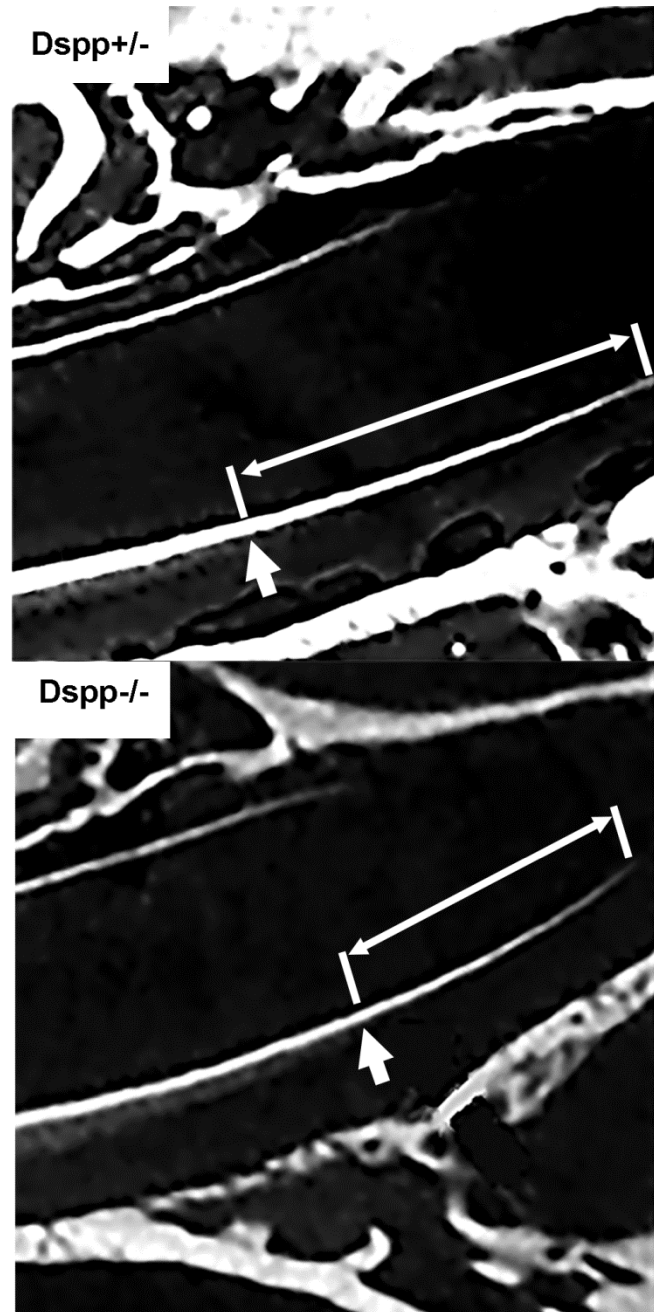
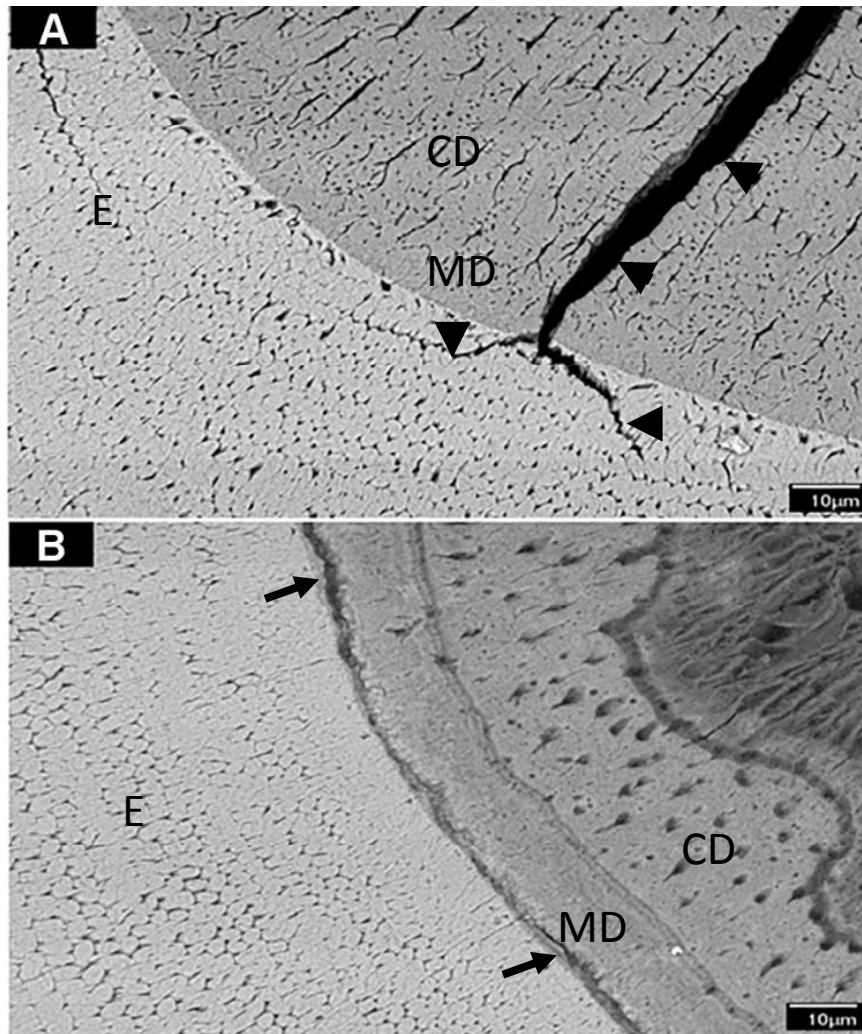


