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Nationality: Singapore

Present Academic Position

Group Leader and Principal Investigator, Stem Cell and Regenerative Medicine Consortium, HKU - (Since 2012-now)

Assistant Professor, Department of Medicine, Queen Mary Hospital, HKU (Since 2017-now)

Visiting Professor and Consultant Physician (Medicine), Peking University Shenzhen Hospital, PKU (Since 2017-now)

Previous Academic Position

2010-2016 Assistant Professor, School of Biomedical Sciences and Dept. of Medicine, HKU, Hong Kong

2008-2010 Research Assistant Professor, Department of Medicine, HKU, Hong Kong

2007-2008 Research Scientist, National University Medical Institute (NUMI), Singapore

2006-2007 Visiting Scientist, Experimental Cardiology, Utrecht University Medical Centre, Netherlands

2004-2007 Postdoc BMRC Fellowship, Stem Cell & Developmental Biology, Genome Institute of Singapore

2001-2003 Postdoc NMRC Fellowship, Stem Cell & Developmental Biology, National University of Singapore

1999-2001 Cardiology Registrar, Peking University First Hospital, and Fujian Medical University Affiliated Quanzhou Hospital, China

Academic Qualifications and Training:

1999 Fellowship (Medicine), Peking University the First Hospital, Peking, China

1999 M.D/PhD in Medicine, the Harbin Medical University, Harbin, China

1993 B. Med in Medicine, the Fujian Chinese Medical University, Fuzhou, China

Relevant Research Work

--Human pluripotent stem cells and lineage differentiation for genetic disease modelling and therapeutic testing (*Stem Cell* 2007; *Circulation* 2010; *Cell Stem Cell* 2011; *Gastroenterology*.2015; *Stem Cell* 2015; *Nature Communications* 2018 (in revision))

-- mesenchymal stem cells for health renaissance in mitochondrial dysfunction-related lung, heart and eye degeneration (*Am J Respir Cell Mol Biol.* 2014; *Stem cell Report* 2016; *Cell Death & Dis* 2016; *J Cell Mol Med.* 2017; *J Allergy Clin Immunol.*2017 ; *Stem Cell Reports* 2018)

--stem cell gene therapies for neuromuscular disorders. Initiating genetically-modified hematopoietic stem cell therapy for neuromuscular dystrophy in early phase I/II of clinical trial (www.ClinicalTrials.gov NCT02559830) (*Clin Genetics* 2017; *Molecular Therapy-Nucleic Acids* 2017)

External Grants Competition (Since 2010, >16 external grants funded)

- 3 RGC-GRF as PI,
- 1 RGC-NSFC as PI
- 2 NSFC Research as PI
- 1 ITFs together with grants from industry, as PI
- 2 AOSPINE grant as PI
- 1 HMRF as PI (fundable with revision, pending)
- 2 RGC-GRF Research as Co-PI; 1 HMRF Co-PI
- 2 RGC-CRF for Group Research as Co-PI (2009, 11)
- 2 Theme-based Research Grant as Co-PI (2011, 12)

Research Outputs

- >70 research publications on international scientific journals and 45 conference proceedings
- 2 books & book chapters
- 5 patents
- 25 invited plenary/keynotes/invited /speaker on international conferences/symposiums

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Selected Ten Publications in Chronological Order (* as corresponding author)

~70 stem cell research articles were published totally. Ten presentative publications are listed as following. The full publications are listed in separated appendix

