

## A publication from UCM confirms that some mouthrinses with antiseptics could play a preventive role against the transmission of COVID-19

- The mouth is a gate of entry and exit for the virus and plays an important part in the transmission and pathogenicity associated with SARS-CoV-2; therefore, we must raise awareness of the importance of frequent, daily oral hygiene because of how quickly the disease is spread.
- The scientific publication [Is the oral cavity relevant in SARS-CoV-2 pandemic?](#) by the ETEP (Aetiology and Treatment of Periodontal and Peri-implant Diseases) research group suggests that the use of antiseptic mouthwashes with povidone-iodine or cetylpyridinium chloride (CPC) could reduce the severity of COVID-19 and the risk of transmission.

Madrid, 30<sup>th</sup> June 2020.- Investigators from the ETEP Group (Aetiology and Treatment of Periodontal and Peri-implant Diseases), Mariano Sanz, David Herrera, Jorge Serrano and Silvia Roldán - periodontists and teachers from the School of Dentistry at UCM -, have carried out a review of the scientific literature until 30<sup>th</sup> April 2020, focusing on SARS-CoV-2, COVID-19, the oral cavity and antimicrobial agents. The aim of the research was to analyse the scientific evidence available on the effect that the use of mouthwash with cetylpyridinium chloride (CPC), chlorhexidine, povidone-iodine solutions, and hydrogen peroxide, among others, can have on certain types of viruses.

The article [Is the oral cavity relevant in SARS-CoV2 pandemic?](#), published in the journal *Clinical Oral Investigations* concludes that “the use of oral antiseptic mouthwashes with povidone-iodine or cetylpyridinium chloride (CPC) could help to reduce the severity of COVID -19 and the risk of transmission by reducing the viral load in the mouth of infected individuals”.

The report shows that the mouth is one of the main routes of entry into the body, along with the nose and the eyes. And it is therein, where the SARS-CoV-2 virus (the virus that causes the COVID-19 disease) finds a high density of its specific binding receptors. Retaining the virus in the mouth facilitates its transmission from person to person, through the droplets that an infected person may emit, when speaking, coughing, exhaling, etc.

Some basic research studies show that the SARS-CoV-2 coronavirus is capable of infecting when it specifically binds to a transmembrane protein, called ACE2, present in some cells of our body. This receptor is found in most cells of the pulmonary alveoli, which is why the virus so greatly affects the respiratory system. Specifically, SARS-CoV-2 uses the salivary glands as a reservoir in asymptomatic patients, and is anchored to the tongue, gums and palate. One of the most recent studies, published in February 2020, shows that there is a dense population of these ACE2 receptors in the mouth, especially on the surface of the tongue.

Based on the above, the authors point out that **“the mouth can be considered both a gate of entry and of exit for the virus, and in itself is a high-risk site for the development of coronavirus (COVID-19) disease due to the presence of ACE2 receptors”**. Another relevant issue relates to the viral load and how it is directly associated with the severity of the disease. **The use of mouthwashes with antiseptics might help reduce this load and, consequently, diminish the severity of the disease, as well as the transmission.**

This work has been carried out within the framework of the activity performed by the **Dentaïd Extraordinary Chair in Periodontal Research** at the Universidad Complutense de Madrid.

### **About the investigators**

**Prof. Dr. Mariano Sanz:** Doctor of Medicine and Surgery from Universidad Complutense de Madrid (UCM), where he also earned a specialty degree in Stomatology. He is a Professor of Periodontology at UCM and a Professor at the Universities of Bern and Oslo. He directs the ETEP (Aetiology and Therapeutics of Periodontal and Peri-implant Diseases) Research Group of UCM. He is the author of more than 200 scientific publications and associate editor of the *Journal of Clinical Periodontology* and *Evidence-Based Dental Practice*.

**Prof. Dr. David Herrera:** European Doctor of Periodontology from Universidad Complutense de Madrid (UCM), Full Professor of Periodontology and co-director of the Master’s Program in Periodontology. Co-director of the ETEP (Aetiology and Therapeutics of Periodontal and Peri-implant Diseases) Research Group of UCM, has written more than 125 publications in international scientific journals.

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