

Hemodynamic, developmental and histopathological aspects of BAV aortopathy

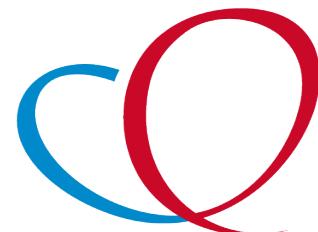
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Disclosure of Interest



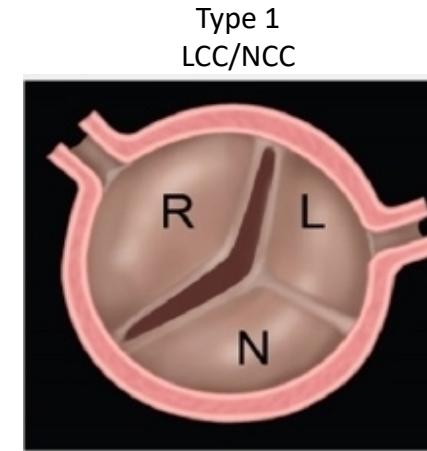
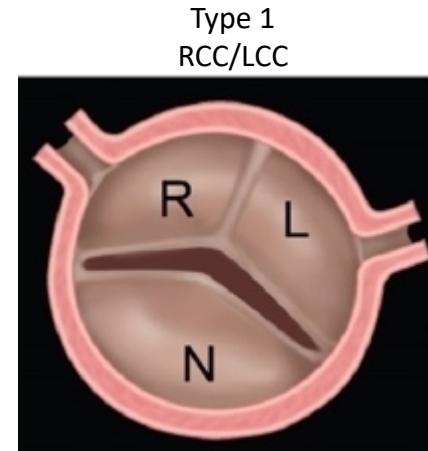
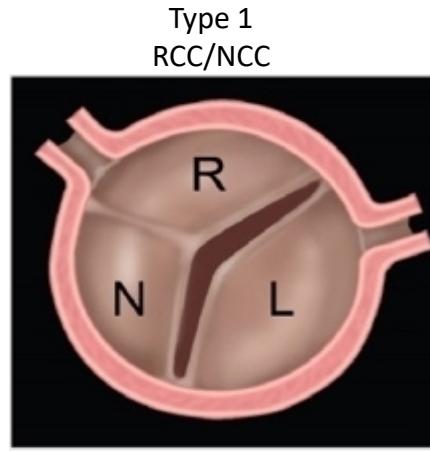
Speaker name: Nimrat Grewal

I do not have any potential conflict of interest

- Introduction
- (Ab)normal development of the aortic valve and ascending aortic wall
- The ascending aortic wall in BAV
- The role of haemodynamics and second heart field
- Conclusion and future perspectives

