



ISAPP

INTERNATIONAL SCIENTIFIC
ASSOCIATION FOR PROBIOTICS
AND PREBIOTICS

WWW.ISAPPSCIENCE.ORG



STEWARDSHIP

Individually and collectively, we endorse the proper use of the terms 'Probiotics' and 'Prebiotics'

ADVANCING THE SCIENCE

We encourage research by facilitating interactions among scientists in the field, helping regulators understand the science, and publishing evidence-based summaries that highlight research gaps and promote needed research



EDUCATION

We endeavor to disseminate scientifically accurate information on probiotic, prebiotic and microbiota science to enhance understanding of the science among researchers, students, and regulators

2018 ANNUAL REPORT



January 1-December 31, 2018

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Singapore – Meeting Site for 2018 ISAPP Annual Meeting

INTRODUCTION

ISAPP is an international, non-profit collaboration of scientists, which exists to advance scientific excellence in probiotics and prebiotics. ISAPP is the leading scientific organization dedicated specifically to probiotics and prebiotics, bringing together scientists from all pertinent disciplines, including microbiology, immunology, biochemistry, nutrition, molecular biology, food science and medicine.

As a scientific society, ISAPP activities are focused on science, not the promotion of any commercial products. The activities of ISAPP are dictated by an academic Board of 10 directors, and facilitated by the ISAPP's Executive Science Officer, Mary Ellen Sanders, PhD. Each year, the Industry Advisory Committee elects a representative to serve in a non-voting, advisory role to the Board of Directors, as a mechanism to ensure industry ideas and concerns are communicated to the Board.

This report features highlights of ISAPP accomplishments during 2018. ISAPP's many accomplishments for 2018 include: our first Annual Meeting in Asia - Singapore; several peer-reviewed publications on key issues for probiotic and prebiotic science; a robust science blog, and outreach activities, such as consumer-friendly infographics and monthly blog postings, championed by ISAPP's Science Translation Committee, chaired by Dr. Christopher Cifelli.

For additional details, see www.isappscience.org

ISAPP's ACTIVITIES: STEWARDSHIP, ADVANCING THE SCIENCE, AND EDUCATION

Stewardship

- **Responses to published papers incorrectly characterizing aspects of probiotic safety and efficacy.** When [Rao, et al](#) incriminated probiotics as a cause of D-lactic acidosis, ISAPP posted a [blog](#) and published a [letter to the editor](#) of *Clin Transl Gastroenterol* objecting to this conclusion. Responding to two papers in *Cell* ([here](#) and [here](#)), and accompanying media coverage that called into question probiotic safety and efficacy, ISAPP published a detailed [blog](#) objecting to conclusions and released a [public statement](#). ISAPP also submitted a letter to the editor in *JAMA Internal Medicine* responding to a [commentary](#) that characterized probiotics as unsafe.
- **Minimum criteria for probiotics.** The discussion group at the Singapore ISAPP meeting on global harmonization of probiotic regulations developed a white paper titled [Minimum Criteria for Probiotics](#).
- **Brazilian guidelines on probiotic use.** ISAPP filed comments (April 3, 2018) with Brazilian regulatory authorities on their Draft of Guidelines on Procedural Instruction regarding Petition for the Evaluation of Probiotics for Use in Food.
- **Helping consumers know what's in the bottle.** Mary Ellen Sanders chairs the Expert Panel on probiotics for the United States Pharmacopeia (USP). Representing ISAPP, she works with industry and government scientists and USP staff to develop quality standards for probiotic supplements.
- **Probiotic Codex initiative in Argentina.** A symposium and Workshop with global experts (including Prof. Seppo Salminen and Mary Ellen Sanders, on behalf of ISAPP) was convened on "Probiotics, their role in health. A vision from the Southern Cone." The focus was on scientific and regulatory issues involved with developing a probiotic standard with **CODEX Alimentarius**. A Spanish-language book "[Probióticos su impacto en la nutrición y la salud. Una visión desde el Cono Sur](#)" was published as an output from the symposium.

