

INFORM Hub Annual Event

Post Illness Infection and Immune Support Breakout Session Recap

Date: 24th June 2025

Venue: University of Reading, Whiteknights Campus

Discussion Facilitators: Dr James Kennedy (University of Reading) & Professor Kieran Tuohy (University of Leeds)

Discussion Highlights and Summary on Probiotics and Functional Foods in Infection Recovery

The recent discussion brought together experts from diverse backgrounds, including dietetics, probiotic research, gut microbiology, and the dairy industry, to explore the potential of probiotics and functional foods in enhancing recovery from infections. The dialogue emphasised several key areas for future research and development, highlighting both clinical and mechanistic aspects of probiotic application.

Key Discussion Points

- **Clinical Trials in Hospital Settings:** The group proposed conducting randomised controlled trials involving hospital inpatients to evaluate the impact of probiotic-enriched foods, such as fortified yoghurts, on recovery speed and clinical outcomes. Such studies could compare bowel function and other health parameters between active and control groups, providing valuable evidence for probiotic efficacy.
- **Targeted Infections:** Specific infections like *Clostridium difficile* and *Helicobacter pylori* were identified as potential candidates for probiotic adjunct therapy. Developing products to support existing treatments could improve response rates and reduce recurrence, offering a complementary approach to traditional therapies.

- **Oral Microbiome and Respiratory Health:** The role of the oral microbiome in respiratory infections was discussed, with the hypothesis that modifying oral microbial communities through probiotics could decrease the incidence or severity of respiratory illnesses, especially in vulnerable populations such as those with pulmonary fibrosis.
- **Global and Cross-Species Insights:** The discussion expanded to consider how probiotic applications vary worldwide and what lessons could be learned from veterinary science, where probiotics are more established. This cross-disciplinary perspective could inform human health strategies.
- **Mechanistic Evidence and Emerging Fields:** A recurring theme was the necessity for mechanistic understanding, including the roles of metabolites, receptors, and bile acid metabolism. The potential use of artificial intelligence to predict the efficacy of probiotics and prebiotics was also considered a future tool for personalised nutrition.
- **Regulatory and Policy Considerations:** The importance of health claims, standardisation, and regulatory frameworks was underscored. Developing impact studies to influence policy and identify future research directions was seen as crucial for advancing the field.

Summary

This comprehensive discussion underscored the promising role of probiotics and functional foods in managing post-infection recovery and immune support. It highlighted the need for rigorous clinical trials, mechanistic research, and cross-sector learning to unlock the full potential of these interventions. The integration of innovative technologies like artificial intelligence and the development of clear regulatory pathways are essential steps toward translating scientific insights into practical health solutions. Overall, the dialogue fostered a sense of excitement and opportunity for future collaborations aimed at filling existing gaps in the market and improving health outcomes through targeted probiotic strategies.