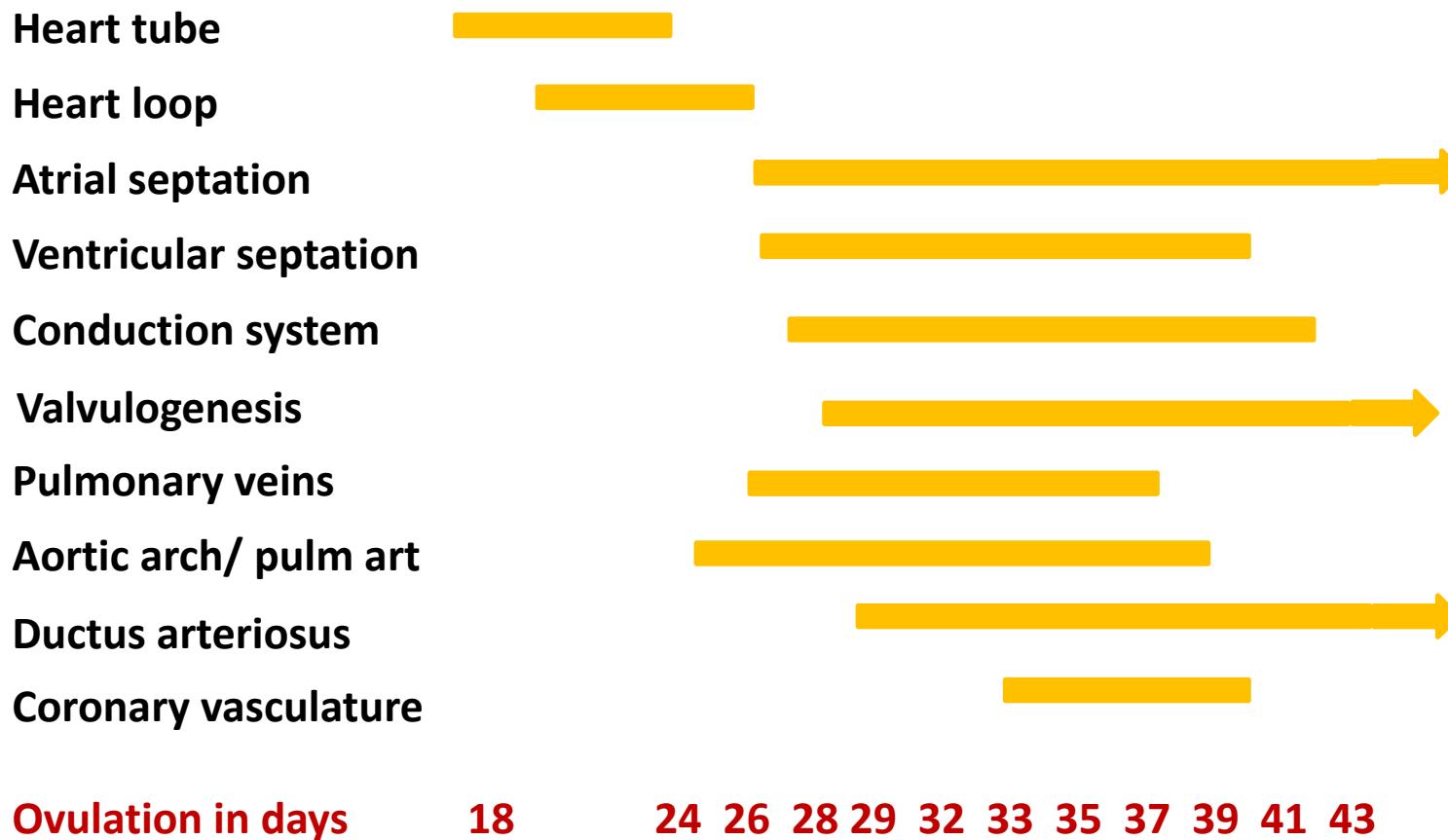
Introduction

- BAV most common congenital cardiac anomaly
- Clinical classification



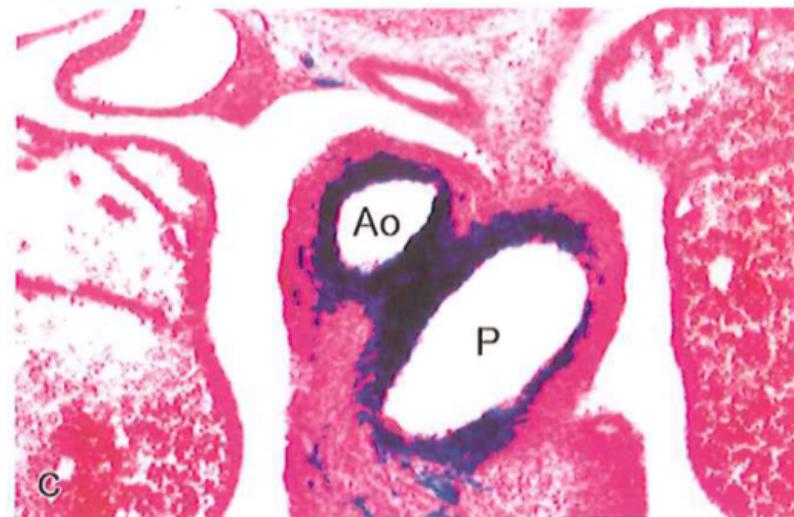
- Clinical course
 - Valvular complications
 - Aortopathy

