

VASCULAR MEDICINE



Principal Investigator

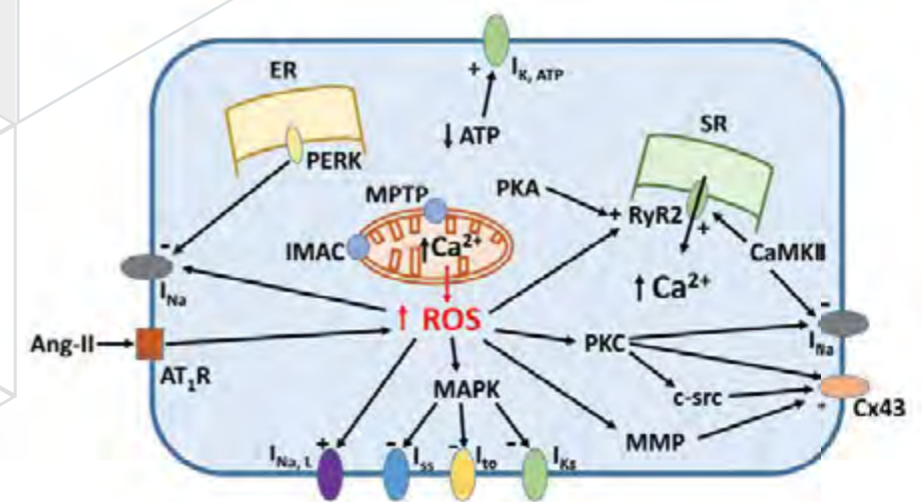
Professor Gary Tse

Team

Ken Wong, Jeremy Wong, Natalie Tsui, Lorraine Chiang, Cynthia Chan, Ricko Wong, Angel Cheung, Khethile Mhlongo, Kevin Ho, Christine Jia Hao Li, Justin Li

Research Progress Summary

Professor Gary Tse has built up an interdisciplinary team that brings together researchers from science and medical backgrounds to conduct translational research in cardiovascular disorders. The team has established close collaborations with local, mainland and overseas experts. Since joining the Li Ka Shing Institute of Health Sciences, the team has co-authored 20 manuscripts, of which 6 have been accepted for publication. Their recent efforts have focused on unravelling the novel mechanisms by which the immunosuppressive, anti-lipidemic and anti-diabetic medications exert protective effects against atrial fibrillation, the most prevalent cardiac arrhythmia observed in clinical practice, through reductions in oxidative stress and prevention of mitochondrial dysfunction to achieve reversed remodelling of the atria.



Reactive oxygen species, endoplasmic reticulum stress and mitochondrial dysfunction: the link with cardiac arrhythmogenesis.

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Recognitions

Awards and Fellowships

Member's Full Name	Details
Gary Tse	Clinical Assistant Professorship Fellow of the European Society of Cardiology

Grants and Consultancy

Full Name of PI	Project Title	Funding Source	Start Date (dd/mm/yyyy)	End Date (dd/mm/yyyy)	Amount (HK\$)
Gary Tse	The Roles of Oxidative Stress in Diabetic Mice	Croucher Foundation of Hong Kong	12/09/2016	11/09/2020	250,000

Publications

A. Journal Papers

- Li KH, Liu T, To OT, Chan YS, Tse G, Yan BP. A1427S missense mutation in SCN5A causes Type 1 Brugada pattern, recurrent ventricular tachy-arrhythmias and right ventricular structural abnormalities. *Research in Cardiovascular Medicine*. 2016; e42085.
- Fu H, Li G, Liu C, Li J, Cheng L, Yang W, Tse G, Zhao J, Liu T. Probucol prevents atrial ion channel remodeling in an alloxan-induced diabetes rabbit model. *Oncotarget*. 2016; 7(51):83850-8.
- Wong P, Tan T, Chan PL, Laxton T, Chan YW, Liu T, Wong WT, Tse G. The role of connexins in wound healing and repair: novel therapeutic approaches. *Frontiers in Physiology*. 2016; 7:596. (Review)
- Tse G, Liu T, Li KH, Laxton V, Chan YW, Keung W, Li RA, Yan B. Electrophysiological mechanisms of Brugada syndrome: insights from pre-clinical and clinical studies. *Frontiers in Physiology*. 2016; 7:467. (Review)