1. Li X, Michaeloudes C, Zhang Y, Wiegman C, **Lian Q***, Mak JC*, Bhavsar PK*, Chung KF. Mesenchymal stem cells alleviate oxidative stress-induced mitochondrial dysfunction in the airways. *J Allergy Clin Immunol*. 2018 May;141(5):1634-1645.e5. (*using MSC to protect against oxidative injuries of airway in both mouse model and patients' primary airway cells via mechanisms of mitochondrial transfer*)
2. Zhang Z, Feng H, Meng XH, Li Q, Xu A, , Tse HF, **Lian Q***. iPSCs Reveal PUFA Overload-provoked Mitochondrial Stress as a Central Node for RPE Degeneration in Bietti's Crystalline Dystrophy. *Nature Communications* (under review. ID No:NCOMMS-18-25573) August,2018 (*using patients' and CRISPR/cas9 technique -created isogenic RPE cells and unexpectedly discovered poly-unsaturated fatty acid overload in CYP4v2 gene mutation -induced RPE damage, and to develop a novel gene therapeutic strategy*)
3. Yao Y, Fan X, Jiang D ,Zhang Y, Li X, Fang S, Chiu S, Tse HF, **Lian Q***, Fu Q*. Connexin 43 mediated mitochondrial transfer of iPSC-MSCs alleviates asthma inflammation *Stem Cell Reports* 2018 (in press) (*we discovered a tight junction protein CX43 acts as a highway for mitochondrial transportation from MSC to airway epithelial cells for the repair of inflammation-damaged airway functions*)
4. Zhang Z, Zhang Y, Gao F, Tse HF, **Lian Q***. CRISPR/Cas9 genome-editing system in human stem cell: Current status and future prospects. *Molecular Therapy-Nucleic Acids*.2017 Dec 15;9:230-241 (*invited expert to write a review to use CRISPR/cas9 in human pluripotent stem cells for human disease, lineage differentiation tracing and therapeutics*)
5. Zhang Y, Yu Z, Jiang D, Liang X, Liao S, Zhang Z, Yue W, Li X, Chiu SM, Chai YH, Liang Y, Chow Y, Han S, Xu A, Tse HF*, **Lian Q***. iPSC-MSCs with High Intrinsic MIRO1 and Sensitivity to TNF- α Yield Efficacious Mitochondrial Transfer to Rescue Anthracycline-Induced Cardiomyopathy. *Stem Cell Reports*. 2016 Oct 11;7(4):749-763 (the best cover for the journal in 2016) (*The first time to report MSC transplantation rescues Doxorubicin-induced cardiotoxicity through MSC mitochondrial donation*)
6. Song Y, Pan G, Chen L, Ma S, Zeng T, Chan TH, Li L, **Lian Q**, Chow R, Cai X, Li Y, Li Y, Liu M, Li Y, Zhu Y, Wong N, Yuan YF, Pei D, Guan XY*. Loss of ATOH8 Increases Stem Cell Features of Hepatocellular Carcinoma Cells. *Gastroenterology*. 2015;149(4):1068-81 (*our team examined human pluripotent stem cell to model ATOH8 in cancer stem cells*)
7. Lin Z, Pan X, Wu F, Ye D, Zhang Y, Wang Y, Jin L, **Lian Q**, Huang Y, Ding H, Triggle C, Wang K, Li X, Xu A. Fibroblast growth factor 21 Prevents Atherosclerosis by Suppression of Hepatic Sterol regulatory Element-Binding Protein-2 and Induction of Adiponectin in Mice. *Circulation*. 2015 May 26; 131(21):1861-71. (*our team examined and found the role of FGF21 in mice with Atherosclerosis*)
8. Fu QL, Chow YY, Sun J, Zeng X, Sun Y, Shi, W, Tse HF, **Lian Q***, Xu G*. Mesenchymal stem cells derived from human induced pluripotent stem cells modulate T-cell phenotypes in allergic rhinitis. *Allergy* 2012 Oct; 67(10):1215-22 (*we reported effects and mechanisms of MSC in suppression of T cells in allergic rhinitis*)
9. Zhang J, **Lian Q**, Zhu G, Zhou F, Sui L, Tan C, Mutalif RA, Navasankari R, Zhang Y, Tse HF, Stewart CL, Colman A. A human iPSC model of Hutchinson Gilford Progeria reveals vascular smooth muscle and mesenchymal stem cell defects. *Cell Stem Cell*. 2011 Jan 7;8(1):31-45 (*The key responsibility to induce premature ageing iPSC into MSC and examine in vivo function after transplantation, and test hypoxia induced ageing in iPSC-VSMC*)
10. **Lian Q***, Zhang Y, Zhang J, Zhang HK, Wu X, Zhang Y, Lam FF, Kang S, Xia JC, Lai WH, Au KW, Chow YY, Siu CW, Lee CN, Tse HF*. Functional mesenchymal stem cells derived from human induced pluripotent stem cells attenuate limb ischemia in mice. *Circulation*. 2010 Mar 9;121(9):1113-23

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(The first report to successfully derive MSC from iPSC with clinical compliant protocols and to functional testing of iPSC-MSC in hindlimb ischemia)

International Service & Contribution

Grant Assessment Committee/Scientific Expert

Since 2018 Apr French National Research Agency (ANR), Grant Review /Scientific Expert
Since 2011 Nov National Natural Science Foundation of China (NSFC), Grant Review/Scientific Expert

Member on Editorial Board

- Academic Editorial Board Member, *-Scientific Reports* (since 2017-)
- Academic Guest Editor, *-Stem cell Research & Therapy* (since 2012-)

Honors, Awards and Patents:

Honors and Awards

- Young Scientist Scholarship Award, the 10th Annual Symposium of the Society of Chinese Biologists in America (SCBA), USA ,2004
- Young Scientist Award. 2nd International Symposium of Healthy Ageing, Hong Kong 2007
- 10th ISSCR Travel Grant Award, International Society of Stem Cell Research. Yokohama, Japan 2012

Patents:

Patent 1: Lian Q. A type of human protein VEGF fused with EGF active domain 7. Patent No: CN154109242

Patent 2: Lian Q and Liang XT. Method for NRG1-ERBB4 circuit applicable for ischemic diseases. Patent No: CN152691698

Patent 3. Lian Q: Method of MSC-TNF α -AB engineered stem cells and application of the product therefore. Patent No: HK 1217268; CN 2016102831193

Full publications (See Separated pages)

Research Statement and Future Research Plan (See Separated Pages)

Teaching activities and Teaching Philosophy (See Separated Page)