The normal development of the aortic valve and ascending aortic wall

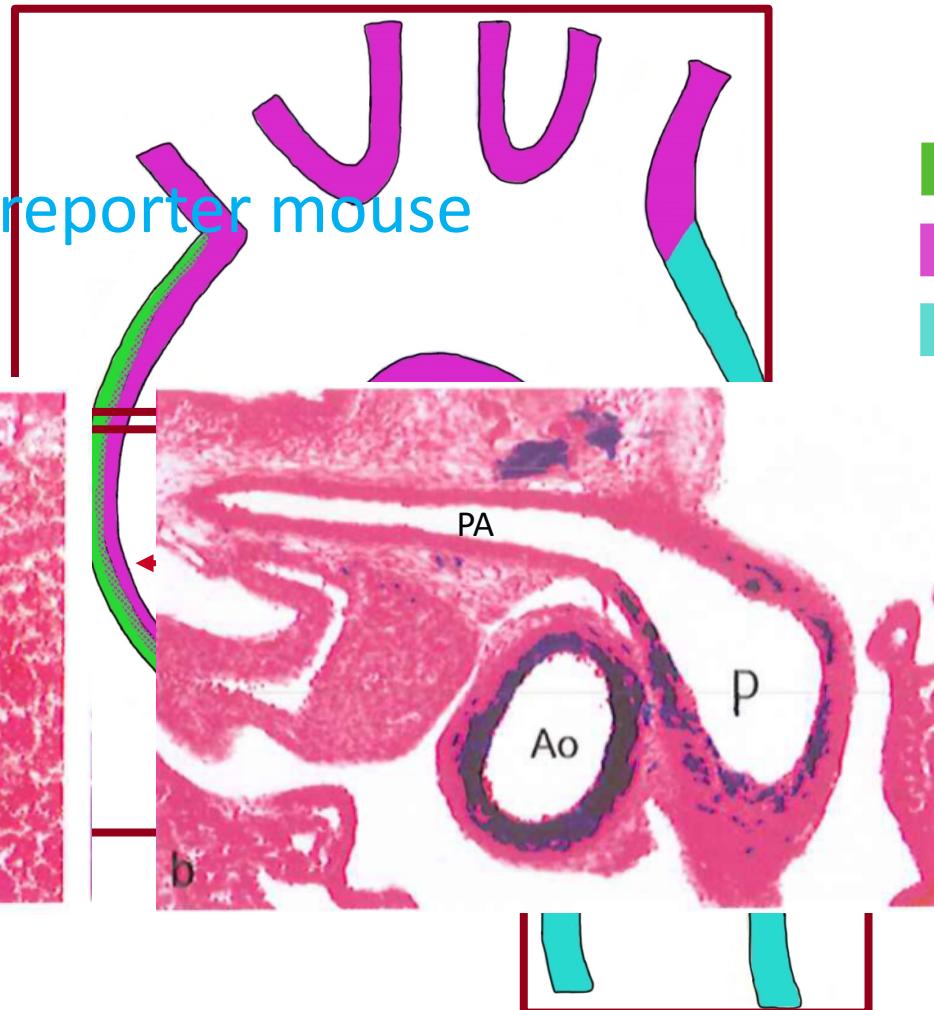


The normal development of the aortic valve and ascending aortic wall (II)

