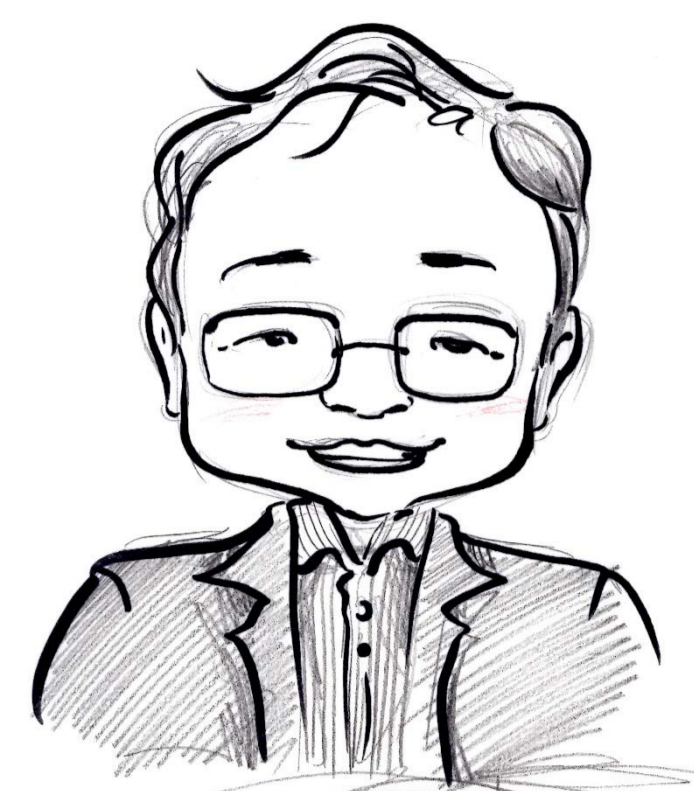




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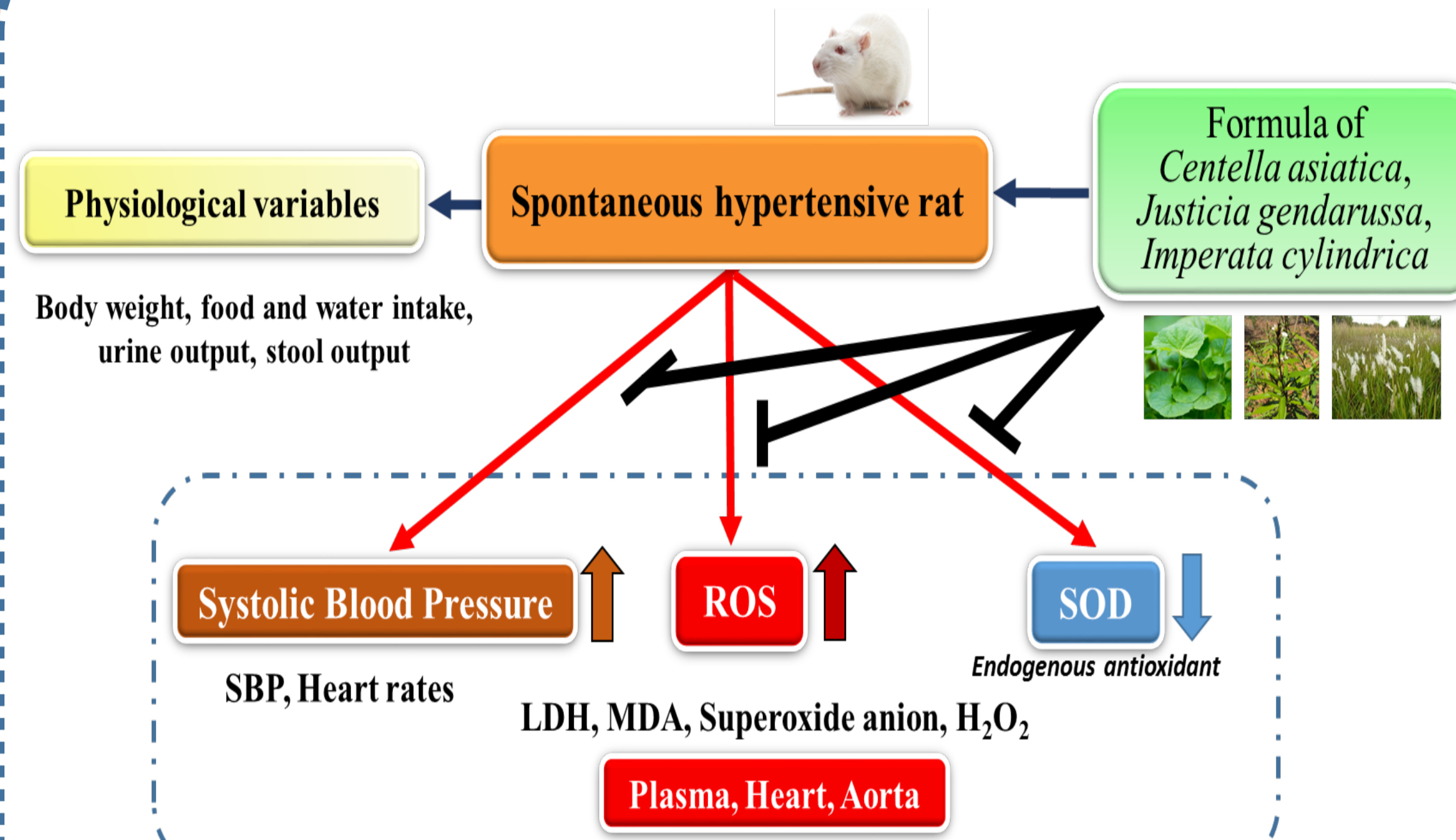
### Professional and Research Experience:

2016 - 2016 Visiting scholar, School of Pharmacy, The University of North Carolina at Chapel Hill  
2003 - 2004 Visiting scholar, Department of Neurology, College of Medicine, University of Virginia  
2005 - present Professor, Department of Pharmacology, Kaohsiung Medical University

### Research Interest – 中草藥藥理學

Recently, herb-based traditional medicine has been widely used and is rapidly growing among many countries, and World Health Organization has encouraged the utilization of natural medicine as potential therapeutic. Indonesian herbal medicine *Centella asiatica*, *Justicia gendarussa* and *Imperata cylindrica* decoction (CJID) are known to be efficacious for hypertension.

This study evaluated whether CJID inhibit cardiac remodeling in spontaneously hypertensive rats (SHRs) through mechanism of oxidative stress-related cardiac-NADPH oxidase (NOX-s) pathway: NOX1, NOX2 and NOX4. We found that CJID inhibits cardiac hypertrophy through a mechanism that may involve the reduction of oxidative stress formation yielded by NADPH oxidase pathway. CJID treatment decreased BP and HR efficiently and reversed ventricular remodeling in SHRs. The mechanism is possibly related with the inhibition effect of CJID in the formation of ROS through cardiac NADPH oxidase pathway.

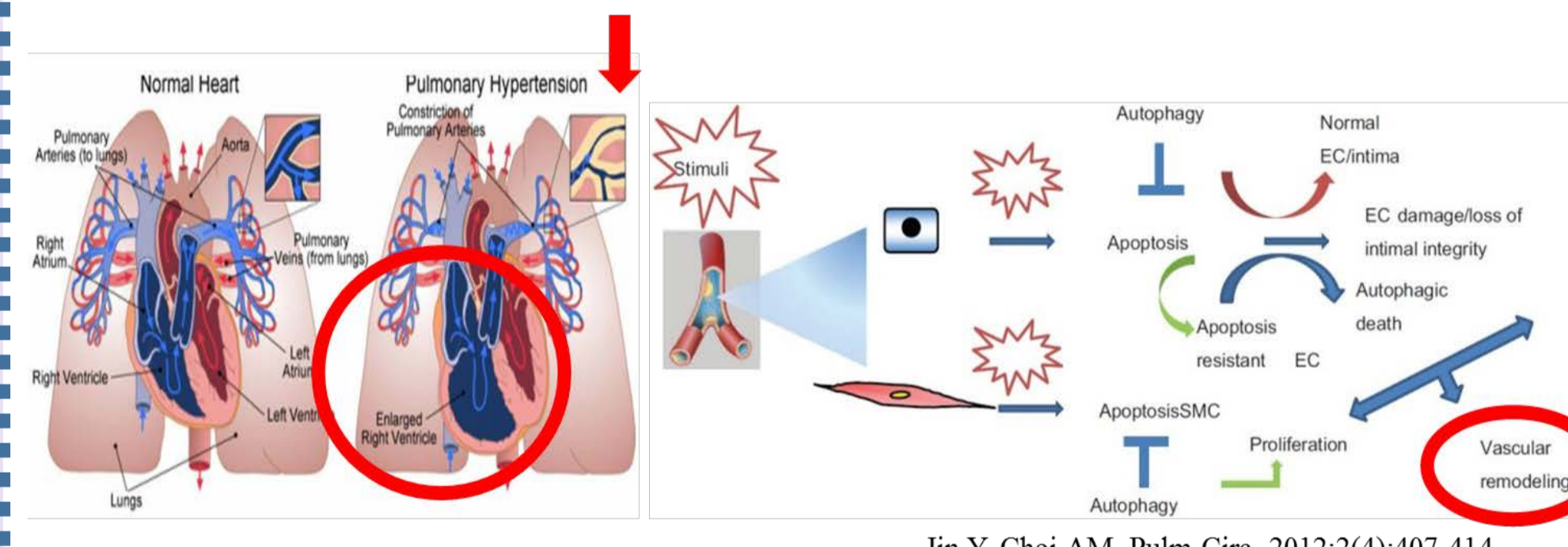


Publication: *Oncotarget*. 2017; 8:86784-86798.  
<https://doi.org/10.18632/oncotarget.21424>

