A person with long hair wearing a black jacket

Description automatically generated**Presentation title:** The Effects of Essential Oils on Growth Inhibition of Various *Candida* Clinical Pathogens

**Corresponding Author name:** Rucha Deshpande

**Affiliation:** Lake Erie College of Osteopathic Medicine, Erie, PA, USA

**Ph. No:** 12096135962

**Email ID’s:** rdeshpande82535@med.lecom.edu

**WhatsApp No:** 12096135962

**Any alternative number:  
  
Twitter:**

**LinkedIn:   
  
Facebook:**

**Other Authors if any:** Nancy Carty, Ph.D., Noelle Thielman, Ph.D., Robert Waters, Ph.D., Christopher Keller, Ph.D., FNAOME

**Presentation type:** Poster presentation

**Abstract (250-300 words):**

*Candida albicans*, *Candida auris*, and *Candida glabrata* are multidrug-resistant fungal pathogens that pose a significant threat to public health, especially in healthcare settings. Traditional antifungal agents are often ineffective against some *Candida spp*, highlighting the need for alternative treatments. Essential oils have shown promising antimicrobial properties and are being recognized for their potential use in combating various infections. This study aims to investigate the effect of essential oils on the growth of *C. albicans, C. auris,* and *C. glabrata*, with a focus on identifying potential antifungal agents for future therapeutic applications. Using the disc diffusion method, all three species of *Candida* were grown on yeast-malt agar and incubated overnight at 27°C. All three species of *Candida* were tested with 38 different essential oils. Each *Candida* isolate was exposed to the same concentration of essential oil. The zone of inhibition (ZOI) was measured at 24, 48, and 72 hours for each individual essential oil and compared to other oils to determine the most effective oils. Out of 38 essential oils, 33 consistently inhibited growth of *Candida* *spp*. Lemongrass essential oil inhibited all growth (95 mm ZOI) at 24, 48, and 72 hours of *C. albicans* and *C. auris*, however for *C. glabrata* the mean inhibition by lemongrass essential oil was 39.26 mm. Essential oils, especially lemongrass, were noted to have a significant impact on the growth of *Candida spp,* with *C. albicans* and *C. auris* being most affected*.* Further investigation is warranted into the effects of combining essential oils, and whether those combinations would be synergistic or antagonistic against *Candida spp*. Overall, essential oils could serve as a cost-effective and readily available alternative for managing *Candida* infections.

**Biography (150-200 words):**

Rucha Deshpande is a medical student at Lake Erie College of Osteopathic Medicine in Erie, PA, USA.