- Valvulogenesis:
 - Neural crest cells
 - Secc
 - Endo

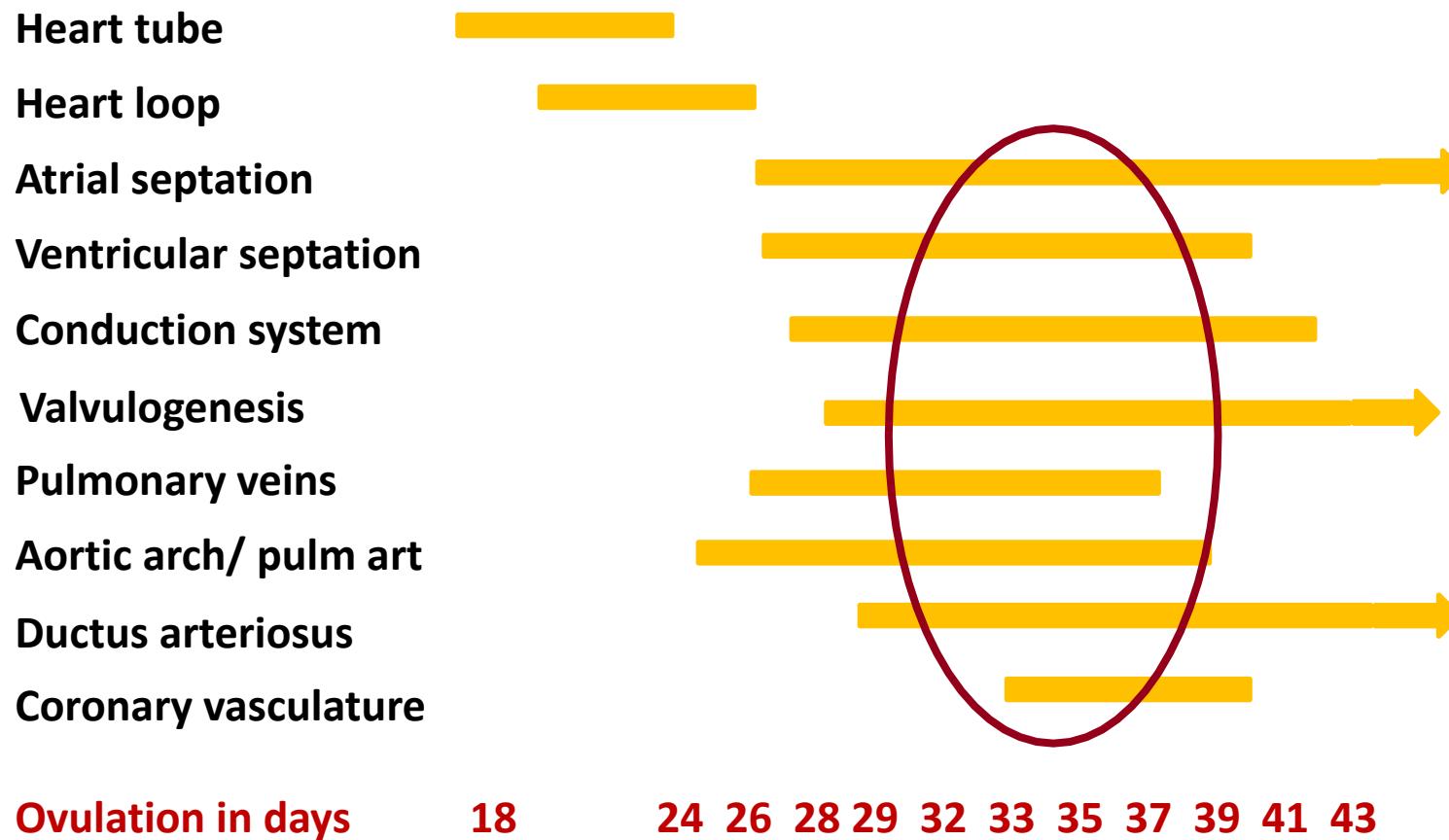


NCC Wnt1 reporter mouse

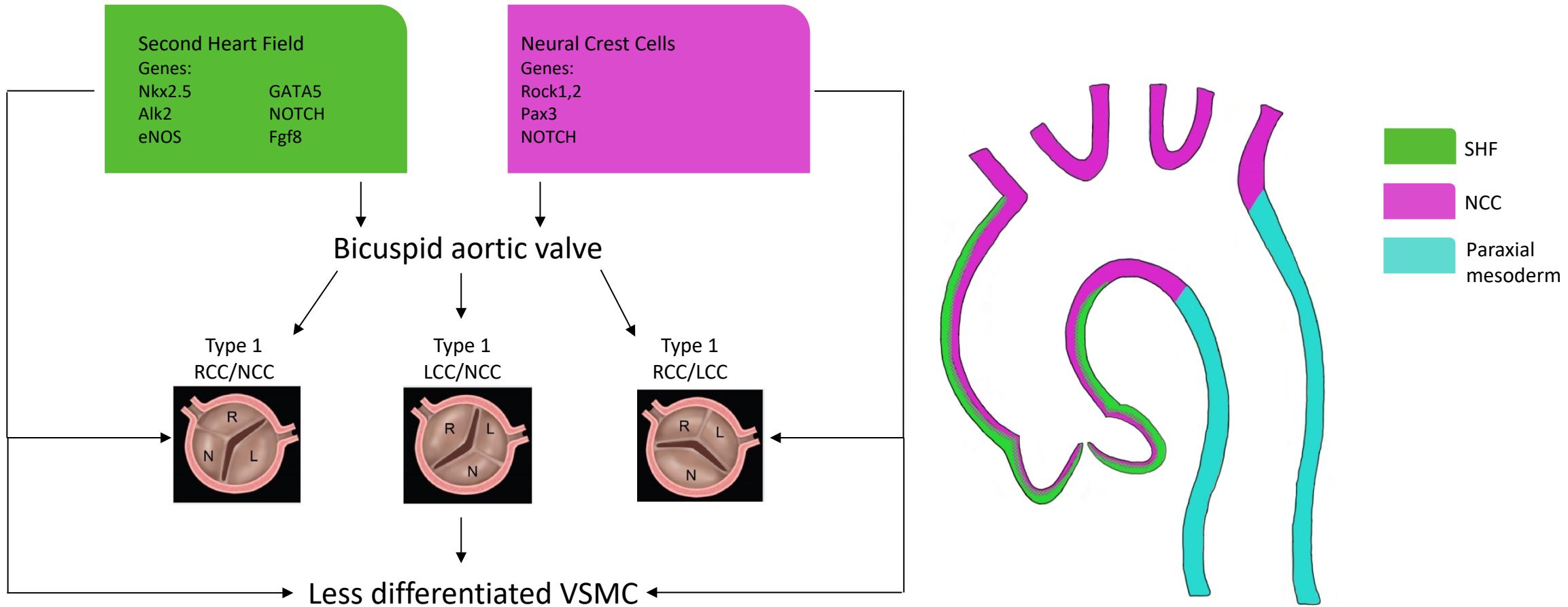