Advancing the Science

- **ISAPP Annual Meeting.** ISAPP convened its 16th annual meeting June 5-7, 2018 in Singapore – the first ISAPP meeting in Asia. [Meeting report](#).
- An outcome from the 2016 ISAPP meeting in Turku, a systemic review and meta-analysis, was published in the *European Journal of Public Health* showing the [association of probiotic consumption with reduced antibiotic prescriptions in children](#).
- **CBER meeting on probiotics.** ISAPP board members attended the meeting and wrote this summary: [FDA/NIH Public Workshop on Science and Regulation of Live Microbiome-Based Products: No headway on regulatory issues](#).
- In partnership with the British Nutrition Foundation, ISAPP published an open access review, "[Human Use of Probiotics](#)", providing an overview of probiotics in the 21st century.
- **Promoting evidence-based guidelines for prevention of AAD and *C. difficile* diarrhea in the UK.** Claire Merrifield championed development of a concise summary of the evidence for

probiotics to prevent AAD and *C. difficile* diarrhea, which was submitted to UK agencies for their consideration in making recommendations. See [here](#).

- **ISAPP-affiliated webinars.** ISAPP collaborated with ILSI-Europe to produce a webinar titled “Microbial Metabolism Associated with Health” (April 12, 2018), featuring Prof. Bob Hutkins. See [here](#). On April 17, a webinar titled “Navigating the World of Probiotics: Helping Patients Make Good Choices” was offered by Medscape. This activity is eligible for CE credits and features short talks by Mary Ellen Sanders and Dan Merenstein. See [here](#).
- **ISAPP in India.** ISAPP sponsored Dan Merenstein to speak at the [Probiotics Association of India](#) meeting in New Delhi, India on Feb 16-17, 2018, with the goal of improving ISAPP’s influence in expanded geographical regions. See [here](#).

Education

ISAPP’s education efforts have been focused on improving outreach to consumers, healthcare providers and other stakeholders.

- See [here](#) for a summary of ISAPP’s many activities targeted toward probiotic clinical use in 2018.
- Educating family physicians on evidence-based probiotic use.
 - CME “Probiotics and the GI Tract, What Should a Busy Clinician Know”, will be presented Oct 11, 2018, at the AAFP annual meeting. Prof. Merenstein is the faculty for this activity. (See [here](#) and search ‘probiotic’.)
 - For the *Journal of Family Practice* (read by 95,000 family physicians), ISAPP authors submitted a paper, “Evidence-based probiotic use in family medicine”.
 - The topic of “Probiotics for Antibiotic-Associated Diarrhea” was submitted for consideration by the American Academy of Family Physicians, but the request was not accepted.
 - The topic of “Probiotics for Antibiotic-Associated Diarrhea” was submitted for consideration by the [United States Preventive Services Task Force](#). They opted to not move forward with a recommendation.
- Webinars. ISAPP delivered a multitude of educational webinars this year including “[Navigating the World of Probiotics: Helping Patients Make Good Choices](#)” by Medscape; “Microbial Metabolism Associated with Health” in partnership with ILSI Europe; “Why is Everyone Talking About Gut Microbiota” by the British Nutrition Foundation; “[Probiotic and Prebiotic Definitions: Where Do We Stand?](#)” by ILSI North America.
- Science-based information for consumers. ISAPP developed [three new infographics in 2018](#) focusing on educating consumers on probiotics. The infographics are titled “Probiotics for Healthy People”, “Probiotics: Dispelling Myths”, and “Probiotic Checklist: Making a Smart Selection”. Check out ISAPP’s previously developed [short videos on probiotics](#). Videos on prebiotics and fermented foods are in progress.

- [ISAPP blogs](#). Blog posts, including [Probiotics and D-Lactic Acid Acidosis in Children](#), [Role of Citizen Science in Research on Fermented Foods](#), [Recommended Daily Allowance \(RDA\) for Microbes?](#) and many more were published by board members and guest writers.
- ISAPP's monthly newsletter. ISAPP publishes a [monthly newsletter](#), keeping subscribers current on ISAPP activities and important developments in the probiotic and prebiotic fields. Sign up [here](#).

