



Conference Summary

2022 Annual Meeting

June 14-17, 2022

Sitges, Spain

For more details, join us at:

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#ISAPP2022

Annual report summary

The SFA's goal is to create an interactive network of graduate students and postdoctoral fellows across the globe working on probiotics, prebiotics, or related fields. They succeeded in this mission in Spain this year by assembling a diverse group of students and fellows from around the world including Argentina, Canada, Belgium, India, Ireland, South Africa, Spain, Taiwan, and the United States. A total of 27 SFA members were invited from which 22 (plus one Glenn Gibson Award winner) ultimately attended due to COVID-19 related travel restrictions and other extenuating circumstances. Students and fellows each shared the focus of their research in rapid, 2-minute talks. In addition, the students and fellows presented their research with posters during the main ISAPP meeting. Three students were selected to present their work as an oral presentation to the group. This year networking and opportunities for knowledge exchange with the main meeting participants was enhanced, and SFA was included in all activities except the discussion groups.

SFA Executive Team for 2021-2022 period:

- President: Daragh Hill (APC Microbiome, Ireland)
- Vice President: Brendan Daisley (University of Guelph, Canada)
- Treasurer: Dieter Vandenneuvel (University of Antwerp, Belgium)
- Secretary: Conall Strain (Teagasc Moorepark Food Research centre, Ireland)
- Communications: Anna-Ursula Happel (University of Cape Town, South Africa)
- Local Organizer #1: Zaida Soler Luque (Vall d'Hebrón Research Institute (VHIR), Spain)
- Local Organizer #2: Zixuan Xie (Vall d'Hebrón Research Institute (VHIR), Spain)

More detailed summary of 2022 activities.

The SFA has had a flux of over 650 members since 2009 with 228 active members in the 2021/2022 period. For the 2022 conference, there were over 50 abstracts submitted from across four continents. A panel of seven judges from the SFA executive committee reviewed the submissions using a standardized set of grading criteria and the top 20 abstracts were selected to attend. The SFA program is summarised below.

Welcome event

The conference kicked off for the SFA on Tuesday afternoon in Hotel Desitges for a welcome reception and meet and greet. Badge pickup and room assignment was from 3-6pm with the welcome event at 6-8pm. This allowed SFA members to get to know one another in a casual setting at the SFA hotel before the official meeting kicked off. This was beneficial to allow members to create contacts ahead of the conference and feedback from the event was very positive.

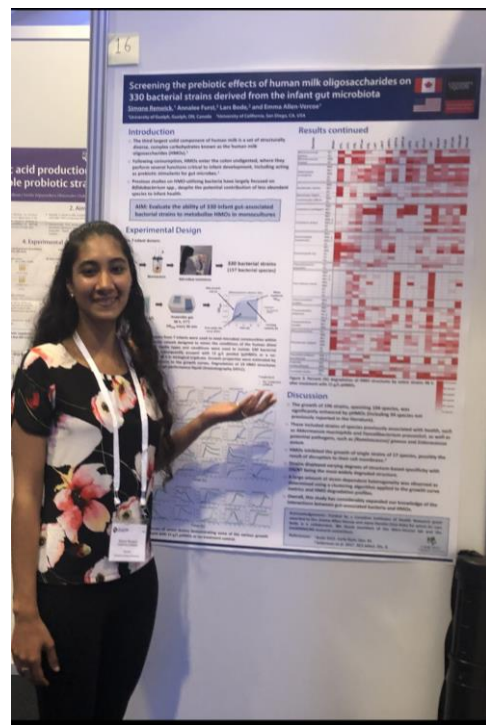
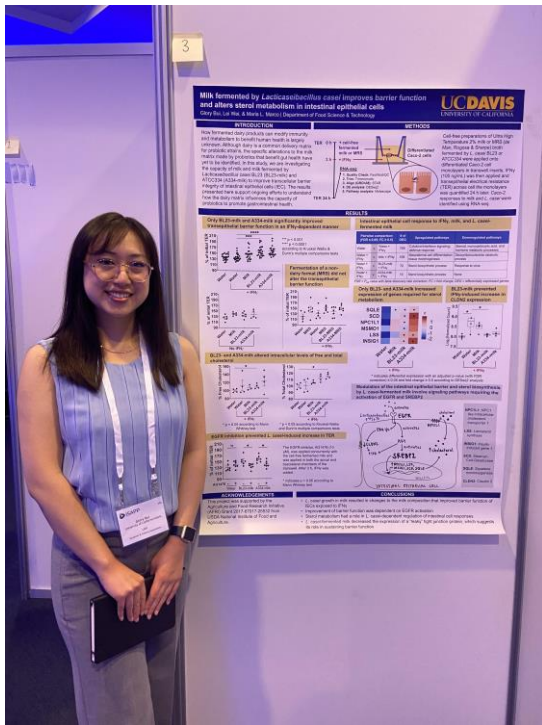
Lightning talks