SHF
NCC
Paraxial mesoderm

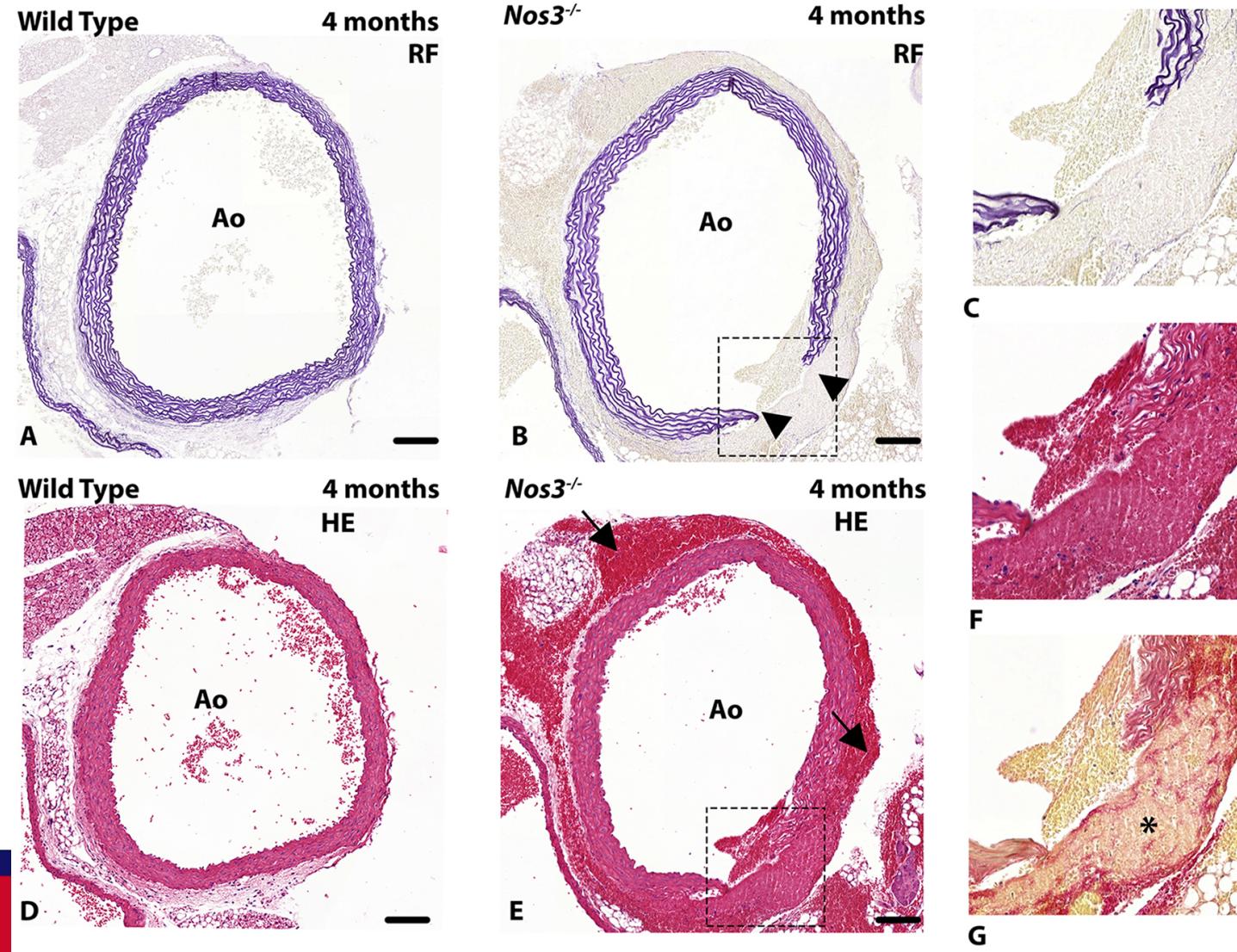
The normal development of the aortic valve and ascending aortic wall (III)



