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## Biomaterials and Designer Functional Applications in Oral Cavity

\$210.00

**Editors:** Victoria Tamara Perchyonok (Biomedical Engineering, School of Engineering, RMIT University, Bundoora Australia; VTPCHEM PTY LTD, Glenhuntly, Victoria, Australia)

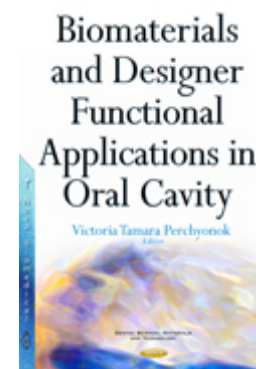
### Book Description:

Dental biomaterials and natural products represent two growing research fields, revealing that plant-derived compounds may play a role not only as nutraceuticals in affecting oral health but also in improving physicochemical properties of biomaterials used in dentistry.

Recently, the role of free radicals in healthcare has attracted tremendous interest in the field of medicine, dentistry and molecular biology. Free radicals can be either harmful or helpful to the human body. When there is an imbalance between input and output of free radicals, a condition called "oxidative stress" develops. To counteract oxidative stress, the body has protective antioxidant mechanisms, which aid in lowering the incidence of various human morbidities and mortalities. The implication of oxidative stress in the etiology of many chronic and degenerative diseases suggests that antioxidant therapy represents a promising avenue for treatment. Thus, various forms of antioxidants have been introduced as an approach to fight dental diseases and improve general gingival health.

The implication of oxidative stress in the etiology of chronic and degenerative diseases as well as the body's protective antioxidant mechanisms and the role dietary antioxidants play, suggests that antioxidant therapy could act as a beneficial treatment.

The aim of this book is to present all available data concerning and linking free radicals, antioxidants and bio-active scaffolds in the utilization of vitamins, proteins and extracts rich in bio-active phytochemicals as an avenue for creating innovative dental biomaterials. These materials are capable of promoting genuine tissue/cell interface integration and gaining insight into molecular origin of the mechanism to combat oral diseases *in vitro* and eventually *in vivo*. (Imprint: Nova Biomedical)



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