Isolation and Determination of the Major Principle or Causative Agent behind the 2016 Published Breakthrough Discovery of Dr. M.S. Reddy’s “Multiple Mixed Strain Probiotic Therapy”, in Successfully Treating the Lethal Hospital Acquired Infections Due to Clostridium difficile (C. diff) and Methicillin Resistant Staphylococcus aureus (MRSA)

Dr. M.S. Reddy¹* and Dr. D.R.K Reddy²

¹President, International Media and Cultures, Inc., 1280 S. Parker Rd., Denver, Colorado 80231, USA, and²Managing Director, ADFAC Labs, Pvt. Ltd., Plot No. 133A, Road No. 15, Jubilee Hills, Hyderabad, Telangana, India.

ABSTRACT
A multiple mixed strain Probiotic culture was compounded using several naturally antibiotic resistant beneficial microorganisms belonging to different genera and species, along with their bacteriocins and growth end products or metabolites. Prior to mixing several individually grown single strains of Probiotics, compatibility studies were conducted to eliminate the strain dominance in the mixed cultures using direct differential plating techniques and strain specific bacteriophages, using the procedures outlined in our earlier publication. The multiple mixed strain Probiotics thus prepared were studied to see whether Probiotic bacteria by themselves or their bacteriocins and other end products of growth (without the live Probiotics) or the combination of live Probiotics and their bacteriocins and other growth end products, were responsible to inhibit the growth and proliferation of the lethal hospital acquired infections i.e., Clostridium difficile (C. diff) and Methicillin Resistant Staphylococcus aureus (MRSA). In addition, several procedures of preparing the functional mixed strain Probiotics, using liquid nitrogen freezing and freeze drying (lyophilization) were evaluated, to come up with the best procedure suitable to maximize their subsequent inhibitory effect on C. diff and MRSA, both under the laboratory conditions and in the practical clinical hospital conditions. Community based clinical trials were conducted to check the effect of multiple mixed strain Probiotics with and without their bacteriocins and their other growth end products, to cure the lethal C. diff infection under practical hospital conditions. The results revealed and confirmed that our 2016 novel discovery is still the best way to prepare and administer the multiple mixed strain Probiotics to treat the lethal hospital acquired infections. Also this study reconfirmed that the liquid nitrogen freezing is far superior to freeze drying or lyophilization to preserve the maximum efficiency of multiple mixed strain Probiotics. In conclusion, it proved that even the concentrated high bacterial cell number multiple mixed strain Probiotics (without their bacteriocins and other growth metabolites) are not as effective compared to the multiple mixed strain Probiotics frozen using liquid nitrogen, along with their bacteriocins and growth metabolites, to cure the lethal C. diff infection under practical clinical hospital conditions.

KEYWORDS: Probiotics; bacteriocins; MRSA; C. diff; multiple mixed strain Probiotic therapy; Multiple mixed strain Probiotics; Nosocomial infections; Hospital acquired infections; Natural antibiotic resistant Probiotics; Propionibacterium; lactic acid producing Probiotic bacteria.

Introduction
Over 6,000,000 people get affected annually with the hospital acquired infections due to “Clostridium difficile” and Methicillin resistant Staphylococcus aureus (MRSA) – the superbug. This statistic is according to the cases recorded and notified. In reality, it could be over 12,000,000 people, since some of the countries and hospitals do not keep the accurate records or reporting. On the record, a minimum of over 100,000 of those people who contact these secondary nosocomial infections die annually. Off the record, it can be over