

CHICK TOOTH' REVISITED

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Teeth have been missing in Aves for more than 80 million years. However, it is believed that the avian oral epithelium retains the molecular signaling required to induce odontogenesis. In this study, we produced teeth as previous report with chick oral epithelia combined with mesenchyme from mouse molar teeth. The size of these recombinant teeth is smaller than that of the mouse molars. The single cusp pattern of these teeth, which may be determined by the epithelial factors, is similar to that of the avian tooth in late Jurassic. Perfect structures of both the ameloblasts and enamel were found in these teeth with showing similar histological characteristics as those of mice. Moreover, to investigate the development of enamel, both the level and distribution of mouse *Amelogenin* (*mAm*) were examined in the developing recombinants by RT-qPCR and *in situ* hybridization. To date, our findings consistent with the previous report that odontogenesis is initially directed by species-specific mesenchymal signals interplaying with common epithelial signals. Furthermore, chick enamel protein is expected to elucidate.