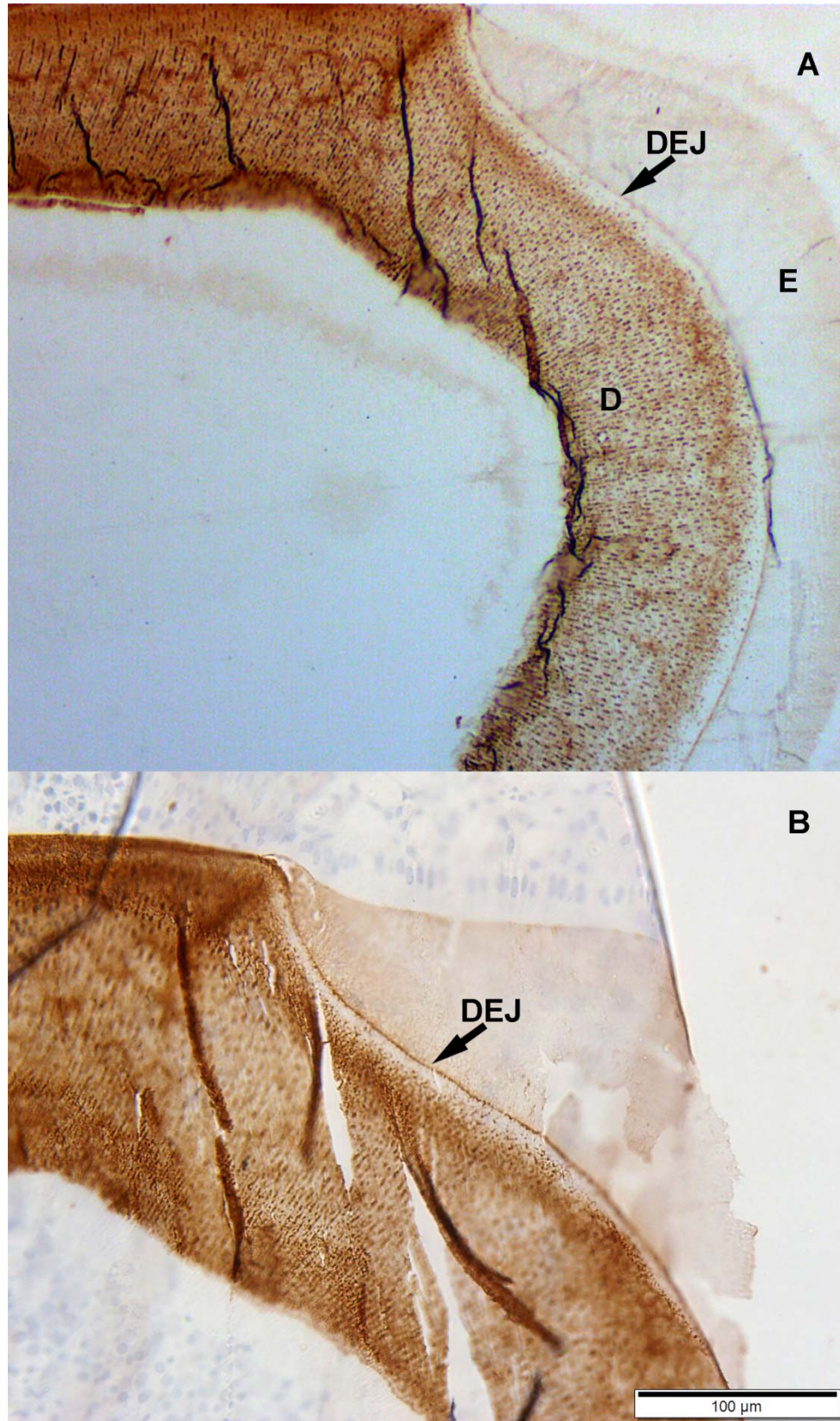
Supplementary Figure 1. Hi resolution microCT reconstruction of the cervical loop regions of incisors from DSPP^{+/-} and DSPP^{-/-} mice. Double arrows outline the mineralized dentin layer of the labial surface of the incisors. The arrows mark the beginning of enamel mineralization, manifested by increase in the density of the area adjacent to the outer surface of dentin (DEJ). Enamel at this stage is 2 to 3 times less dense than dentin.



Supplementary Figure 2. BS SEM of polished sections of *Dspp* +/- (A) and *Dspp* -/- (B) incisors at the DEJ, arrowheads outline cracks. Note that the DEJ is significantly compromised in the KO with dentin delaminating from enamel (arrows). CD- circumpulpal dentin, MD- mantle dentin, E-enamel, arrow-DEJ.



Supplementary Figure 3: Immunohistochemistry of DSP in rat incisor during secretory stage of enamel formation. A) Low magnification micrograph. B) High magnification micrograph. D- dentin, E, enamel, DEJ marked by arrow



Supplementary Figure 4: Expression of DSPP mRNA in incisors and molars at different developmental stages. **a**-ameloblasts; **o**-odontoblasts

