**Self-Assembling Peptides in Oral and Maxillofacial surgery**

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| **Abstract**  Long-term studies have shown that there is an important connection between ‘biomaterials’ and biological materials [1]. Recently, studies have been carried out on different materials that mimic the production mechanisms in nature [2]. As a result of research, self-assembled artificial systems (e.g Peptides,nucleic acids) have been developed. The self-assembly mechanism is a bottom-up system, producing stable biological constructions. Among the self-assembly molecules, peptides are the most easily modified and functionalized structures. Application areas of self-assembly peptides include drug release and tissue engineering [2]. Especially tissue engineering is a very important and complex issue in Oral and Maxillofacial surgery [3]. In the literature review, it has been determined that self-assembly peptides are used especially in the field of hard tissue regeneration together with stem cells [4]. In this context, it has also started to be used as dental implant coatings. Self-assembly peptides with antimicrobial properties have been investigated in cases such as osteomyelitis. Another usage area of peptides in Oral and Maxillofacial Surgery is nerve injuries [5]. Peptides are being investigated not only in oral and maxillofacial surgery but also in other areas of dentistry. Considering all these studies, peptides are thought to be promising and clinically useful in dentistry. |
| Keywords: Self-Assembling Peptides,Tissue Engineering, Dental implant, Maxillofacial defects, bone graft |

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