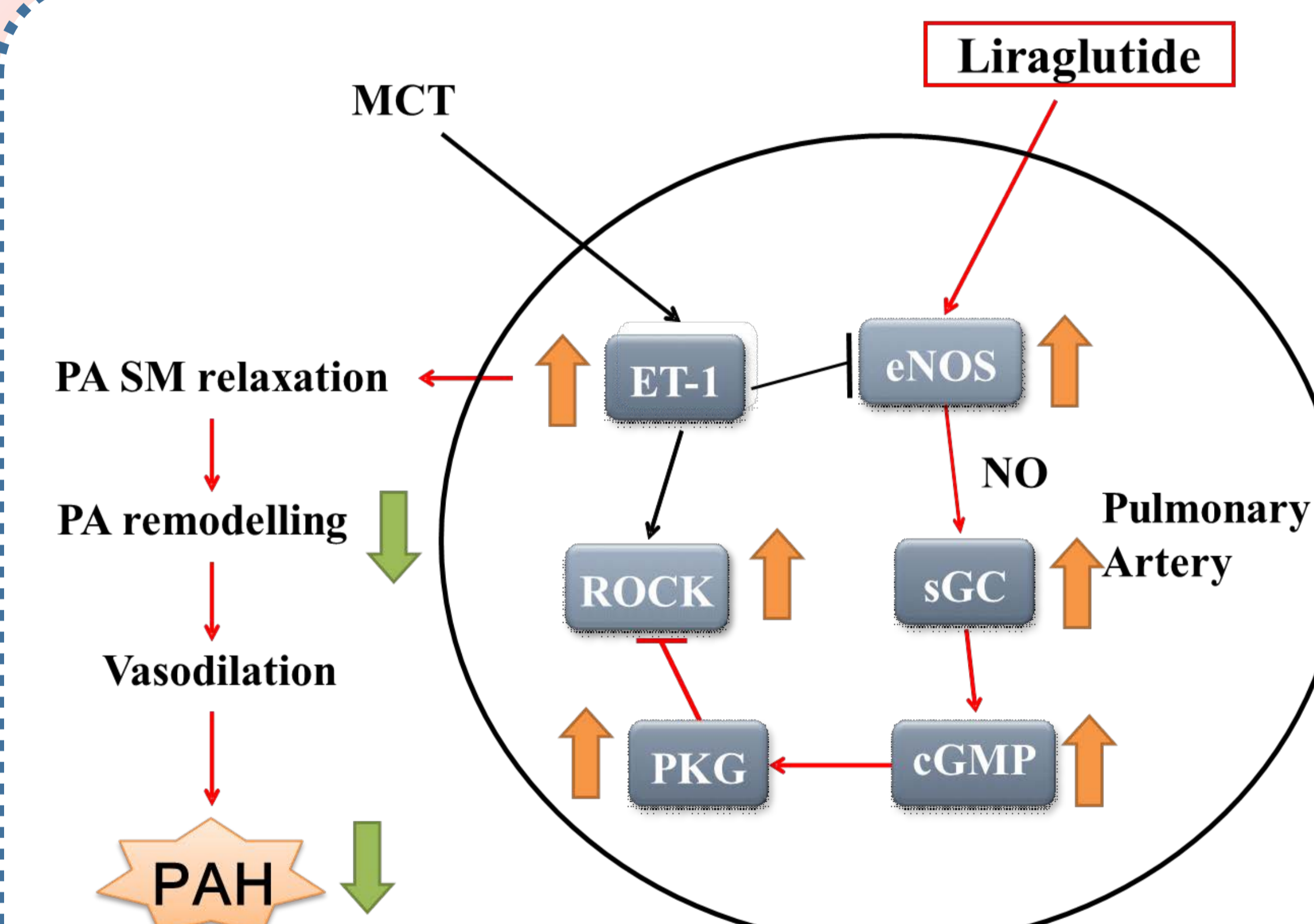
### Research Interest - 心臟血管疾病藥物研發

#### Pulmonary hypertension (PH)

- increase of blood pressure in the pulmonary artery (>25 mmHg at rest)
- increased proliferation of vascular wall cells, pulmonary vascular remodeling, increased right ventricular systolic pressures, and right ventricular hypertrophy leading eventually to heart failure.



Liraglutide, a glucagon-like peptide-1 receptor (GLP-1R) agonist, is widely used to treat diabetes. We found that liraglutide both prevented and reversed MCT-induced PAH, right ventricle hypertrophy and pulmonary vascular wall remodeling. In rats with MCT-induced PAH and PSMCs treated with PDGF-BB, protein expression of ROCK II was increased while eNOS, sGC and PKG were decreased, and all these effects were antagonized by liraglutide.



