

Your reference	Our reference	date
		17-07-2009
Contact person	e-mail	tel. and fax
	patrick.segers@UGent.be	T +32 9 332 3466
		F +32 9 332 4159

Concerns:

PhD Jitka Seidlerova Kucerova – Report

"Interactive influences of environmental and genetic factors on the properties of large arteries in relation to sodium handling"

General comments

This PhD thesis is of a very high quality. The text is very well written and has a clear structure. Data have been analyzed in depth with, as far as I can judge, most appropriate statistical approach. Discussions are to-the-point and conclusions are clear with attention for potential limitations. Most chapters have been published in high-ranked peer-reviewed journals in the domain of Hypertension research. I only have a few comments mainly related to the introduction chapter. The candidate can be given unconditional permission for the public defense.

Major comments

- (i) Why did you not (also) use the carotid tonometry recordings to assess central AIx
- (ii) How did you calibrate the radial, carotid and femoral tonometer waveforms to assess local PP ? This should be added to the intro section.

Minor comments

- Page 3: I would suggest to retitile section 1.1.1 as Pulse Wave Velocity is not really discussed in this section.
- Page 4-5: a decrease in distensibility/compliance does not automatically lead to an increase in systolic blood pressure. It is only through a concomittant increase in resistance that systolic blood pressure rises (see eg. Elzinga and Westerhof, Circ Res 1973; Segers et al., Hypertension 2000)
- 1.1.2, line 3: replace "exerted" by "induced"
- Top of page 5 "distensibility is a determinant of the pulsatile stress on the vessel wall": I would rephrase this section. The distension of the vessel is a kinematic property, rather than a mechanical

