

6th International Workshop on *Streptococcus suis* (6th IWSs): Emerge of pathogenicity and antimicrobial resistance with intensive farming: challenges and solutions

September 5-6, 2025

University of Cambridge, Pembroke College, UK

CONFERENCE SCHEDULE

DAY 1
SEPTEMBER 5TH, 2025

8:00 — 8:30 Registration

8:30 — 8 :45 Welcome words
Prof. Dan Tucker

THEME 1

STREPTOCOCCUS SUIS HUMAN AND SWINE INFECTIONS: VIRULENCE FACTORS AND HOST-PATHOGEN INTERACTIONS

Chairpersons: Dr. Virginia Aragon (Spain) and Cristina Uruén (Spain)

8:45 — 9:20 **Keynote lecture:** Navigating host barriers: Sensory systems and phase-variable epigenetics in *Streptococcus suis*
Prof. Jerry Wells (Wageningen University Research, THE NETHERLANDS)

9:20 — 9:55 **Keynote lecture:** Adaptive survival and infection of *Streptococcus suis*
Prof. Lu Li (Huazhong Agricultural University, CHINA)

9:55 — 10:10 Environmental conditions steer lung immune responses and susceptibility to *Streptococcus suis* infection
Sandra Vreman (Wageningen University Research, The Netherlands)

10:10 — 10:25 *Streptococcus suis* OseR, a redox sensor, regulates ergothioneine uptake via a Cys thiol switch, enhancing oxidative stress resistance and virulence
Zongfu Wu (Nanjing Agricultural University, China)

10:25 — 11:00 **COFFEE BREAK (35 min)**

11:00 — 11:35 **Keynote lecture:** Deciphering the unknown: Analysis of *Streptococcus suis* cell wall glycans and glycolipids
Dr. Nicolas Gisch (Research Center Borstel, Leibniz Lung Center, GERMANY)

11:35 — 11:50 Oral inoculation of pigs with *Streptococcus suis*
Matheus Costa (University of Saskatchewan, Canada)

11:50 – 12:10

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The IgM protease of *S. suis*, a cross-protective vaccine antigen: prevalence, subtyping and pig vaccination-challenge studies.

Dr. Ton Jacobs (MSD, The Netherlands)



12:10 – 13:45

LUNCH & POSTER SESSION (95 min) (ALL THEMES)

THEME 2

GENOMICS, EVOLUTION OF PATHOGENESIS AND MOLECULAR EPIDEMIOLOGY (Part I)

Chairpersons: Prof. Matheus Costa (Canada) and Dr. Annika Breitfelder (Germany)

13:45 – 14:20

Keynote lecture: In the shadow of *Streptococcus suis*: A genomic look at emerging streptococcal lineages

Prof. Nahuel Fittipaldi (University of Montreal, CANADA)

14:20 – 14:35

Genome-scale metabolic model atlas of *Streptococcus suis*

Karl Kochanowski (IRTA-CReSA, Spain)

14:35 – 14:50

Genomic and antimicrobial resistance traits of invasive *Streptococcus suis* in Spain

Jesus Arenas Bustos (University of Zaragoza, Spain)

14:50 – 15:30

COFFEE BREAK & POSTER SESSION (40 min)

15:30 – 16:05

Keynote lecture: Zoonotic potential of *Streptococcus suis*

Prof. Constance Schultz (University of Amsterdam, THE NETHERLANDS)

16:05 – 16:20

Population biology of *Streptococcus suis* and emergence of pathogenic lineages

Peter van Baarlen (Wageningen University Research, The Netherlands)

16:20 – 16:35

Emergence of serotype 9 *Streptococcus suis* in Italy and Spain: genomic insights into sequence type 123 with a reduced susceptibility to beta-lactams

Francesca Romana Massacci (Istituto Zooprofilattico, Italy)

16:35 – 17:05

Special lecture: Disease emergence and livestock intensification

Prof. James Wood (University of Cambridge, UK)

17:05 – 17:15

Day 1 closing words and housekeeping messages (Dr. Lucy Weinert)

19:00 – 22:00

FAREWELL DINNER

DAY 2
SEPTEMBER 6TH, 2025

THEME 3

MOLECULAR EPIDEMIOLOGY (Part II), FARM MANAGEMENT AND
DISEASE CONTROL IN THE ERA OF ANTIMICROBIAL REDUCTION

Chairpersons: Prof. Nahuel Fittipaldi (Canada) and Dr. Jose Luis Arnal (Spain)

8:30 — 9:05

Keynote lecture: Phages infecting *Streptococcus suis*: are they there and should we care?

