

Fact Sheet

Project Information

AVANT

Grant agreement ID: 862829

Start date

1 January 2020

End date

31 December 2024

Funded under

H2020-EU.3.2.1.1.

Overall budget

€ 6 537 033,75

EU contribution

€ 5 999 905,02

Coordinated by

KOBENHAVNS UNIVERSITET

 **Denmark**

Project description

Substituting antibiotics in livestock

Veterinary use of antimicrobials poses a threat to human health because of the possible transfer of resistant bacteria to people. AVANT aims at developing and testing the efficacy and sustainability of alternatives to antimicrobials for the management of pig enteritis, as this disease condition accounts for the majority of antimicrobials used in food animals. The alternatives under study include gut microbiome modulators, innovative medicines targeting the pathogen or the pig immune response, and feeding strategies for disease prevention. Based on the results of pre-clinical studies, including regulatory considerations, the efficacy of the most promising interventions will be assessed by farm trials. Mathematical modelling will be used to predict the effects of these interventions on reduction of antimicrobial use.

Objective

Antimicrobial resistance in livestock is a public health threat due to the risk of zoonotic transmission to humans and its negative consequences on animal health and welfare when diseases cannot be treated. AVANT is a multi-actor inter-sectorial project aimed at developing alternatives to antimicrobials for the management of bacterial infections in pigs, especially diarrhoea during the weaning period, as the major indication for antimicrobial use in livestock in Europe. Antimicrobial treatment options for pigs are increasingly limited because of planned restrictions in the use of colistin and zinc, two current choices for treatment of post-weaning diarrhoea. The AVANT portfolio comprises a variety of alternatives for treatment or prevention of diarrhoea and/or respiratory infections, namely (i) gut-stabilizing interventions based on a symbiotic (pre- and probiotic) product and faecal microbiota transplantation; (ii) novel veterinary medicinal products containing bacteriophages and polymers for targeted treatment of enterotoxigenic

E.coli infections; (iii) immuno-stimulating injectable and feed additive products, and (iv) alternative feeding strategies targeting sows and piglets. During pre-clinical studies, efficacy, toxicity, and mode of action of these interventions is tested, and their dosage and formulation optimized. The results and a survey for veterinarian-, farmer- and consumers perception of antimicrobial alternatives, will be used together with legal and economic considerations to select three interventions for large-scale farm trials, assessing clinical efficacy and impact on antimicrobial use. All steps are supported by regulatory advice for quick market entry post-project. Generated and existing data on antimicrobial use, pig demographics and projected consumption of pork, will be used in mathematical modelling to estimate the reduction in antimicrobial use that could be achieved by 2030 if the AVANT alternatives were widely adopted in pig production.

Fields of science

Zoonosis, epidemics prevention, antibiotic resistance, pharmaceutical drug

Programme(s)

[H2020-EU.3.2.1.1. - Increasing production efficiency and coping with climate change, while ensuring sustainability and resilience](#)

Topic(s)

[SFS-11-2018-2019 - Anti-microbials and animal production](#)

Call for proposal

H2020-SFS-2019-1

Funding Scheme

IA - Innovation action

Coordinator

KOBENHAVNS UNIVERSITET



Denmark

Address

Norregade 10
1165 København
Denmark

[Website](#)

Activity type

**Higher or Secondary
Education Establishments**

[Contact the organisation](#)

EU contribution

€ 2 254 125

Participants (13)

BIOMIN HOLDING GMBH



Austria

Address

Erber Campus 1
3131 Getzersdorf Bei Traismauer

[Website](#)

Activity type

**Private for-profit entities
(excluding Higher or Secondary
Education Establishments)**

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EU contribution

€ 123 333,38

COOPERL INNOVATION S.A.S



France

Address

7 Rue De La Jeannaie Maroue
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22400 Lamballe

[Website](#)

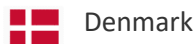
Activity type

**Private for-profit entities
(excluding Higher or
Secondary Education
Establishments)**

[Contact the organisation](#)

EU contribution

€ 240 316,13

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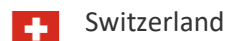
Address

**Ostermollevej 32
7900 Nykobing**

Activity type

**Private for-profit entities
(excluding Higher or Secondary
Education Establishments)**

EU contribution

€ 31 981,25[Contact the organisation](#)**EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH**

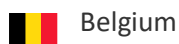
Address

**Raemistrasse 101
8092 Zuerich**

Activity type

**Higher or Secondary Education
Establishments**

EU contribution

€ 260 420[Website](#)[Contact the organisation](#)**FEDERATION OF VETERINARIANS OF EUROPE AISBL**

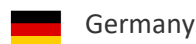
Address

**Avenue De Tervueren 12
1040 Bruxelles**

Activity type

Other

EU contribution

€ 96 041,25[Website](#)[Contact the organisation](#)**KLIFOVET AG**

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Activity type

**Private for-profit entities
(excluding Higher or Secondary
Education Establishments)**

EU contribution

€ 260 181,25[Website](#)[Contact the organisation](#)**LABORATORIOS OVEJERO SA**

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Activity type

**Private for-profit entities
(excluding Higher or Secondary
Education Establishments)**

EU contribution

€ 49 364,88[Website](#)[Contact the organisation](#)**LANDBRUG & FODEVARER F.M.B.A.**

Address

**Axeltorv 3
1609 Kobenhavn V**


Activity type

Research Organisations

EU contribution

€ 282 541,25[Website](#)[Contact the organisation](#)

RTDS - VEREIN ZUR FORDERUNG DER KOMMUNIKATION UND VERMITTLUNG VON FORSCHUNG, TECHNOLOGIE UND INNOVATION (RTDS VEREIN, ENGL. RTDS ASSOCIATION)

 Austria

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Activity type
Other

[Contact the organisation](#)

EU contribution
€ 357 791,25

SCHOTHORST FEED RESEARCH B.V.

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8200AM Lelystad

[Website](#)

Activity type
Private for-profit entities
(excluding Higher or Secondary
Education Establishments)

[Contact the organisation](#)

EU contribution
€ 548 121,88

STICHTING WAGENINGEN RESEARCH

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6708 PB Wageningen


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Activity type
Research Organisations

[Contact the organisation](#)

EU contribution
€ 393 931,25

THE ROYAL VETERINARY COLLEGE

 United Kingdom

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Royal College Street
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[Website](#)

Activity type
Higher or Secondary Education
Establishments

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EU contribution
€ 586 756,25

UNIVERSIDAD COMPLUTENSE DE MADRID

 Spain

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Activity type
Higher or Secondary Education
Establishments

[Contact the organisation](#)

EU contribution
€ 515 000

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