Each SFA member presented a lightning talk consisting of two slides; one personal background and one describing their research. This enabled members to get familiar with research themes of the current pool of attendees and to encourage members to come learn more about each other's work during the poster session.

Poster session

The poster session went on throughout day one of the conference. There was engagement with ISAPP members and industry partners with the SFA posters, with good discussions on the work being presented. The posters were judged by SFA executive team members, the Glenn Gibson award

winner (Irina Spacova) and board members (Maria Marco, Sarah Lebeer, Kristina Campbell, Colin Hill). Two poster prizes were awarded for best poster presentation, and these were awarded to Glory Bui (University of California Davis, USA), and Simone Renwick (University of Guelph, Canada).



Poster prize winners. Glory Bui (University of California, Davis) and Simone Renwick (University of Guelph).

Oral presentations

There were four SFA members selected to give oral presentations this year on day two of the conference. These were selected based on abstract submissions to have a range of topics from around the world. One member was diagnosed with COVID and so unfortunately could not attend the conference to present their talk. The presentations were of an extremely high standard and provoked an interesting Q&A session from the SFA group. The talk titles were:

1. “Integrative multi-omics analyses reveal the therapeutic impact of probiotics via modulating microbial-based signatures in chronic kidney disease” by Hsiao-Wen Huang, National Taiwan University, Taiwan.
2. “Screening the prebiotic effects of human milk oligosaccharides on 330 bacterial strains derived from the infant gut microbiota” by Simone Renwick, University of Guelph, Canada.
3. “Gamma-aminobutyric acid (GABA) production by probiotic strains” by Andrea Monteagudo-Mera, University of Reading

Harnessing the Power of Social Media

Kristina Campbell led a workshop with the SFA on how to utilise social media in your science career. This included tips on how to best communicate online, how to choose your platform, and how to engage. This session was greatly beneficial as Kristina highlighted how social media and engagement can be used as much or as little as you are comfortable with. The disadvantages of social media in spreading misinformation has been highlighted in recent years throughout the pandemic and it is important as scientists that we promote correct information, if your reach is small or large.

The group divided into smaller sub-groupings to discuss our current activities online, and our general thoughts on engagement. Then there was a larger conversation with the entire group about our thoughts and how we can best communicate moving forward. Kristina kindly tweeted the twitter handles of members to promote our reach. Demonstrating the degree of active engagement, the post was retweeted 21 times and received 58 likes.

Niche study area break out groups

There were three topics for discussion groups which members had the choice to sign up for after the lightning talks on day one. The purpose of this session was to discuss the current field, where it has come from, and where we envisage the field moving in the coming years. These groups allowed for members from different labs to discuss methods they utilise and the pros/cons of the latest methods in the field. A brief summary of the discussions is outlined below.

1. Probiotics; beneficial microbes for health. Chairs; Dieter Vanderheuvél, Zaida Soler Luque
Interesting novel developments were outlined such as using probiotics as a vector eradicate a Salmonella infection, or against alcohol intoxication. The different regulation and laws between countries were highlighted, some use the term “probiotics” quite loosely. Around the world there are vastly different regulations as to what constitutes a probiotic. This is confusing, as well as creating opportunities.
There was also an interesting discussion around what is a strain? This is difficult to define, but the consensus was that we should use all available information and it is important that we don't overlook functionality in particular.
2. Prebiotics; modulating fibre intake for health. Chair; Conall Strain
The updated definition is still dominated by dietary fibres and there is need for testing promising dietary candidates e.g. polyphenols. It is important to remember some fibres are more equal than others where testing is involved. Structure function in carbohydrate utilisation was discussed. A good discussion was also had on techniques used in the field e.g. media for fermentations. There is a lot of discussion on next generation probiotics and it is important to also discuss next generation prebiotics.
3. Human microbiota & bioinformatic analysis. Chairs; Daragh Hill, Zixuan Xie
Harmonisation of methods across studies would be ideal within the field. How to do this is unclear as there is no “best” method universally implemented and this largely depends on the area of study. However, guidelines on important analysis to be included in microbiome studies would be beneficial, there was general agreement that absolute abundance is critical. This can be done a number of ways now (qPCR, flow cell counting techniques, etc) and is important to be included if at all possible in studies. In the future there is hope for development of tools to integrate all “omics” data. There are a number of possible “omics” measurements and there is hope that these can be combined for meaningful analysis.
Machine learning for the future was discussed as this field is growing, it was highlighted that matching biomarkers and clinical outcomes should be considered. A final discussion point was about bespoke databases that are fit for purpose. More databases are needed for studies in emerging areas, your data is only as good as your database.

