Reviewer’s report

Title: Short-term effects of amelogenin gene splice products A+4 and A-4 implanted in the exposed rat molar pulp

Version: 1 Date: 7 December 2007

Reviewer: Beate Lüttenberg

Reviewer’s report:

General
The paper deals with an analysis of the influence of two amelogenin splice products (A+4/A-4) on relevant cells in the dental pulp. Soaked agarose beads with A+4 and A-4 and unsoaked beads as control were implanted into the pulp after preparation of cavities in 90 maxillary first molars of 45 Sprague-Dawley rats. Cells were characterized by detecting four different markers (PCNA for proliferation, RP59 as a marker for osteoblast/odontoblast differentiation, osteopontin as a member of the extracellular matrix/as a inflammatory marker and Dentosialprotein as a more or less specific marker for odontoblastic cells) 1,3 and 7 days after surgery.

The presented results suggest evidence for some functional differences between A+4 and A-4 concerning their ability to promote proliferation and/or differentiation of dental pulp cells.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

- Plate 4 in the figure legends: the Implantation of A- has to be mentioned
- It remains unclear how Jegat and coworkers got the data in figure 5. What does 0.5, 1.5 and 2 mean?

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.