Replacing missing teeth with approaches other than dental prosthetics has become a focus in dental research over the decade. The non-prosthetic approaches proposed included scaffold-based tooth regeneration, cell pellet engineering, gene-manipulated tooth regeneration and inductive formation of the third dentition. Although supernumerary teeth have been considered as a dental disease or a sign of genetic disorders, recent research in formation of supernumerary teeth implied a pathway to tooth regeneration. Using murine models, several genes relevant to the mechanisms were identified. The presenter will outline research findings of his team and other colleagues and suggest a potential direction of future molecularly targeted therapy to replace missing teeth.

Biography

Boyen Huang is the Head of School at Charles Sturt University (CSU) School of Dentistry and Health Sciences. Before joining CSU, he held teaching and research posts at the University of Western Australia (Australia), Kyoto University (Japan) and James Cook University (Australia). He has current research collaboration with institutions in Australia, Japan, Taiwan and Thailand. He was successively involved in sectional, divisional and regional executive roles of the International Association for Dental Research (IADR). In addition, he is a Co-Editor-in-Chief for Oral Health and Dental Management, and a journal Editorial Board Member for two other dental journals. He is also a peer reviewer for more than a dozen scientific journals related to medicine, dentistry and public health, and an assessor/panel member of grant proposals to the National Health and Medical Research Council (NHMRC, Australia). Of further note, he has worked in private practice as a general and paediatric dentist with a full dentist licence in Australia and Taiwan.

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