Overall, the 2022 SFA program was a successful event that facilitated great discussions within the SFA and the wider ISAPP community. The feedback form participants was very positive and overall we had a very successful program. Some photos from the SFA group activities are included below.



Probiotics discussion group.

Left to right; Sarah Ahannach, Angel Camargo, Maria Florencia Zacarias, Glort Buit, Dieter Vandeneuvel, Hsiao-Wen Huang, Gerrit Stuivenberg, Irina Spacova.



Prebiotics discussion group;

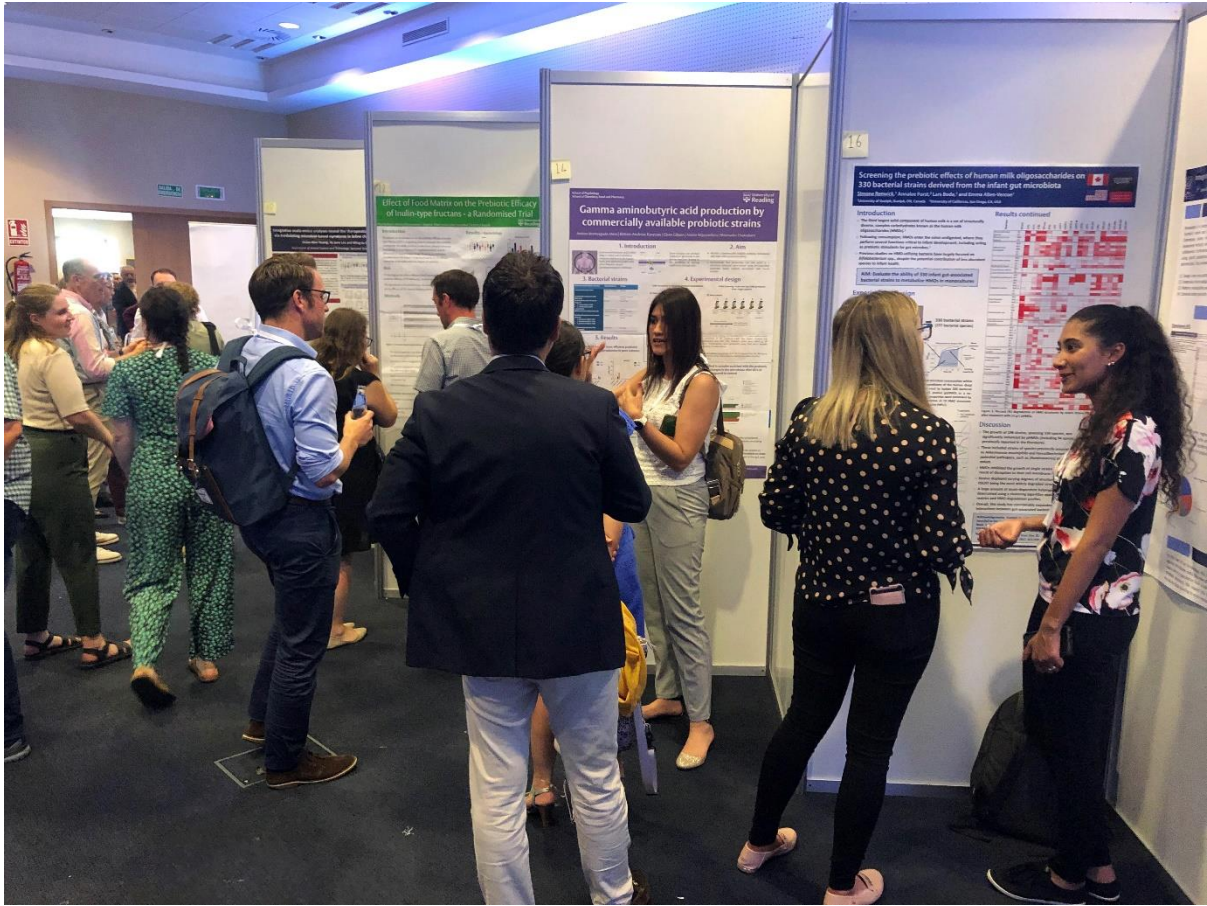
Left to right; Conall Strain, Atul Chavan, Andrea Monteagudo-Mera, Zaida Soler Luque, Yvonne Seidler, Peter Jackson



