

Commentary

Commentary: Natural Plant Phytocannabinoids Offer New Tools for Physicians and Dentists to Fight Disease

Knox J^{1,2,3*}¹Founder and CEO, Doctors Knox, Inc., USA²Founder, Abena IHR, USA³President, DK Technologies, Inc, USA

Commentary

Dental disease affects approximately 3.5 billion people worldwide, constituting the most prevalent infectious disease globally [1]. Despite technological advances in dentistry, traditional approaches to managing oral infections and inflammation rely heavily on antiseptics and antibiotics that disrupt the natural oral microbiome and potentially contribute to antimicrobial resistance [2,3].

In the groundbreaking review in this issue, “BioIntelligent Dentistry - Modeling the Biological Mechanisms of Phytocannabinoids in Dental Health and Disease”, Cooper and Magyar [4] explore how phytocannabinoids derived from hemp offer a promising alternative through their multi-faceted biological mechanisms. Unlike conventional antiseptics that indiscriminately kill oral bacteria, phytocannabinoids selectively target pathogens while preserving beneficial microbiota. They also exhibit potent anti-inflammatory properties by modulating cytokine production [5,6] and promote tissue healing by stimulating fibroblast activity and collagen formation [7].

The authors highlight the evolutionary connection between plant and human defense systems, explaining why phytocannabinoids effectively interact with the human endocannabinoid system to strengthen oral mucosal barriers. This interaction not only addresses local oral health issues but also prevents the transmission of oral pathogens to systemic circulation, potentially reducing the risk of related cardiovascular, respiratory, and other systemic diseases [8,9].

Their innovative DenticDS™ PAIR rinse represents a shift from chemical antiseptics toward biologically-aligned phytocannabinoid formulations that work with the body's natural mechanisms rather than against them. This approach promises to transform dental care by addressing the limitations of current treatments and offering a more balanced solution to oral health maintenance.

Information provided in this Special Issue of Clinics in Medicine is a clarion call to physicians and dentists alike. With our improved understanding of the interrelationship particularly of the oral and gut microbiomes, provision of continuous health care [10] is a collaborative effort incumbent upon both professions to participate.

As a member of a family of practicing Cannabinoid physicians, we understand and fully support this vision.

References

1. World Health Organization. Oral Health. 2025.
2. Heta S, Robo I. The Side Effects of the Most Commonly Used Group of Antibiotics in Periodontal Treatments. *Med Sci*. 2018;6(1):6.
3. Arnold WA, Blum A, Branyan J, Bruton TA, Carignan CC, Cortopassi G, et al. Quaternary Ammonium Compounds: A Chemical Class of Emerging Concern. *Environ Sci Technol*. 2023;57(20):7645-65.
4. Cooper D, Magyar W. Novel Approach to Anxiety Management or BioIntelligent Dentistry? Collaborative Opportunity Medical and Dental Professionals. *Clin Med*. 2025.
5. Garzon HS, Loaiza-Oliva M, Martínez-Pabón MC, Puerta-Suárez J, Corral MAT, Bueno-Silva B, et al. Antibiofilm and Immune-Modulatory Activity of Cannabidiol and Cannabigerol in Oral Environments—In Vitro Study. *Antibiotics*. 2024,13(4):342.
6. Jirasek P, Jusku A, Frankova J, Urbankova M, Diabelko D, Ruzicka F, et al. Phytocannabinoids and gingival inflammation: Preclinical findings and a placebo-controlled double-blind randomized clinical trial with cannabidiol. *J Periodont Res*. 2024;59(3):468-79.
7. Scutt A, Williamson EM. Cannabinoids stimulate fibroblastic colony formation by bone marrow cells indirectly via CB2 receptors. *Calcif Tissue Int*. 2007;80(1):50-9.
8. Bale BF, Doneen AL, Vigerust DJ. High-risk periodontal pathogens contribute to the pathogenesis of atherosclerosis. *Postgrad Med J*. 2017;93(1098):215-20.
9. Park DY, Park JY, Lee D, Hwang I, Hye-Sung Kim. Leaky Gum: The Revisited Origin of Systemic Diseases. *Cells*. 2022;11(27):1079.
10. Magyar CW, Preston V, Goff, Y, Smith C, Cooper DL. Innovations in Dental Health: DenticDS™ PAIR Rinse Utilizes Dual Nanochemistries. 2024.

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***Correspondence:** Knox J, Founder and CEO, Doctors Knox, Inc., USA