
5. Shen J, Li S, and Chen D (2014) TGF-β signaling and OA development. **Bone Res** (Accepted)

Dr. Bin Li, Soochow University, China

1. L. Zhou, C-H. Zhu, L. Edmonds, H-L. Yang, W-G. Cui, B. Li. Microsol-electrospinning for controlled loading and release of water-soluble drugs in nanofibrous membranes. ***RSC Advances***, in press.
2. Q-P. Guo, J. Li, C. Liu, S-H. Wang, Y-B. Wang, B. Li, H-L. Yang. Identification of rabbit annulus fibrosus-derived stem cells. ***PLoS One***, in press.
3. C-B. Cao, H. Li, J. Li, C. Liu, H-L. Yang, B. Li. Mechanical reinforcement of injectable calcium phosphate cement/silk fibroin (SF) composite by mineralized SF. ***Ceram Int*** 2014, 40: 13987-13993.
4. G-Q. Pan, B-B. Guo, Y. Ma, W-G. Cui, F. He, B. Li, H-L. Yang, K. J. Shea. Dynamic introduction of cell adhesive factor via reversible multicovalent phenylboronic acid/cis-diol polymeric complexes. ***J Am Chem Soc*** 2014, 136(17): 6203-6206.
5. J. Li, C. Liu, Q-P. Guo, H-L. Yang, B. Li. Regional variations in the cellular, biochemical, and biomechanical characteristics of rabbit annulus fibrosus. ***PLoS One*** 2014, 9(3): e91799.
6. S-J. Dong, J-Y. Sun, Y-D. Li, J. Li, W-G. Cui, B. Li. Electrospun nanofibrous scaffolds of poly (L-lactic acid)-dicalcium silicate composite via ultrasonic-aging technique for bone regeneration. ***Mater Sci Eng C- Mater Biol Appl*** 2014, 35(1): 426-433.
7. W-K. Zhu, S-H. Liu, J-W. Zhao, S. Liu, S-C. Jiang, B. Li, H-L. Yang, C-Y. Fan, W-G. Cui. Highly flexible and rapidly degradable papaverine-loaded electrospun fibrous membranes for preventing vasospasm and repairing vascular tissue. ***Acta Biomater*** 2014, 10(7): 3018-3028.
8. S. Zhao, J-W. Zhao, S-K. Dong, X-Q. Huangfu, B. Li, H-L. Yang, J-Z. Zhao, W-G. Cui. Biological augmentation of rotator cuff repair using bFGF-loaded electrospun poly(lactide-co-glycolide) fibrous membranes. ***Int J Nanomed*** 2014, 9: 2373-2385.
9. Z-M. Yuan, J-W. Zhao, W-K. Zhu, Z-L. Yang, B. Li, H-L. Yang, Q. Zheng, W-G. Cui. Ibuprofen-loaded electrospun fibrous scaffold doped with sodium bicarbonate for responsively inhibiting inflammation and promoting muscle wound healing in vivo. ***Biomater Sci*** 2014, 2: 502-511.

Dr. Xiaoling Zhang, Shanghai Institutes for Biological Sciences, China

1. X HG, Yu YF, Zheng Q, Zhang W, Wang CD, Zhao XY, Tong WX, Wang H, Liu P, **Zhang XL**. Autophagy protects end plate chondrocytes from intermittent cyclic mechanical tension induced calcification. ***Bone.*** 2014 Sep;66:232-9. doi: 10.1016/j.bone.2014.06.018. Epub 2014 Jun 23.
2. Zhang L, Yang C, Li J, Zhu Y, **Zhang X**. High extracellular magnesium inhibits mineralized matrix deposition and modulates intracellular cacium signaling in human bone marrow-

derived mesenchymal stem cells. ***Biochem Biophys Res Commun.*** 2014 Aug 8; 450(4):1390-5. doi: 10.1016/j.bbrc.2014.07.004. Epub 2014 Jul 7.
3. Wang J, Zhou J, Zhang N, **Zhang X**, Li Q. A heterocyclic molecule kartogenin induces collagen synthesis of human dermal fibroblasts by activating the smad4/smad5 pathway. ***Biochem Biophys Res Commun.*** 2014 Jul 18; 450(1):568-74. doi: 10.1016/j.bbrc.2014.06.016. Epub 2014 Jun 10.
4. Du Z, Xiang S, Zang Y, Zhou Y, Wang C, Tang H, Jin T, **Zhang X**. Polyspermine imine, a pH Responsive Polycationic siRNA Carrier Degradable to Endogenous Metabolites. ***Mol Pharm.*** 2014 Jun 2. [Epub ahead of print]
5. Zhao X, Qu Z, Tickner J, Xu J, Dai K, **Zhang X**. The Role of SATB2 in Skeletogenesis and Human Disease. ***Cytokine Growth Factor Rev.*** 2014 Feb;25(1):35-44.

VII. Job Postings

To help our members find jobs, we will post job openings submitted by ICMRS members. To submit advertisements for job openings, please send an email to: herb.sun@einstein.yu.edu.

SOOCHOW UNIVERSITY	Institute of Orthopaedics Soochow University and First Affiliated Hospital of Soochow University, Suzhou, Jiangsu, PR China

Full-time faculty positions at the levels of Assistant Professor, Associate Professor and Professor.

Candidates in all areas of musculoskeletal research are encouraged to apply. Areas of interests include, but are not limited to: molecular and cell biology of musculoskeletal system, orthopedic biomaterials and devices, tissue engineering and regenerative medicine, biomechanics of bone and muscle, metabolism and immunity of musculoskeletal diseases.

Successful candidates are expected to develop robust and independent research programs, initiate interdisciplinary and collaborative research within the Institute and engage in external funding application and scholarly publication. The Institute was established upon the nationally renowned Department of Orthopaedic Surgery in the First Affiliated Hospital of Soochow University, which holds two national key curricula for medical education. The Institute is now a leading research center in Jiangsu Providence as well as East China with exciting research environment and well-funded research program.

A Ph.D. and/or M.D. degree in Orthopaedics, Biomedical Engineering or a related field is required. Candidate for the Assistant Professor position must have outstand potential for developing an independent research program. To be competitive for the Associate Professor and Professor positions, candidates must have outstanding academic and research records recognized nationally or internationally in the related fields.

Ranks, compensation and start-up package including laboratory space are dependent upon the qualifications and experience. The review of application begins immediately and the positions will remain open until filled.

Please send a curriculum vitae, a statement of research interests and plans (3 pages maximum), and contact information of three references to Xuehua Hang, Vice-director, Institute of Orthopaedics, Soochow University (IOSU), The First Building Room 314, South Campus of Soochow University, 708 Renmin Rd., Suzhou, PR China 215006, Tel: 86-512-67781807, Fax: 86-512-67781165, E-mail: xiufeiyue@163.com, xhhang@suda.edu.cn.