

## Propositions pertaining to the thesis

### **Novel insights into the Pathophysiology of Group II Pulmonary Hypertension Impact on the pulmonary vasculature and right ventricle**

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1. Chronic instrumentation allows serial measurement of cardiopulmonary function during disease development without the effects of anaesthesia and acute surgical trauma, thereby increasing translatability while reducing the number of animals required for a study. (This thesis)
2. Pulmonary vasodilation in response to PDE5-inhibition is enhanced – and is nitric oxide-independent – in swine with pulmonary hypertension secondary to myocardial infarction. (This thesis)
3. Endothelin is responsible for the transition from isolated post-capillary pulmonary hypertension towards combined pre- and post-capillary pulmonary hypertension. (This thesis)
4. In early stages of combined pre- and post-capillary pulmonary hypertension, an increase in availability of – and sensitivity to – nitric oxide acts to attenuate the increased pulmonary vascular tone. (This thesis)
5. Impaired right ventricular oxygen delivery during exercise contributes to right ventricular dysfunction in early stages of combined pre- and post-capillary pulmonary hypertension. (This thesis)
6. In preterm infants with persistent pulmonary hypertension, pulmonary vein stenosis should be systematically ruled out by repeated examinations, since initial echocardiography can be normal and the disease is progressive. (Laux D. et al. *Pediatr Cardiol*, 2016)
7. Pulmonary hypertension in heart failure with preserved ejection fraction is easily misdiagnosed as pulmonary arterial hypertension. (Vachièry J. et al. *Eur Respir J*, 2019)
8. To design specific pharmacotherapies for pulmonary hypertension, it is critical to understand the contribution of endothelial cells and smooth muscle cells to the development of the disease as well as the cross-talk between these cell types. (Gao Y. et al. *Am J Respir Cell Mol Biol*, 2016)
9. The most surprising correlation in pulmonary hypertension research is the strong inverse relationship of the number of articles published on group 1 and 2 pulmonary hypertension and their respective prevalence. (Lang I.M. *Resp Med*, 2020)
10. If we want knowledge to be a positive force, we should not only embrace the end products, but also the methods to achieve those insights. (Dijkgraaf R. Abel Herzberg Lecture, 2019)
11. It always seems impossible until it's done. (Nelson Mandela)