Dr. John Kenny (Teagasc Food Research Centre, IRELAND)

9:05 — 9:20

Incorporation of whole genome sequencing of *Streptococcus suis* into national pig disease surveillance at the Animal and Plant Health Agency, in collaboration with the University of Cambridge

Claire Scott (Animal and Plant Health Agency, England)

9:20 — 9:35

The antiviral defence profile of *Streptococcus suis*

Emmet B. T. Campbell (Queen's University Belfast, UK)

9:35 — 9:50

Can shared antibiotic use promote host jumps? Evidence from zoonotic *Streptococcus suis* in birds

Muriel Dresen (Freie Universität Berlin, Germany)

9:50 — 10:05

Assessment of economic and antibiotic usage impacts of endemic *Streptococcus suis*-related disease in the United Kingdom

Dan Tucker (University of Cambridge - Pembroke College, UK)

10:05 — 10:20

Streptococcus suis serotype 2 is the most contagious respiratory pathogen in piglets

Flemming Thorup (SEGES Innovation, Agro Food Park, Denmark)

10:20 — 11:05

COFFEE BREAK & POSTER SESSION (45 min)

11:05 — 11:40

Keynote lecture: Insights into *Streptococcus suis* prevention and control: progress, pitfalls, and perspectives

Prof. Marcelo Gottschalk (University of Montreal, CANADA)

11:40 — 12:00

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High diversity of *Streptococcus suis* isolates from diseased pigs in Europe and its effective management by autogenous *S. suis* bacterins

Dr. Paloma Suarez (CEVA Animal Health)



12:00 — 13:00

LUNCH & POSTER SESSION (60 min)
(ALL THEMES)

THEME 4

ANTIMICROBIAL RESISTANCE AND POLICY DEVELOPMENT



Chairpersons: Prof. Ján Matiasovic (Czech Republic) and Mr. Emmet Campbell (UK)

13:00 – 13:35

Keynote lecture: Dissemination of antimicrobial resistance genes by chromosomal mobile genetic elements in *Streptococcus suis*

Dr. Sophie Payot (French National Institute for Agriculture, Food, and Environment, FRANCE)

13:35 – 13:55

Invited conference: Adaptation to farming practices: the evolution of pathogenicity and drug-resistance in *Streptococcus suis*

Dr. Gemma Murray (University College London, UK)

13:55 – 14:10

Understanding the development of penicillin resistance in *Streptococcus suis* through Adaptive Laboratory Evolution

Chenxi Liu (University of Cambridge, UK)

14:10 – 14:30

Invited conference: Antibiotic use in pigs in the UK: Progress, solutions and barriers to the global AMR issue

Dr. Mandy Nevel (UK Agriculture and Horticulture Development Board)

14:30 – 15:00

COFFEE BREAK (30 min)

15:00 – 15:20

Invited conference: Insight into *Streptococcus suis* in Thai Pigs: genetic diversity and antimicrobial resistance surveillance

Dr. Suganya Yongkiettrakul (National Center for Genetic Engineering and Biotechnology, THAILAND)

15:20 – 15:35

Factors correlating with human infection via the whole genome sequence analysis of *Streptococcus suis* serotype 2

Ngo Thi Hoa (Oxford University Clinical Research Unit, Vietnam)

15:35 – 15:45

Perspectives on how animal health research priorities are funded by international agencies

Armando Heriazon (International Development Research Centre, Canada)

15:45 – 15:55

General questions and discussions on AMR

15:55 – 16:00

Closing remarks

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