Recent Papers from ISAPP Activities

- Quigley E, Pot B, Sanders ME. [‘Brain Fogginess’ and D-Lactic Acidosis: Probiotics Are Not the Cause](#). Nature, Clinical and Translational Gastroenterology. Published Online September 24, 2018.
- King S, Tancredi D, Lenoir-Wijnkoop I, Sanders ME, Gould K, Vann H, Connors G, Linder J, Shane A, Merenstein DJ. [Does probiotic consumption reduce antibiotic utilization for common acute infections? A systematic review](#). Eur J Pub Health, cky185, <https://doi.org/10.1093/eurpub/cky185>.
- Reid G, Kort R, Alvarez S, Bourdet- Sicard R, Benoit V, Cunningham M, Saulnier DM, van Hylckama Vlieg JET, Verstraelen H, Sybesma W. [Expanding the reach of probiotics through social enterprises](#). Beneficial Microbes, 9 (5): 707-715.
- Rezac S, Kok CR, Heermann M, Hutkins R. [Fermented Foods as a Dietary Source of Live Organisms](#). Frontiers in Microbiology. 2018 Aug 24.
- Sanders ME, Merenstein DJ, Merrifield CA, Hutkins R. [Probiotics for human use](#). Nutrition Bulletin 43(3): 212-225.
- Lebeer S, Bron PA, Marco ML, Van Pijkeren JP, O’Connell Motherway M, Hill C, Pot B, Roos S, Klaenhammer T. [Identification of probiotic effector molecules: present state and future perspectives](#). 2018. Curr Opin Biotechnol. 49:217-223.
- Sanders ME, Benson A, Lebeer S, Merenstein DJ, Klaenhammer TR. 2018. [Shared mechanisms among probiotic taxa: implications for general probiotic claims](#). Curr Opin Biotechnol. 49: 207-216.
- Sung V, D’Amico F, Cabana MD, Chau K, Koren G, Savino F, Szajewska H, Deshpande G, Dupont C, Indrio F, Mentula S, Partty A, Tancredi D. [Lactobacillus reuteri DSM17938 to treat infant colic: a meta-analysis](#). 2018. Pediatrics. Jan;141(1). pii: e20171811. doi: 10.1542/peds.2017-1811.

Helpful Links

[Full list of ISAPP Publications](#)

[17 years of annual meeting reports](#)

[Industry involvement in ISAPP](#)

BOARD OF DIRECTORS OCTOBER 1, 2017 – SEPTEMBER 30, 2018

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2018 INDUSTRY ADVISORY COMMITTEE MEMBER COMPANIES

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Mead Johnson Nutrition	Yoplait France/General Mills
Mendel Gene Tech Co. Ltd.	Zespri
Metagenics	

Quotes from Industry Advisory Committee Members

"ISAPP membership expands and strengthens our scientific and regulatory network on prebiotics, which can help us in future collaborations."

"At the Annual Meeting the combination of plenary presentations with the detailed discussion groups offered a unique opportunity to observe the "macro trends" of the field of probiotics and prebiotics, while also having the opportunity to deep dive into specific topics."



APPENDIX. SUMMARY OF 16th MEETING OF ISAPP – SINGAPORE

[Link to full 2018 meeting report](#)

June 5-7th 2018 ISAPP held its first Asian meeting in Singapore. This open registration meeting was a huge success with over 241 attendees from 34 countries. In attendance were 52 IAC representatives, 21 invited experts, 24 speakers, and 18 SFA members. The other 126 participants were open registered academics/clinicians, industry, and students.



Two days of plenary talks focused on the latest science featuring prebiotic and probiotic use in: pediatrics, oral health, allergy immunotherapy, the gut microbiome throughout life, synbiotics, liver disease, honey bee health, chronic gut disorders, and more. The meeting also featured an interesting talk about the changes coming in the nomenclature of the genus *Lactobacillus*.

The plenary, open sessions were followed by a Discussion Forum on June 7th for invited experts and Industry Advisory Committee Members. The discussion groups focused on:

- Harmonizing Global Probiotic and Prebiotic Food/Supplement Regulation
- Fermented Foods for Health: East Meets West
- Potential Value of Probiotics and Prebiotics to Treat or Prevent Serious Medical Issues in Developing Countries
- Prebiotics as Ingredients: How Foods, Fibres and Delivery Methods Influence Functionality

Finally, there were over 70 posters presented at the meeting featuring the latest prebiotic and probiotic research from around the world.

Slides and abstracts for the meeting can be found on the ISAPP website under the “[Annual Meetings](#)” tab, available to meeting participants only.

