**On: Heusser P, Berger S, Stutz M,
Hüsler A, Haerberli A, Wolf U:
Efficacy of homeopathically potentized
antimony on blood coagulation.
Forsch Komplementmed 2009;16:14–18.**

The study by Heusser et al. is interesting but also somewhat puzzling. These authors tested whether homeopathic antimony 6x has a pro-coagulatory effect on 30 healthy volunteers after i.v. administration. They found significant changes on one of several variables tested. However, the clotting time shows no significant changes in the group of 30 volunteers. The authors, nevertheless, report significant changes in the subgroup of 15 men without pointing out that this presumably was a subgroup analysis and as such not a test of their 'main hypothesis'. The reader has to wait until the discussion section for some clarity on this point.

The authors believe to have established that a homeopathically potentized medicine has biological effects. Yet the i.v. verum and the control solutions may have differed substantially. The control was a 0.9% NaCl solution. We are not told what the verum solution was but, as far as I know, homeopathic remedies are not potentized in NaCl. If this is so, the highly sensitive test system used might have reacted to this difference rather than to any homeopathic stimulus as the authors seem to think.

In my view, any attempt of proof principle of homeopathy should be done such that only one interpretation of the results is likely and the findings should be discussed openly in all its ramifications. The study by Heusser et al. fails on several accounts.

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Authors' Reply

As stated in the paper [p 15], the primary analysis for testing the main hypothesis 'antimony 6x has a pro-coagulatory effect in the sense of the previous in vitro study, i.e. enhances MCF and possibly shortens CT' was carried out for all subjects as well as for genders separately, because a gender difference could not be excluded a priori. Particularly from a clinical point of view it is crucial and obvious to include gender as a potential factor affecting the effect of pro-coagulatory drugs. Therefore, from the beginning 15 subjects of each gender were randomized and an analysis including gender was planned, although this was not mentioned in the main hypothesis. The detection of a gender difference in one of the variables was not the result of 'subgroup analysis' to find potential significances as assumed by Ernst, but based on obvious clinical rationale.

The placebo was produced in the same way as the verum, only that antimony was substituted with lactose. Since in the potentization process antimony and placebo were ground with lactose up to 4x before producing liquid potencies in 0.9% NaCl solution, both verum and placebo contained lactose in addition to the 0.9% NaCl solution. Indeed, the respective information (only 0.9% NaCl solution) in the paper is incorrect and we apologize for the confusion this has caused. However, since verum and placebo differed only in the content of antimony, the pro-coagulatory effect reported can clearly be ascribed to antimony.

Last but not least we would like to point out that we did neither attempt nor indicated in our study a proof of principle of homeopathy but to investigate possible effects of potentized antimony on blood coagulation.

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