

Supplementary Tables

Table S1. Distribution of laboratory techniques and standards use by each partner or programme

Country	Partner or programme	AST technique	Microdilution technique	AST standard	Bacterial identification technique
Denmark	UCPH	microdilution	commercial microtiter plates	CLSI	MALDI-TOF MS
Denmark	Laboratory for Pig Diseases	microdilution	commercial microtiter plates	CLSI	Colony morphology, selective agars, agglutinations or MALDI-TOF MS
Finland	FINRES-Vet	microdilution	commercial microtiter plates	CLSI	API galleries or MALDI-TOF MS
France	RESAPATH	disk diffusion		CA-SFM Vet	API galleries or MALDI-TOF MS
Germany	GERM-Vet	microdilution	commercial microtiter plates	CLSI	MALDI-TOF MS
Germany	LABOKLIN	microdilution	MERLIN Diagnostika GmbH	CLSI	MALDI-TOF MS
Italy	AniCura	microdilution	VITEK 2®	CLSI	MALDI-TOF MS
Norway	NORM-VET	microdilution	commercial microtiter plates	ISO 20776-1:2019 (EUCAST)	MALDI-TOF MS
Spain	SEVAE	microdilution, disk diffusion	commercial microtiter plates	CLSI	VITEK or MALDI-TOF MS
Sweden	SVA	microdilution	commercial microtiter plates	ISO 20776-1:2019 (EUCAST)	MALDI-TOF MS
Switzerland	ZOBA	microdilution	commercial microtiter plates	CLSI	MALDI-TOF MS

Table S2. EARS-Vet data dictionary

Name of the variable	Expected values
Isolate ID	Fully-anonymized or pseudo-anonymized ID, for example i_FR1, i_FR2, i_FR3 (for the list of French isolates)
Animal ID	Fully- anonymized or pseudo-anonymized ID, for example a_FR1, a_FR2, a_FR3
Herd ID	Fully- anonymized or pseudo-anonymized ID, for example h_FR1, h_FR2, h_FR3
Country	
Year of sampling	2016 to 2020
Animal host	cat / cattle / chicken / dog / turkey / swine
Production type	broiler / layer / dairy / beef / piglet / fatterer / sow / not available
Specimen	ear/ faeces / inner organs / joints / lung / milk / skin / urine / not available
Bacterial species	<i>Actinobacillus pleuropneumoniae</i> / <i>Escherichia coli</i> / <i>Klebsiella pneumoniae</i> / <i>Mannheimia haemolytica</i> / <i>Pasteurella multocida</i> / <i>Staphylococcus aureus</i> / <i>Staphylococcus hyicus</i> / <i>Staphylococcus pseudintermedius</i> / <i>Streptococcus dysgalactiae</i> / <i>Streptococcus suis</i> / <i>Streptococcus uberis</i>
AST technique	microdilution / disk diffusion
AST standard	CLSI / EUCAST / CA-SFM Vet
Antibiotic agent	amoxicillin / amoxicillin + clavulanic acid / ampicillin / cephalexin / cefalotin / cefazolin / cefepime / cefotaxime / ceftiofur / cefovecin / ceftiofur / cefpodoxime / ceftiofur / chloramphenicol / ciprofloxacin / colistin / daptomycin / doxycycline / enrofloxacin / ertapenem / erythromycin / florfenicol / flumequine / gentamicin / imipenem / lincomycin / linezolid / marbofloxacin / meropenem / moxifloxacin / nalidixic acid / neomycin / oxacillin / oxytetracycline / penicillin / piperacillin-tazobactam / rifampicin / streptomycin / sulfamethoxazole – trimethoprim / tetracycline / tiamulin / tigecycline / tilmicin / tulathromycin / vancomycin
Disk diameter or MIC value	Value of the inhibition zone diameter (in mm) or the minimum inhibitory concentration (in mg/L or µg/mL)
Disk concentration	Concentration of the antibiotic drug in the disc (in µg)
Virulence testing technique	PCR / serotyping / haemolysis / haemolysis+PCR / other
Virulent strain	yes / no / not available
ESBL/AmpC confirmation technique	disk diffusion / EUVSEC2 panel / chromagar / PCR / other
ESBL/ AmpC profile	yes / no / not available
PCR <i>mecA</i> or <i>mecC</i> positive	yes / no / not available

Table S3. Number of isolates included per bacterial species and partner or programme

Bacterial species	AniCura	FINRES-Vet	GERM-Vet	LABOKLIN	Laboratory for Pig Diseases	NORM-VET	RESAPATH	SEVAE	SVA	UCPH	ZOBA
<i>Actinobacillus pleuropneumoniae</i>	0	136	136	0	649	21	828	458	0	0	0
<i>Escherichia coli</i>	166	508	0	47	2369	378	78723	743	8091	989	657
<i>Klebsiella pneumoniae</i>	0	0	0	0	0	4	580	0	214	0	0
<i>Mannheimia haemolytica</i>	0	334	373	0	80	0	1393	2	23	0	0
<i>Pasteurella multocida</i>	0	1130	915	0	151	0	2419	219	344	0	0
<i>Staphylococcus aureus</i>	4	118	0	30	0	0	5466	0	465	63	123
<i>Staphylococcus hyicus</i>	0	52	118	0	49	0	237	43	11	0	0
<i>Staphylococcus pseudintermedius</i>	0	0	503	75	0	156	10223	0	7311	1251	85
<i>Streptococcus dysgalactiae</i>	0	0	136	0	0	0	1053	0	18	0	0
<i>Streptococcus suis</i>	0	62	663	0	700	0	1236	316	28	0	0
<i>Streptococcus uberis</i>	0	0	428	0	0	0	5807	0	37	0	163

Table S4. Number of isolates with confirmed virulence, ESBL/AmpC or *mecA/mecC* profiles

Country	Partner or programme	Virulence confirmation*	ESBL/AmpC confirmation	<i>mecA/mecC</i> confirmation**
Denmark	UCPH	-	-	-
Denmark	Laboratory for Pig Diseases	1,343	-	-
Germany	LABOKLIN	-	47	-
Germany	GERM-Vet	-	-	24
Finland	FINRES-Vet	263	55	7
France	RESAPATH	-	-	-
Italy	AniCura	-	-	-
Norway	NORM-VET	-	3	-
Spain	SEVAE	-	-	-
Sweden	SVA	242	35	120
Switzerland	ZOBA	2	-	-
Total		1,850	140	151

* In accordance with the EARS-Vet scope, virulence data were collected only for swine *E. coli*

** *mecA / mecC* confirmation only applied to *Staphylococcus* spp.