“Novel Mouth Sealer to Decrease Oral Leaking and Improve Compliance with Nasal CPAP for the Treatment of Obstructive Sleep Apnea (OSA)"

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OSA is an epidemic affecting more than 25 million Americans. Untreated OSA leads to short and long-term health consequences, tragic accidents, and billions of dollars annually in increased healthcare spending. OSA can be effectively treated with CPAP (continuous positive airway pressure), however long-term compliance with treatment is suboptimal at 55-60%. Mask discomfort, including oral leaking, is a common cause of CPAP non-compliance. The innovative mouth sealer is a conceptually simple device to seal the lips closed comfortably and safely to eliminate mouth leaking with nasal CPAP. Decreasing mouth leaking will improve compliance with CPAP and decrease the economic burden of untreated OSA. This BIP grant will bring together the ideas and experience of a sleep medicine physician with the technical expertise of bioengineers to develop a prototype that is ready to be tested in clinical trials.