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## 演題: 「The link between oral carcinogenesis and maxillofacial development」

Head and neck squamous cell carcinoma (HNSCC) develops from the mucosal epithelium of the oral and maxillofacial regions. Comprehensive genetic mutation analysis of HNSCC cases has reported that the frequency of gene mutations is highest in *TP53*, followed by *FAT1* and *CDKN2A*. To clarify the involvement of *TP53*, *FAT1* and *CDKN2A* gene mutations in oral carcinogenesis, we generated knock-in mice that mimic the genetic mutations frequently observed in human HNSCC. Among them, the Fat1 knock-in mouse was embryonic lethal, so detailed phenotype analysis of the fetal mice revealed that mandibular and tongue hypoplasia occurred due to morphological abnormalities of the first pharyngeal arch. In this seminar, I would like to introduce maxillofacial hypoplasia caused by genetic abnormalities in Fat1 and discuss the link between oral carcinogenesis and maxillofacial development.

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