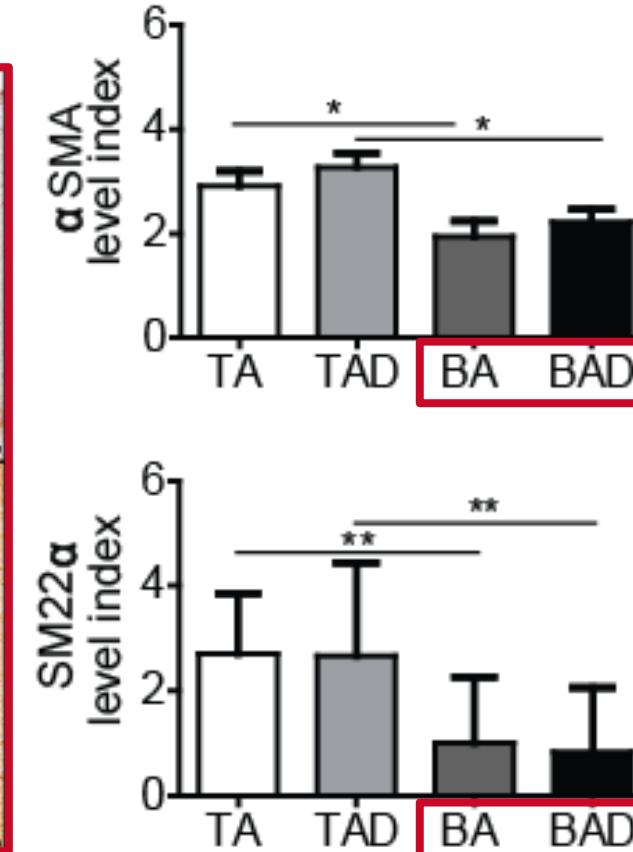
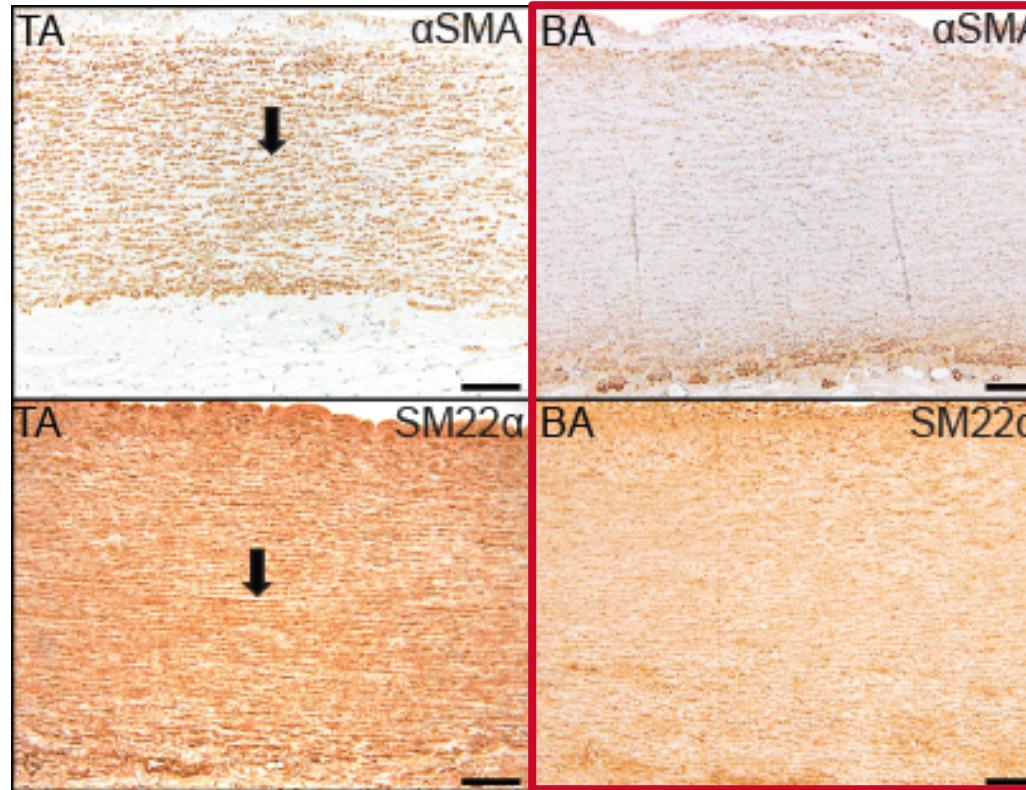
The normal development of the aortic valve and ascending aortic wall (IV)



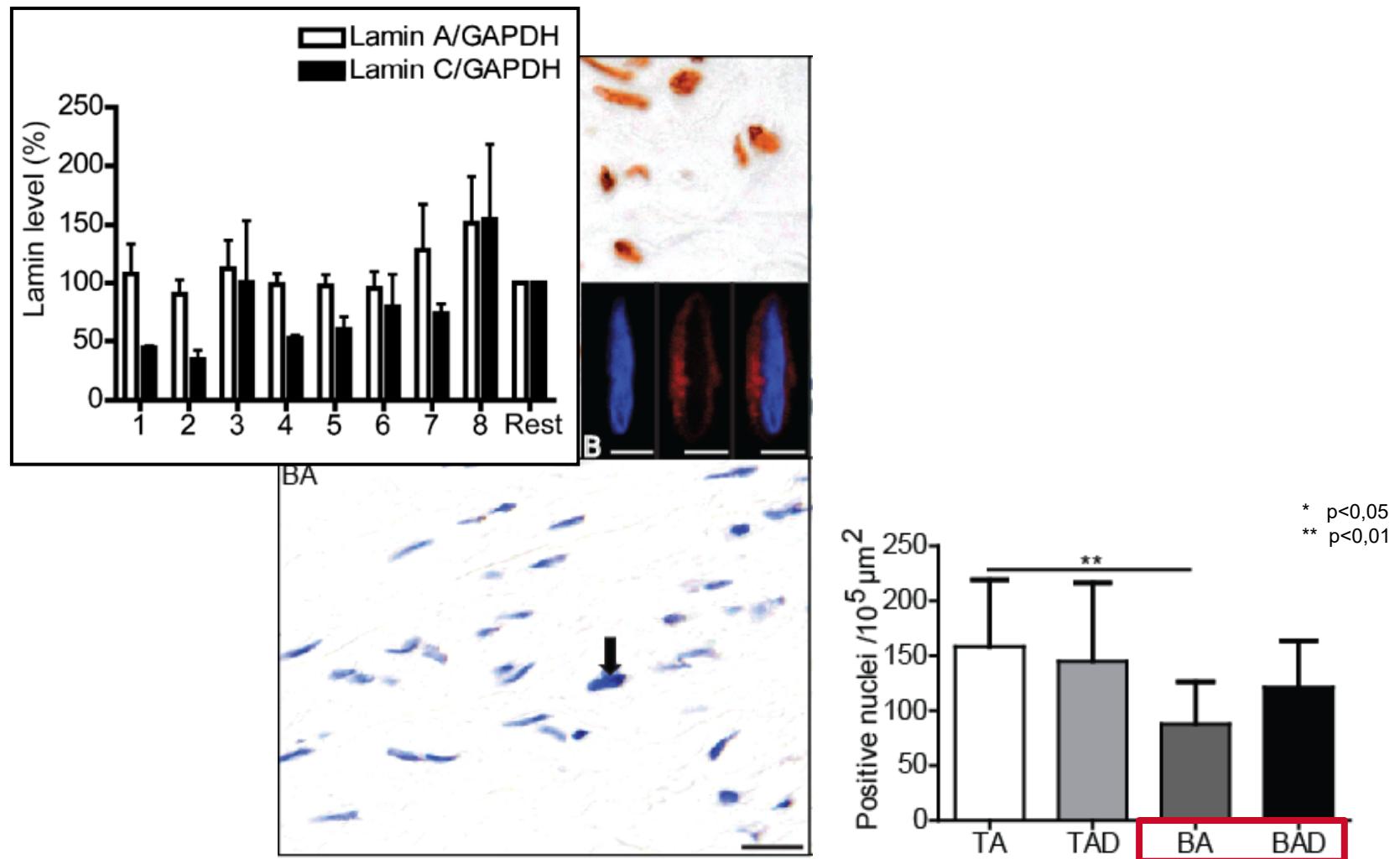
Disturbed nitric oxide signaling gives rise to congenital bicuspid aortic valve and aortopathy



