

## PhD in Biomedical Sciences

**Title:** Predictive morphological factors for prescribing a mandibular advancement device in the therapeutic approach of obstructive sleep apnea

This project evaluates the morphological predictive factors for prescribing a mandibular advancement device in the therapeutic approach of Obstructive sleep apnea (OSA). We will carry out the project with patients who travel to CUF Tejo Hospital to solve their sleep disturbance, namely cases of obstructive sleep apnea. We designed three groups of 22 individuals each. We will only include individuals after signing the informed consent. In the 1st appointment, the principal investigator will conduct a complete anamnesis and a clinical examination, where several items will be documented: Age, gender, body mass index, mallampati index, neck, and waist circumference. The clinical interview will assess the patient's daytime sleepiness, nighttime snoring, and quality of life through the respective questionnaires: the Epworth Sleepiness Scale (ESS), the snoring severity scale (SSS), and the Sleep Apnea Quality of Life Index (SAQLI). Still in the 1st consultation, a level III Polysomnography (PSG) will be prescribed to assess the possibility of OSA and a pharyngeal computed tomography (CT) with cephalometric analysis and recording in maximum comfortable protrusion to assess the Upper Airway (UA) and the prognosis of mandibular advancement in case of UA collapse. The other group will perform Drug Induced Sleep Endoscopy and CT with registration in maximum comfortable protrusion. Then, we will make personalized and titled mandibular advancement devices. The measurements and PSG III questionnaires will be carried out after 1 and 6 months to evaluate the results.

**Keywords:** Obstrutive Sleep Apnea; Oral Appliance; DISE; Computed Tomography

**Publications (doi):**

- Extended Abstract “Assessment Of Upper Airway Collapse In Obstructive Sleep Apnea - Computed Tomography Versus Drug Induced Sleep Endoscopy - Pilot Study” at Sleep Medicine 100 (2022) S1eS307;

**Supervisors:** Prof. Doctor Cristina Manso and Prof. Doctor Cristina Caroça  
**Start Year:** 2020