

6<sup>th</sup> Annual Conference on

## MICROBIOLOGY

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Annual Conference on

## MICROBES AND BENEFICIAL MICROBES

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**Computer generated decision support for probiotic guideline addressing artificial intelligence: An educational strategy/resource****J G Thomas**

International Educator and Global Microbiologist, USA

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, we established Global Microbiology Consulting, including Bac-2-Health (B-2-H) encompassing three educational arms: international surveys (IS), a B-2-H probiotic library (Probiotic Solutions), and translational research (TR). Here, we describe Phase I of B-2-H development, creating a database with graded, searchable 7-tiered library for 1) general public, 2) health care providers (HCP), populated by current literature for evidence based decision support. IS confirmed limited positive knowledge (31%) of use, benefits and limitations of probiotics, helping Phase I B-2-H database organization/stratification integrating reviewed literature (310 manuscripts), 83% international, describing the use, mechanism of action, and clinical application with 50 conditions organized into 11 diseases. Phase II, Partners-4-Life, expands the use of probiotics in chronic wounds and aging, a recent disease as postulated by NIH, based on an additional review of 34 and 35 manuscripts, respectively; this has formed an interesting intersect with links to Artificial Intelligence (AI) as an ultimate strategy for our web based, interactive App. Presently, advances in metagenomics have further fostered our concepts of restorative microbiology recognizing our hypothesis of dual citizenship, catalyzed by the emerging Hologenomic Theory of co-evolution which fostered our new Center for Hologenomic Clinical Studies in 2017.

**Biography**

John G Thomas is recognized as an "International Educator and Global Microbiologist"; being lectured in more than 43 countries while a Clinical Microbiologist in Pathology, Dentistry and Medicine for 51 years. His research emphasizes bio-films and medical devices including endotrachs and the connection between oral diseases, VAP and wound infections ("Intellectual Design") with the recent integration of micro 3-D- bio printing using bio-plastics and unique prebiotics (Therapeutic Bacteria) for intervention. He has over 50 publications, multiple book chapters, significant grant support, pending patents and over 100 posters/abstracts at national and international meetings. His sabbatical at Cardiff University, Wales, UK (2007) was a driving influence. He has been a member of the ADA Scientific Advisory Committee for the last 8 years. As Faculty at 6 Universities during his career, he has received Alumni and University awards for research and International Student Mentoring; retiring from WVU in 2013 after 23 years as Professor Emeritus, he presently is expanding his research/teaching utilizing the advanced resources of the Allegheny Health Network in Pittsburgh, PA, Carnegie-Mellon University and Mass. Gen. Hospital, Boston, MA.

jgthomas@hsc.wvu.edu

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