Vascular Smooth Muscle Cells



Lamin A/C

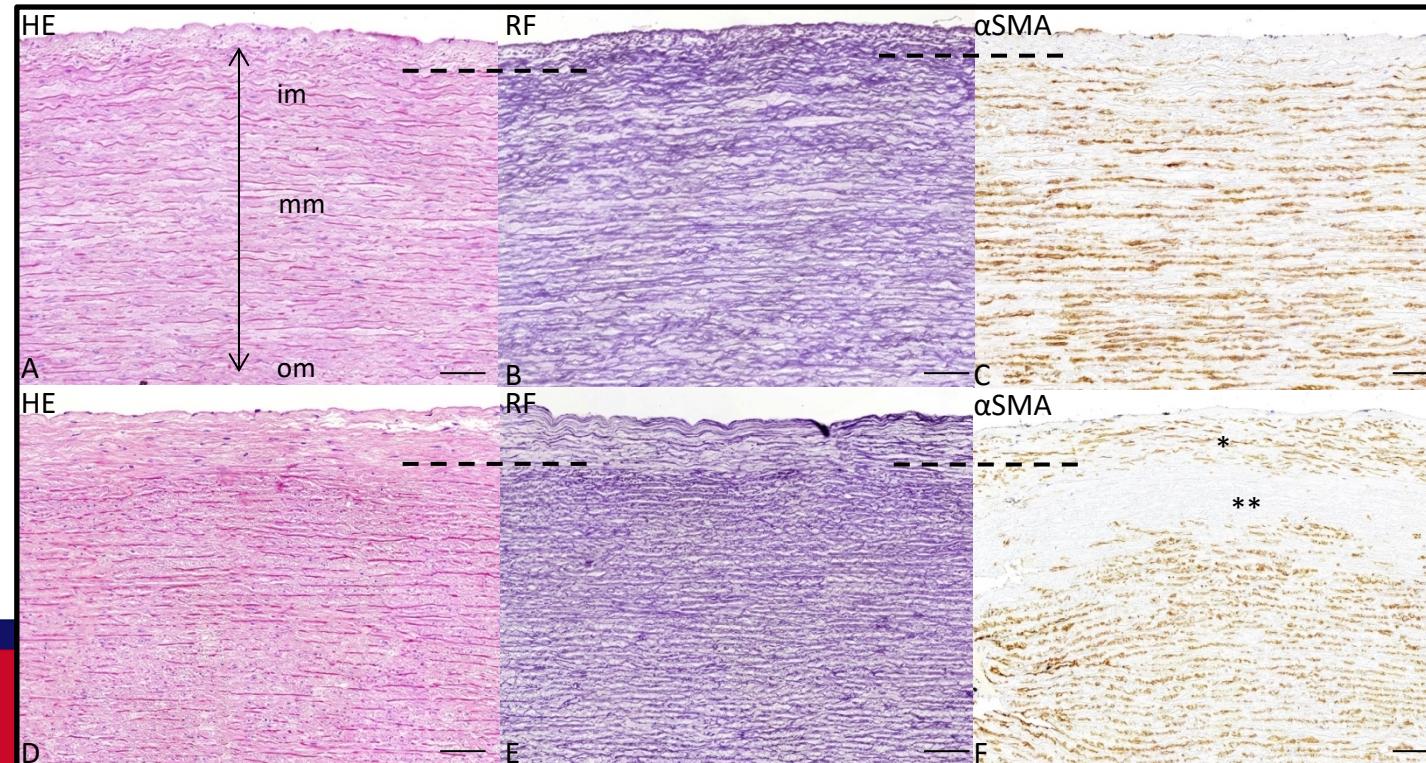
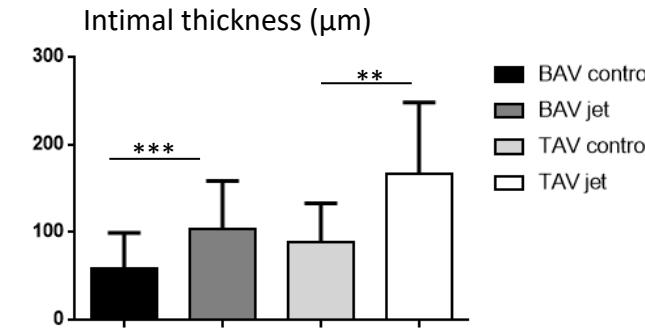


