Reviewer's report

Title: Effect on the tensile strength of human acellular dermis (Epiflex(R)) of in-vitro incubation simulating an open abdomen setting

Version: 2 Date: 13 September 2013

Reviewer: Cornelia D Richters

Reviewer's report:

Minor essential revisions:

1. Another limitation of the study is that Epiflex is not compared with other human acellular dermis products, such as allodermis. For the potential user this would make the results more valuable.

2. In addition, the authors should pay attention in the discussion to what is the mechanism causing the lower mechanical strength, enzymes, lower pH? Also the authors may describe what is present in the upper GI secretion. I was somehow surprised that Ringers only also caused lower strength within 3 weeks.

3. In the histology sections, could there be also effects on elastin fibres next to the collagen? And are bacteria attached to fibres present?

Discretionary Revisions

1. Abstract and Introduction. It would be more clear if the abbreviation GI was explained in the text also (like for human acellular dermis, hAD).

2. Introduction. page 2. It is stated that Epiflex is approved for use as a medicinal product in Europe. Why then the phase I and III study that are mentioned in the discussion? Or is Epiflex only approved for limited indications? Please clarify. Probably human acellular dermis products are only in Germany regulated as medicinal products, not in other member states?

3. Introduction page 2

The method that is used to remove the cells from the human dermis can also influence the mechanical strength, please add this to the factors described.

4. Method page 4

How long were the samples submerged in Ringer's before testing, 10 min?

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests