

# Tissue distribution and function of arginase I : an experimental study

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## Propositions belonging to the PhD thesis of Selvakumari Sankaranarayanan

1. Citrulline supplementation appears more effective than arginine supplementation in increasing intracellular arginine concentration of argininosuccinate synthesizing cells.  
(Wijnands et al, PLoS ONE 2012; 7(5): e37439)
2. Cells in the small intestine experience difficulty in importing extracellular arginine.  
(Wijnands et al, PLoS ONE 2012; 7(5): e37439)
3. Extrahepatic arginase1 appears to double plasma arginine turnover and to suppress tissue NO synthesis.  
(Wijnands et al, PLoS ONE 2014; 9(1): e86135)
4. Intestinal arginine synthesis affects hepatic amino-acid metabolism.  
(Marion et al, PLoS ONE. 2013; 8(6): e67021; this thesis)
5. Intracellular arginine resynthesis from citrulline is a redundant mechanism to safeguard the capacity for NO production in the endothelium.  
(Chennupati et al, PLoS ONE 2014; 9(7): e102264.)
6. Intracellular arginase1 in macrophages activity does not appear to affect bronchial smooth-muscle relaxation in the lung.  
(Cloots et al, Am J Physiol Lung Cell Mol Physiol 305: L364–L376, 2013; this thesis)
7. Arginase1 expression in M2 macrophages suppresses tissue inflammation by inhibiting lymphocyte proliferation via depletion of extracellular arginine.  
(Chapter 1; this thesis)
8. Natural weaning of human neonates occurs between 2 and 3 years of age.  
(Koehler et al, BMC Developmental Biology 2008, 8:107; this thesis)
9. Induction of the “Integrated Cell Stress Response” is a good parameter to determine whether an amino acid is essential.  
(Marion et al, J Biol Chem 2011; 286(11): 8866-8874; this thesis)
10. The valorization of science (described in this thesis) lies in publication.
11. Creation of a conditional knock-out mouse is a breath-taking process.