An Improved Formula to Isolate Bacteria

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*A New Anti-swarming Agar*

**Invention**
Researchers at the University of Central Florida (UCF) have developed a low-cost culturing medium that significantly reduces the swarming of gram negative bacteria such as *Alcaligenes faecalis*, *Proteus mirabilis* and *Proteus vulgaris* to allow clear and easy isolation of bacteria. UCF’s agar formulation is non-selective, non-differential and supports the growth of most non-fastidious gram positive and gram negative bacteria.

**Background**
Bacteria such as *Proteus mirabilis* or *Proteus vulgaris* exhibit a rapid form of growth and motility, known as swarming, when cultured on nutrient agar plates. This rapid growth typically colonizes a large portion of the plate within 24 hours and is a common problem in microbiology laboratories. The swarming by certain bacteria can contaminate other strains that are present in mixed cultures, making it difficult to isolate and identify individual colonies.

**Applications**
- Pre-mixed media
- Pre-prepared agar plates
- Analysis of bacterial samples in academic and clinical microbiology laboratories
- Quality control in food and water testing

**Inventor**
Ishrath Abdulsamad

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**Traditional Tryptic Soy Agar**

After 24 hours of central inoculation of *Proteus mirabilis*

**UCF’s Agar**

After 24 hours of streak inoculation of *Proteus mirabilis* (blue arrows) and *Staphylococcus aureus* (red arrows)