

BRINGING TO LIFE THE GERM THEORY TO GERM THERAPY: AN EDUCATIONAL DECISION TREE (Evidence Based) EMPLOYING THERAPEUTIC BACTERIA (PROBIOTICS): Phase I.

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BACKGROUND and AIMS

WHO reported 30% of global population consumes Pre/Probiotics (P/P) worth \$87.5 Billion/yr. Yet, considerable misunderstanding persists fostered by a plethora of commercial products meeting WHO standards. In 2011, addressing the problem, we established the Center for Probiotic Studies, “Partners - 4-Life”, encompassing 3 educational arms: International Surveys (IS), Bac-2-Health (B-2-H) Library , and Translational Research(TR). Here, we focus on Phase I of B-2-H development, creating a database with graded, searchable library for 1) General Public, 2) Health Care Providers (HCP) and 3) Research/Investigators, populated by current literature for evidence based decision support.

MATERIALS and METHODS

Results of 1,521-15 question Probiotic Surveys from 2012-2014 and literature review were used to design “need to know” 5 searchable categories. Drop Box was used for archiving , tracking and retrieving 310 manuscripts from 2000- 2014 using Pub Med., EBSCO Host and CINAHL. Probiotics, microbes and effects on 50 clinical conditions were coded for future Phase II data base searching, while all manuscripts were graded to 8 Study Types and Strength of Evidence (A-F) using National Standard criteria, emphasizing statistical significance. A multi-tiered informational cascade was designed, recognizing the need for searches by P/P products, microbes, organ systems/conditions, Strength of Evidence/Study Type linked to complete text separated by need to know .

RESULTS

IS confirmed limited positive knowledge (31%) of use, benefits and limitations of probiotics, helping Phase I B2H database organization. There was a reservoir of reviewed literature (310 manuscripts) , 83% international, that described the use , mechanism of action , and clinical application with 50 conditions of P/P including multiple RCTs for GIT diseases. 21 P/P products were highlighted with 22 microbial species, ranging from 1-11/product, representing 3 bacteria and one fungal genera. Of the 11 medical/dental target organ systems, GIT (110), Oral (75)and Female Reproductive (20) had the most intervention articles . Study Types emphasized Cross-Sectional or *in vitro* and Strength of Evidence recognized B(Good) or D(Fair).

CONCLUSION

Recent advances in metagenomics have fostered concepts of “restorative microbiology “ and “therapeutic bacteria” recognizing our hypothesis of “Dual Citizenship” in humans, prokaryotic and eucaryotic cells. Here, we describe Phase I construction of an evidence based decision support library catalogued by General public, HCP , and or Researchers/Investigators organized to facilitate Phase II , a web based interactive App for probiotic/ restorative microbe education.