Pathogenesis of thoracic aortic dilation in BAV: role of haemodynamics

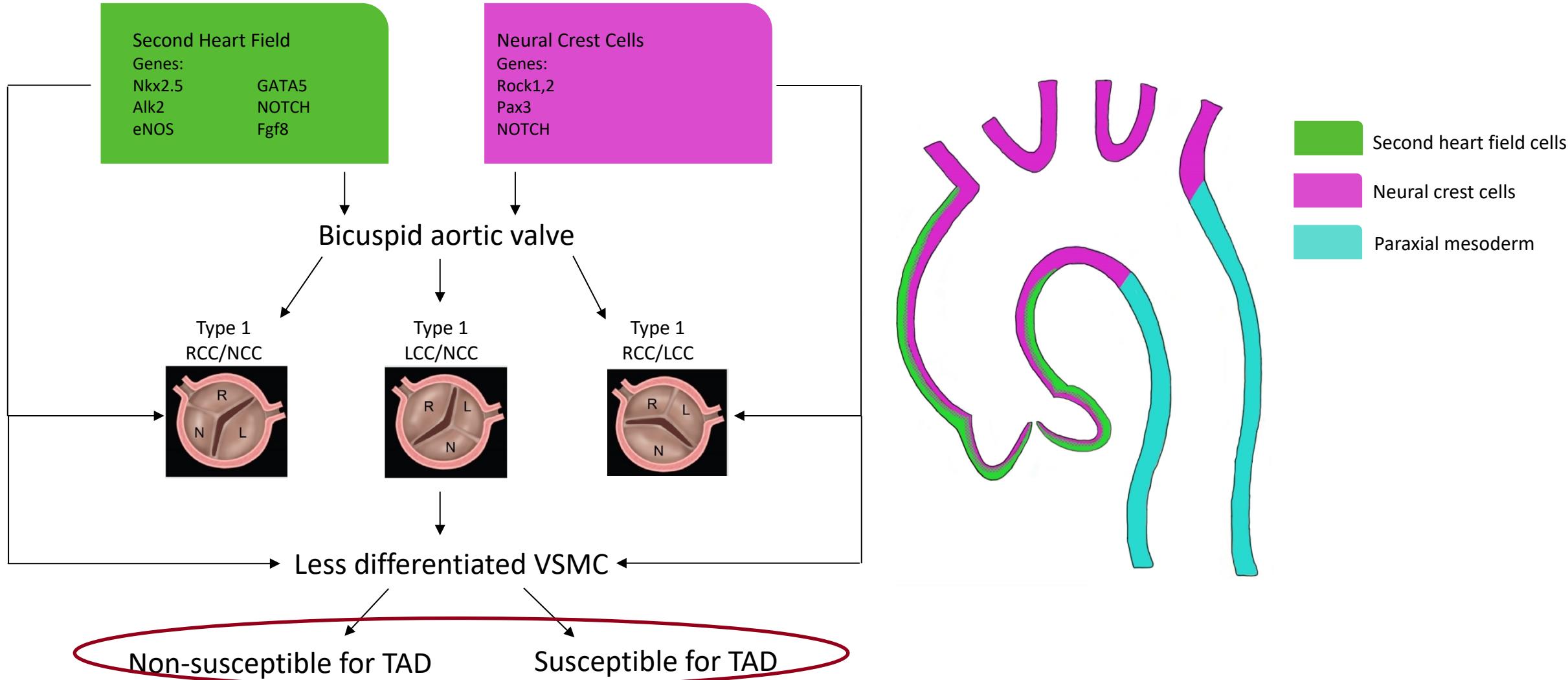


- Literature on role of haemodynamics
- Study on role of haemodynamics

Pathogenesis of thoracic aortic dilation in BAV: role of haemodynamics



Conclusion and future perspectives



Thank you