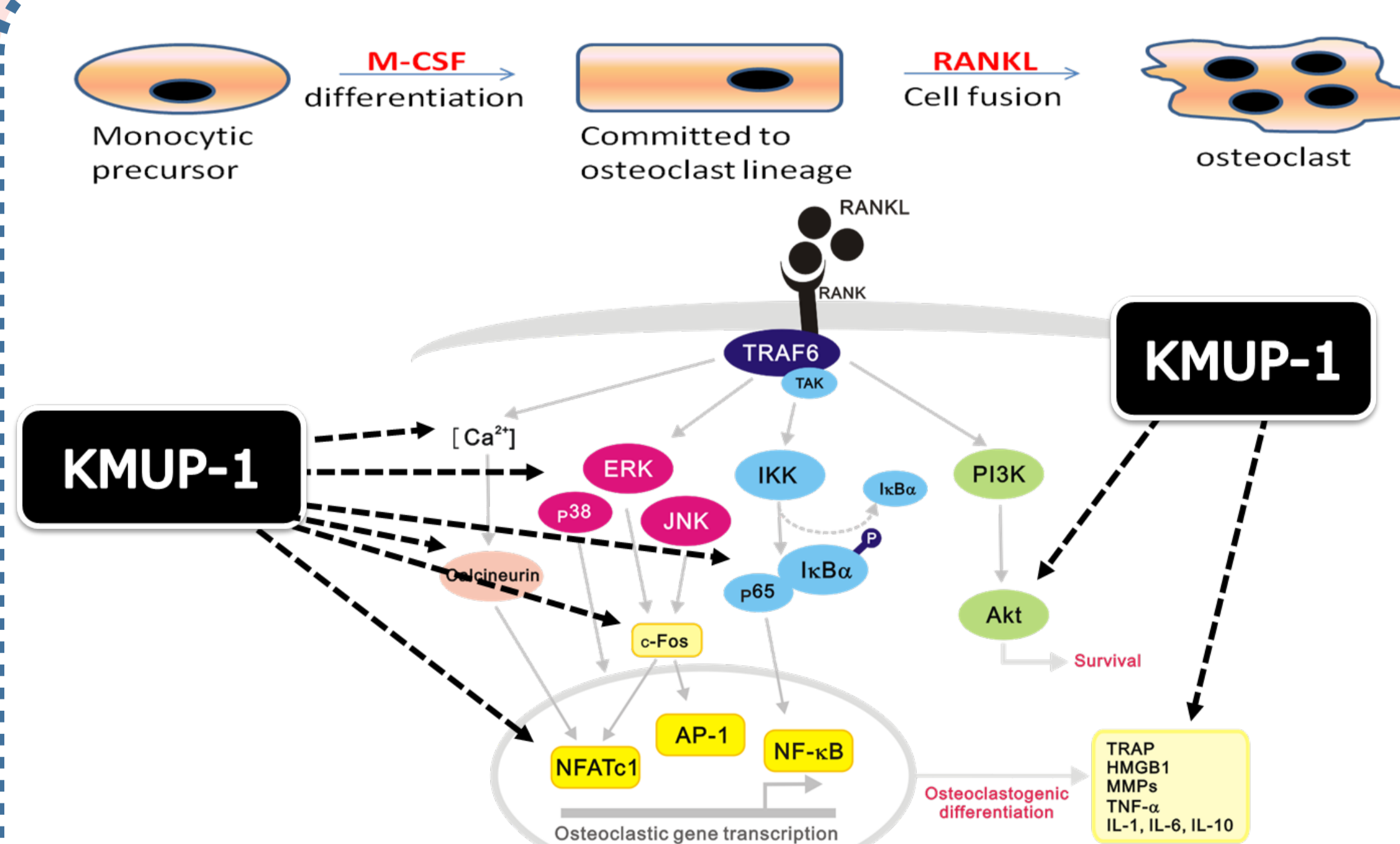
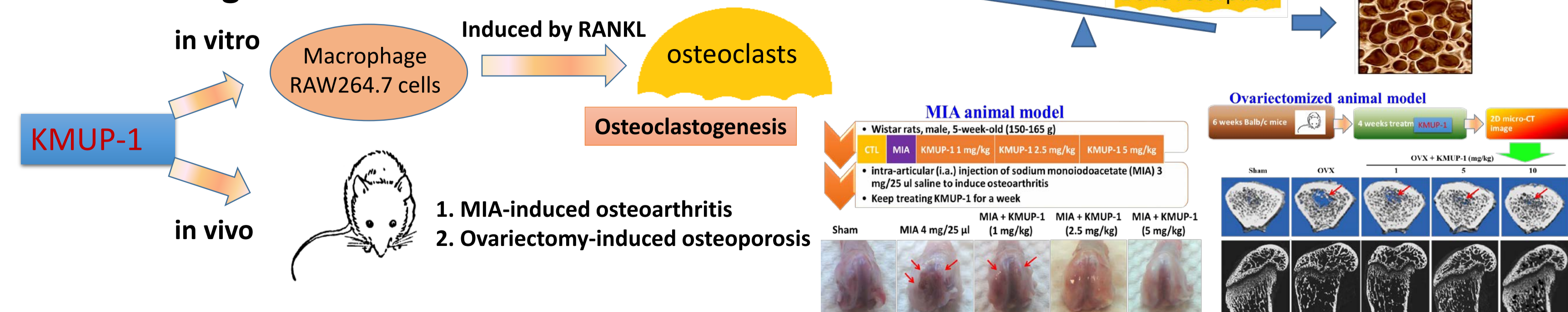
Publication: *Scientific Reports*. 2016 Sep 1;6:31788.  
<https://www.nature.com/articles/srep31788>

### Research Interest - 骨骼藥理學

**創新性:** KMUP-1 可用於高血壓、肺動脈高血壓、高血脂、攝護腺肥大之治療，已獲得美國專利8470805，台灣專利1373336。

**KMUP-1**, a xanthine derivative, produces tracheal relaxation, intracellular accumulation of cyclic nucleotides, inhibition of phosphodiesterases (PDEs) 3,4,5 and activation of K<sup>+</sup> channels. KMUP-1 可活化上皮及內皮細胞之 eNOS，活化平滑肌可溶性鳥苷酸環化酶(sGC)、抑制磷酸二酯酶(PDE) 3、4及5之作用，經由 cAMP/PKA 及 cGMP/PKG 等路徑。

#### Research design



Publication: *J Cell Physiol*. 2015 Sep;230(9):2038-48.  
*PLoS One*. 2013 Jul 25;8(7):e69468.



歡迎加入我們的團隊

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