



Board of Directors: *Seppo Salminen PhD, President; Daniel Merenstein MD, Vice President; Robert Hutkins PhD, Secretary; Karen Scott PhD, Treasurer; Members at Large: Eamonn Quigley MD, Glenn Gibson PhD, Colin Hill PhD, Sarah Lebeer PhD, Maria Marco PhD, Hania Szajewska MD, Gabriel Vinderola PhD, Kelly Swanson PhD, and Daniel Tancredi PhD.*
Mary Ellen Sanders PhD, Executive Science Officer.

Changes to the ISAPP board. This year we said farewell to founding board member Prof. Gregor Reid and we welcomed Professors Vinderola (Argentina), Tancredi (USA) and Swanson (USA). Learn more about these new board members in this blog: [ISAPP welcomes three new board members](#).

Highlights of ISAPP Activities 2020

2020 was a year overshadowed by the spread of COVID-19 and the lockdowns it brought. Despite these considerable obstacles, ISAPP continued to serve a vital role for industry and academic scientists engaged in probiotic and prebiotic research. Importantly, several ISAPP board members weighed in on the research and evidence that probiotics and prebiotics may help resist viral infection ([here](#), [here](#), [here](#), and [here](#)), even while other organizations propagated misleading information on this topic.

ISAPP had to cancel its much anticipated 2020 annual meeting in Banff, instead hosting a [virtual meeting in June 2020](#). Plans are underway to determine how we will gather in 2021. It is likely that a virtual meeting will again be necessary – the board is discussing a virtual ISAPP learning event in May 2021, with an in-person meeting tentatively planned for late in 2021.

2020 was a year for strengthened collaborations. ISAPP worked closely with United States Pharmacopeia and with ILSI North America (details below). We [co-sponsored two webinars, one with ILSI Europe](#) and one with the [British Nutrition Foundation](#); [co-authored a paper with the International Probiotics Association \(IPA\)](#); and we co-developed an infographic with the NEC Society. We worked closely with global experts on synbiotics, postbiotics and fermented foods as we undertook consensus panels on these topics. Further details below.

Under the leadership of Dr. Chris Cifelli, the ISAPP Science Translation Committee advanced its goal of making the science of probiotics, prebiotics and fermented foods easier to grasp for non-researchers. This committee develops education tools, webinars, infographics, videos and blogs.

ISAPP's core values are **Stewardship, Advancing the Science, and Education**. We apply these values when working on ISAPP's mission to advance scientific excellence in probiotics and prebiotics. Our expanded [academic governing board](#) under the leadership of Prof. Seppo Salminen drives these activities to assure that ISAPP remains the premier independent, science-based authority supporting the probiotic and prebiotic fields. Our [industry partners](#) support these activities through their insights, commitment, and financial contributions. Below is a short summary of how ISAPP promoted these core values over the past year.

Stewardship

- **Australia's probiotic regulatory framework.** The Therapeutic Goods Agency (TGA) in Australia is developing a regulatory framework for probiotics under its jurisdiction. ISAPP is working in consultation with industry to determine if TGA's proposal is scientifically justified.
- **Advocating for improved probiotic quality.** Mary Ellen Sanders continues to serve as chair of the Expert Panel on probiotics for the [United States Pharmacopeia](#) (USP), working with industry and government

scientists and USP staff to develop quality standards for probiotic supplements. See this document from 2019: [Improving End-User Trust in the Quality of Commercial Probiotic Products](#).

- **ISAPP consensus definition panels.** Two of the most frequently downloaded papers from *Nature Reviews Gastroenterology & Hepatology* are the ISAPP consensus statements on [probiotics](#) and [prebiotics](#). In 2019, ISAPP extended this approach of assembling panels of global experts to provide scientific clarity to the topics of [synbiotics](#), [fermented foods](#), and postbiotics (paper In Press).

Advancing the Science

- **Adequate intake of live dietary microbes.** ISAPP has extended efforts to explore the role of live dietary microbes and health. Underway is an assessment of NHANES data to determine if there is sufficient evidence linking live dietary microbe intake and health in Americans to support an official dietary recommendation. ISAPP is also collaborating with ILSI-North America (ILSI-NA) on a Live Dietary Microbes subcommittee of their Gut Microbiome committee. This subcommittee has funded a [scoping review of published research](#) that might inform on this question. Some members of the ISAPP board also co-authored a [paper that calls for investigation of evidence for links between live dietary microbes and health](#).
- **Delivery matrix and probiotic/prebiotic functionality.** IAC representatives, Drs. Marla Cunningham and Roberta Grimaldi, organized and led a discussion during the IAC Learning Forum at ISAPP 2019 on *How does product formulation influence activity of prebiotic and probiotic products?* (Slides available [here](#) for 2019 meeting participants.) A paper summarizing the outcomes is under review for *Trends in Food Science and Technology*.
- **Future of probiotics and prebiotics.** As an output from a 2019 discussion group, Marla Cunningham and Glenn Gibson, in conjunction with 14 other academic and industry participants, prepared a paper titled “Shaping the Future of Probiotics and Prebiotics”, which is in press with *Trends in Microbiology*.
- **Collaboration with ILSI-NA.** Mary Ellen Sanders represents ISAPP on the ILSI-NA [Gut Microbiome Committee](#). She co-chairs, along with Dr. Bruno Pot, the Live Dietary Microbe subcommittee of this group. Comprising industry, government, non-profit organization and academic experts, the Gut Microbiome Committee addresses translation of gut microbiome research into actionable items related to the food industry.

