



Kansas State University Research Foundation

TECHNOLOGY LICENSING PROFILE

PRRSV Resistant Pigs

REF. NO. (2017-050)

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Description: Researchers at Kansas State University have discovered small mutations in the CD163 gene of pigs that confers resistance to porcine reproductive and respiratory syndrome virus (PRRSV) without disrupting the beneficial functions of CD163.

Other research teams have shown the complete knockout of CD163 confers complete resistance to PRRSV infection. Since CD163 is important for maintaining several homeostatic processes, such as scavenging excess hemoglobin and regulating inflammation after tissue damage, the complete loss of CD163 comes at a price.

K-State's research discovery will allow swine genetic companies to develop pigs that are resistant to PRRSV without creating potentially new health issues from completely knocking out the CD163 gene.

Advantages:

- PRRSV resistance
- Maintaining the beneficial functions of the CD163 gene

Applications:

- Improved swine genetics

Patent Status: Patent Pending