Theme or question: What are the current treatments targeting eNOS function?

Example of a current treatment: L-arginine

Reference: Schulman et al (2006) L-Arginine therapy in acute myocardial infarction. JAMA

- **Aim / Purpose** - Study investigated whether addition of L-arginine reduces vascular stiffness over 6-months in patients after myocardial infarction.
- **Method** - randomised controlled trial, double blind, n=153
- **Findings**
  - (1) No improvement in vascular stiffness and (2) possibly increased mortality.
- **Meaning**
  - (1) Lack of dose response, L-arginine levels normal to start with → supplementation may only be useful in those with deficiency.
  - (2) L-arginine possibly harmful due to increase ROS or increased iNOS expressions

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Reference: Wilson et al (2007) L-arginine supplementation in peripheral arterial disease, Circulation 116:188-195

- **Aim / Purpose -** Looked at PAD patients and determined whether supplementation with L-arg enhanced vascular reactivity and functional capacity.
- **Method** - randomised, placebo controlled, n =133, oral L-arg (3 g/d) for 6 months
- **Findings**
  - Vascular reactivity not improved with long term L-arg supplementation.
  - L-arg less effective than placebo - endothelial function and exercise.
- **Meaning**
  - Long term admin. L-arg → tolerance? Sim. to prolonged admin of NO donors
  - Short term - useful, but long term possibly harmful
    - Biology → ADMA?