

**Florida International University - Honors College**  
**Advanced Research and Creativity in Honors (ARCH)**  
**Departmental Thesis**

**Doctor's Cyclo-Massage - Cycloidal Vibration Therapy**  
by  
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Body pain can be one of the most common reasons for visits to the doctor. It can be present in many body locations and be caused by different reasons, such as tension, stress, fatigue or other medical conditions. In many cases, users suffering from body pain, muscle stiffness and neuropathies have no reliable solution in their everyday lives to alleviate their symptoms.

The project will investigate Doctor's Cyclo-Massage in order to detect and analyze the current failures in the field that are compromising reliability and functionality of the device, to perform a redesign that will mitigate the mechanical and electrical problems identified, as well as making it to comply with the regulations to be registered as a Class I Medical Device.

Valuable research will be performed to help eliminate the problems and improve the functionality of the device and the knowledge of electrical, mechanical and biomedical disciplines are the major methods to be used in this project.

The device being used by doctors and Professional Athletes is innovative for many reasons, being the most important the use of Cycloidal Vibration Technology, a modality which is faster at relaxing muscles by virtue of the extra dimensions of action, has deeper penetration and promotes wound healing with a noninvasive approach. The goal of the device is that through its repeated use the user can feel how his aches disappear, using multi-speed and adjustment dial and a personal pillow attachment for multi-use application while maintaining a portable size.

The Dr. Cyclo-Massage uses small amplitude, low-frequency vibrations that scatter through the skin into the body tissue to help alleviate body pains, stiffness in the muscles, neuropathies, among other sufferings. This device will represent an impact the massage therapy field and will be a reliable source of relief for many people.