METHODS FOR TREATING OR PREVENTING INFLAMMATION AND PERIODONTITIS

SUMMARY (1024-CHARACTER LIMIT)

Natural products have long been considered a source of biologically active molecules against health disorders, including bone-loss related diseases. Cinnamolyoxy-mammeisin (CNM), can be isolated from Brazilian geopropolis and demonstrates anti-inflammatory activity. Researchers at the National Cancer Institute (NCI), in collaboration with researchers at the Piracicaba Dental School, University of Campinas, Brazil, have shown CNM also demonstrates inhibition of oral bone loss. This invention is available for licensing and/or co-development opportunities.

NIH REFERENCE NUMBER

E-015-2018

PRODUCT TYPE

- Therapeutics

KEYWORDS

- Periodontitis, Geopropolis, Cinnamolyoxy-mammeisin, CNM, Osteoclastogeneis, Bone Loss, Beutler

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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STATUS

Active

DESCRIPTION OF TECHNOLOGY

Bone-loss-related diseases, such as periodontitis, are characterized by an imbalance between the formation and activity of osteoblasts and osteoclasts, leading to bone loss. There are several signaling pathways that participate in the osteoclastogenesis process. Finding inhibitors of these pathways and other osteoclastogenesis-related pathways may have an effect on bone-loss diseases.

Researchers at the National Cancer Institute (NCI), in collaboration with researchers at the University of Campinas, Brazil, have identified cinnamolyoxy-mammeisin (CNM), a 4-phenylcoumarin, which can be

isolated from Brazilian geopropolis, as active against osteoclastogeneis pathways. CNM demonstrates anti-inflammatory activity and inhibition of oral bone loss in a mouse model of periodontitis.

POTENTIAL COMMERCIAL APPLICATIONS

- Alternative to commercial antiresorptive agents

COMPETITIVE ADVANTAGES

- Lack of cytotoxicity

INVENTOR(S)

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DEVELOPMENT STAGE

- Pre-clinical (in vivo)

PUBLICATIONS

Da Cunha M, et al. Effects of Cinnamoyloxy-mammeisin from Geopropolis on Osteoclast Differentiation and Porphyromonas gingivalis-Induced Periodontitis. [PMID 28570825]

Franchin M, et al. Cinnamoyloxy-mammeisin Isolated from Geopropolis Attenuates Inflammatory Process by Inhibiting Cytokine Production: Involvement of MAPK, AP-1 and NF-kB. [PMID 27367493]

PATENT STATUS

- **U.S. Provisional:** U.S. Provisional Patent Application Number 62/678,774, Filed 31 May 2018

THERAPEUTIC AREA

- Immune System and Inflammation