

## Understanding gut microbiomes as targets for improving pig gut health

Edited by Professor Mick Bailey and Emeritus Professor Chris Stokes  
University of Bristol, UK



**bd** burleigh dodds  
SCIENCE PUBLISHING

### Publication date

28 Dec 2021

### Price

£150 / \$195 / C\$255 / €180 / A\$270

### ISBN

Hardback: 978-1-78676-487-4

Mobi: 978-1-78676-488-1

ePub: 978-1-78676-489-8

PDF: 978-1-78676-490-4

### Format

152 × 229 mm / 6 × 9 in, 400 pages

### Illustrations

Color tables, photos and figures

### Series

Burleigh Dodds Series in Agricultural  
Science: no. 103

### BIC/THEMA classification

TVH - Animal husbandry, TVF -  
Sustainable agriculture

### Distributors

**INGRAM** Publisher  
Services UK

Print books (exc. US and Canada)



eBooks (worldwide)

Updated 06/12/21

## New title information

# Understanding gut microbiomes as targets for improving pig gut health

Edited by: Professor Mick Bailey and Emeritus Professor  
Chris Stokes, University of Bristol, UK

### Endorsement:

**“Relevant and timely. I have followed the work of Professor’s Bailey and Stokes for many years and this project is yet another important contribution to the knowledge base involving gut health of pigs.”**

*Dr. Tom Burkey; Professor, Department of Animal Science, University of Nebraska-Lincoln; President, Digestive Physiology of Pigs-North America; U.S. Representative to the Digestive Physiology of Pigs International Steering Committee*

### Description:

The pig production sector faces many challenges, including the need to improve feed efficiency to reduce emissions from manure, finding alternative methods to prevent the onset of diseases affecting swine, as well as ensuring that the welfare of pigs is consistent with consumer and regulatory agencies’ expectations.

*Understanding gut microbiomes as targets for improving gut health* offers a comprehensive coverage on the wealth of research on the porcine gastrointestinal tract, its key role in pig health and nutrition, as well as its implications for improving feed efficiency and growth. This collection details how optimising the gut microbiome can contribute to an overall improvement in pig health.

Edited by Professor Mick Bailey and Emeritus Professor Chris Stokes, University of Bristol, UK, *Understanding gut microbiomes as targets for improving gut health* will be a standard reference text for pig/swine scientists in universities and research centres, pig feed manufacturers, and government and private sector agencies advising pig farmers on health and nutrition.

### Key features:

- Provides a comprehensive coverage of the key ecosystem services delivered by the gut microbiome
- Analysis of the pig gut microbiome and its relationship with the pig gastrointestinal tract
- In-depth focus on the techniques available to optimise gut function as a means for improving pig gut health

### Audience:

Pig/swine scientists in universities and research centres; companies manufacturing pig feed; government and private sector agencies advising pig farmers on health and nutrition

### Editors' details:

**Dr Mick Bailey** is Professor of Comparative Immunology at the University of Bristol’s world-famous Veterinary School. Professor Bailey has an international reputation for his research on the development of the mucosal immune system in pigs.

**Dr Chris Stokes** is Emeritus Professor in the Bristol Veterinary School. Professor Stokes is also internationally known for his research on immune development in pigs.

### Table of contents:

#### Part 1 The gut microbiome and pig gut health

1. Microbial ecosystems as targets for improving pig gut health: *Mick Bailey and Chris Stokes, University of Bristol, UK*
2. Metabolic services delivered by the pig gut microbiome: *Michael Gänzle, University of Alberta, Canada*
3. Microbiological services delivered by the pig gut microbiome: *Peadar Lawlor, Teagasc, Ireland*

#### Part 2 Analysing the pig gut microbiome

4. Characterising microbial communities in the pig gastrointestinal tract: *Tom Clavel, RWTH Aachen, Germany*
5. Understanding the relationship between the microbiome and the structure and function of the pig gastrointestinal tract: *Wei-Yun Zhu, Nanjing Agricultural University, China*
6. Understanding the development of the gut microbiome in pigs: an overview: *Claire Rogel Gaillard, INRA, France*

#### Part 3 Techniques to optimise gut function by manipulating gut microbiomes

7. The use of prebiotics to optimise gut function in pigs: *Barbara Metzler-Zebeli, University of Veterinary Medicine - Vienna, Austria*
8. The use of dietary fibre to optimise gut function in pigs: *Barbara Williams, University of Queensland, Australia;*
9. The use of exogenous enzymes to optimise gut function in pigs: *David Torrallardona, IRTA, Spain*
10. Improving gut function in pigs to prevent dysbiosis and post-weaning diarrhoea: *Charlotte Lauridsen, Aarhus University, Denmark*
11. Improving gut function in pigs to prevent pathogen colonisation: *Paolo Trevisi, University of Bologna, Italy*
12. Microbial protein metabolism in the monogastric gut: a review: *John Pluske, Murdoch University, Australia*

### Related products:

- Achieving sustainable production of pig meat Volume 1, 978-1-78676-088-3, 08 Jun 2018, GBP 130.00, EUR 155.00, USD 170.00, CAD 220.00, and AUD 235.00
- Achieving sustainable production of pig meat Volume 2, 978-1-78676-092-0, 09 Oct 2017, GBP 160.00, EUR 190.00, USD 210.00, CAD 270.00, and AUD 290.00
- Achieving sustainable production of pig meat Volume 3, 978-1-78676-096-8, 12 Mar 2018, GBP 140.00, EUR 170.00, USD 180.00, CAD 240.00, and AUD 250.00
- Improving gut health in poultry, 978-1-78676-304-4, 26 Nov 2019, GBP 180.00, EUR 215.00, USD 235.00, CAD 305.00, and AUD 325.00
- Improving rumen function, 978-1-78676-332-7, 23 Jun 2020, GBP 190.00, EUR 230.00, USD 245.00, CAD 325.00, and AUD 340.00
- Understanding the behaviour and improving the welfare of pigs, 978-1-78676-443-0, 16 Feb 2021, GBP 150.00, EUR 180.00, USD 195.00, CAD 255.00, and AUD 270.00