Human microbiota and bioinformatic analysis discussion group
Left to right; Back Cathy Walsh, Zixuan Xie, Daragh Hill, Alexander Thorman. Front David Alvarado, David Hourigan, Simone Renwick, Lauren Walsh.



Lightning talks introduction.



Poster discussions underway



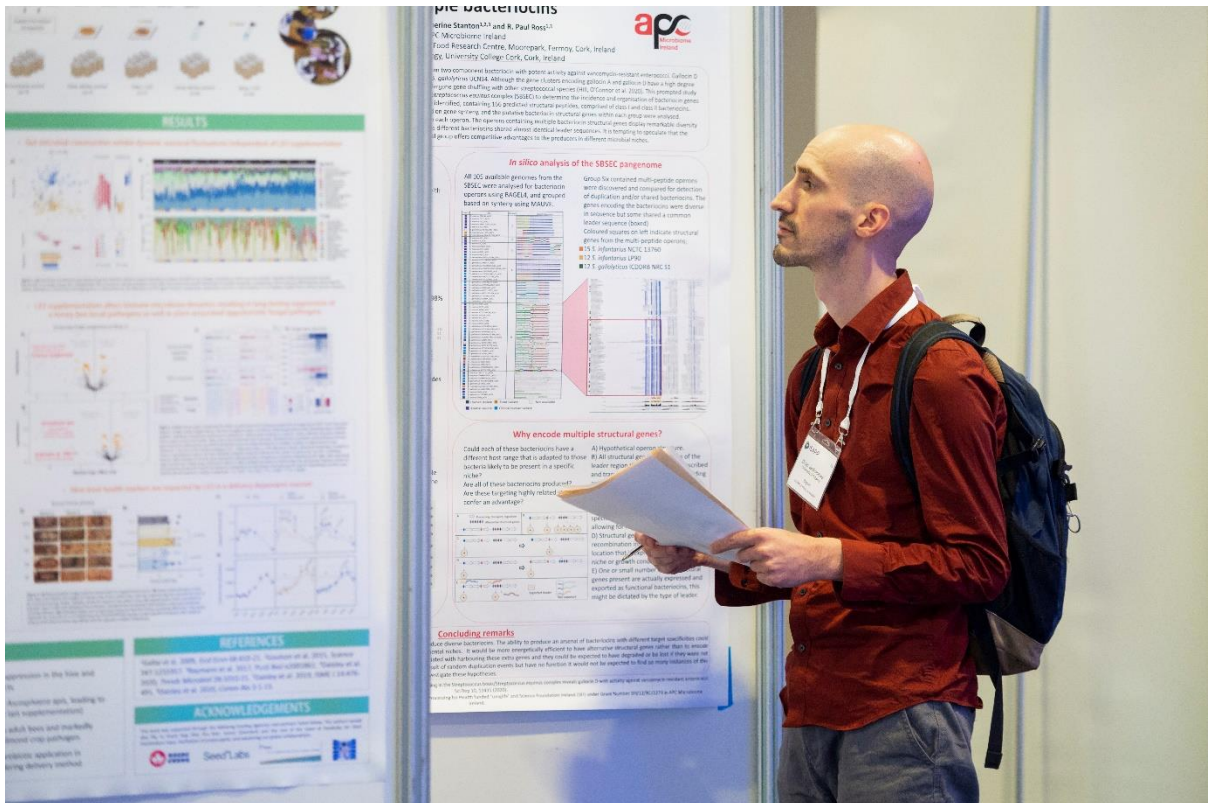
Poster session



Discussion following SFA talks



ISAPP SFA 2022



Poster judging



SFA flyer



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