Education

- **Fermented foods webinar.** ISAPP collaborated with the British Nutrition Foundation on a webinar targeted to a general audience titled, [Fermented food - separating hype from facts](#). Prof. Bob Hutkins spoke on “Understanding fermented foods”.
- **New infographics released.** Infographics released in 2020 include [What Qualifies as a Probiotic](#), [Synbiotics, Probiotics and Necrotizing Enterocolitis](#), [Your Guide to New Probiotic Names: Lactobacillus](#) (for consumers) and [The Big Breakup of Lactobacillus](#) (for scientists).
- **Focused communication strategy.** Under the leadership of Kristina Campbell and building on the communication-focused Springboard session of the [2020 virtual annual meeting](#), ISAPP is doing an audit of its scientific communication activities that target different audiences and identifying a particular group to engage with over the coming years.
- **Probiotic and prebiotic mechanisms of action.** ISAPP and ILSI-Europe co-sponsored a popular [webinar](#) titled, *Understanding Prebiotic and Probiotic Mechanisms that Drive Health Benefits*, featuring Prof. Colin Hill, Prof. Sarah Lebeer, Dr. Karen Scott and Dr. Koen Venema.
- **ISAPP symposium at World of Microbiome Conference 2020.** Several ISAPP board members presented a symposium: [“Biotics” for health: what they are and how can we use them in clinical practice?](#) At the World of Microbiome Conference 2020, virtual. November 6, 2020.

- **ISAPP blogs.** ISAPP appreciates that its audiences are interested in viewpoints of top experts in the field. Our Board members and colleagues publish regular blogs and news posts that offer perspectives and important updates about the field. See the [science blog](#), [consumer blog](#), and [news](#).
- **Continuing education course for dietitians.** Mary Ellen Sanders and Bob Hutkins collaborated with registered dietitian and University of Illinois Assistant Professor of Nutrition, Hannah Holscher, to create a comprehensive self-study continuing education course for dietitians on probiotics, prebiotics and fermented foods. Scheduled to be available March 1, 2021, this course will be published by *Today's Dietitian* and will provide 2 credits for dietitians. The course content will be free to access once published.
- **New names for important probiotic *Lactobacillus* species.** ISAPP collaborated with authors of the [landmark paper on *Lactobacillus* taxonomy](#), including ISAPP board member Prof. Sarah Lebeer, to provide plain language communications for both scientists and consumers/healthcare providers about important name changes for probiotic lactobacilli (see [here](#) for a blog post with links to infographics and a press release).
- **ISAPP's monthly newsletter.** ISAPP publishes a [monthly newsletter](#), keeping over 4500 subscribers current on ISAPP activities and important developments in the probiotic and prebiotic fields. Sign up [here](#).
- **Clinical use of probiotics.** Three current ISAPP board members collaborated on a [paper to provide guidelines](#) for family practice physicians for using probiotics in their practice.
- **Popular media responses.** ISAPP provided responses to popular media when probiotic or prebiotic science was being misrepresented. Here are three examples from 2020: [AGA guidelines](#), [JAMA viewpoint](#), [60 Minutes](#).
- **Social media.** ISAPP is active and engaged on Twitter, and also maintains a Facebook account. This year ISAPP also started an Instagram account, which will share images and information on the science of probiotics and prebiotics, aimed at dietitians and the general public.

Recent Papers from ISAPP Activities (See [full list of ISAPP Publications](#))

- Salminen, et al. Expert consensus document: The International Scientific Association for Probiotics and Prebiotics (ISAPP) consensus statement on the definition and scope of postbiotics. In Press, *Nature Rev Gastroenterol Hepatol*.
- Cunningham, et al. Shaping the future of probiotics and prebiotics. *Trends in Microbiol*. In Press.
- Marco, M.L., Sanders, M.E., Gänzle, M. *et al.* [The International Scientific Association for Probiotics and Prebiotics \(ISAPP\) consensus statement on fermented foods](#). *Nat Rev Gastroenterol Hepatol* (2021). doi.org/10.1038/s41575-020-00390-5.
- Marco ML, Hill C, Hutkins R, Slavin J, Tancredi DJ, Merenstein D, Sanders ME. 2020. [Dietary recommendation on adequate intake of live microbes: a path forward](#). *J Nutr*. 150:3061-3067. doi: 10.1093/jn/nxaa323.
- Swanson KS, Gibson GR, Hutkins R, Reimer RA, Reid G, Verbeke K, Scott KP, Holscher HD, Azad MB, Delzenne NM, Sanders ME. 2020. [Expert consensus document: The International Scientific Association for Probiotics and Prebiotics \(ISAPP\) consensus statement on the definition and scope of synbiotics](#). *Nat Rev Gastroenterol Hepatol*. 17:687–701. doi.org/10.1038/s41575-020-0344-2.
- Binda S, Hill C, Johansen E, Obis D, Pot BD, Sanders ME, Tremblay A, Ouwehand AC. 2020. [Criteria to qualify microorganisms as 'probiotic' in foods and dietary supplements](#). *Front. Microbiol*. 11:1662. doi: 10.3389/fmicb.2020.01662.
- Spacova I, Dodiya HB, Happel A-U, Strain C, Vandenheuvel D, Wang X and Reid G. 2020. [Future of Probiotics and Prebiotics and the Implications for Early Career Researchers](#). *Front. Microbiol*. 11:1400. doi: 10.3389/fmicb.2020.01400

- Merenstein DJ, Sanders ME, Tancredi DJ. 2020. [Probiotics as a Tx resource in primary care](#). J Fam Pract. 69(3):E1-E10.
- Tamang JP, Cotter PD, Endo A, Han NS, Kort R, Liu SQ, Mayo B, Westerik N, Hutkins R. 2020. [Fermented foods in a global age: east meets west](#). Compr Rev Food Sci Food Saf. doi:10.1111/1541-4337.12520.