



2019年第14期总181期

## 动物营养专题

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## ▶ 前沿资讯

### 1 . Next generation no-tag herd monitoring system tracks day and night(下一代无标签群体监控系统全天跟踪)

简介: As production increasingly intensifies to meet consumer demand, efficiently monitoring both individual pig and herd health is a challenge that the pig industry has to face. Particularly in large, commercial herds, reliance solely on human observation means data collection is time consuming, time limited and subject to human error. Animal behaviour is also known to change around stockworkers and visitors to the barn so round-the-clock, continuous and undisturbed monitoring is required to gain the most accurate representation of an animal's or a herd's behaviour. As production increasingly intensifies to meet consumer demand, efficiently monitoring both individual pig and herd health is a challenge that the pig industry has to face. Particularly in large, commercial herds, reliance solely on human observation means data collection is time consuming, time limited and subject to human error. Animal behaviour is also known to change around stockworkers and visitors to the barn so round-the-clock, continuous and undisturbed monitoring is required to gain the most accurate representation of an animal's or a herd's behaviour.

来源: the pig site

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全文链接:

<https://thepigsite.com/articles/next-generation-no-tag-herd-monitoring-system-tracks-day-and-night>

### 2. 我国智能畜牧业进入黄金窗口期

简介: 4月2日,中国畜牧业协会在京举行新闻发布会,宣布成立中国畜牧业协会智能畜牧分会,全面拥抱信息化,引导传统畜牧业向“智能畜牧”转型发展,推动中国畜牧业驶入智能化发展轨道。智能畜牧分会的成立,标志着我国智能畜牧业进入一个新的历史发展阶段,将为智能畜牧产业营造一个数据动态、数据即时、数据真实、数据共享、网络安全、平台开放、共享共生的生态环境。智能畜牧分会将以协同创新、集群集约、智能融合、高效生态为导向,逐步建立起比较完善的智能畜牧业规范体系,使智能化、信息化与现代畜牧业深度融合,促进畜牧业整体水平再上一个台阶,最终实现生产智能化、经营网络化、管理数据化、服务在线化。

来源: 中国农业新闻网-农民日报

发布日期:2019-04-03

全文链接:

[http://www.farmer.com.cn/jjpd/xm/xmdt/201904/t20190403\\_1439273.htm](http://www.farmer.com.cn/jjpd/xm/xmdt/201904/t20190403_1439273.htm)

### 3. 郑金水小组在动物肠道微生物组研究获新进展

简介: 近日, Microbiome杂志在线刊发了我院郑金水研究小组与加拿大阿尔伯特大学的 Micheal G&auml;nzle教授课题组合作的题为” Metagenomic reconstructions of gut microbial metabolism in weanling pigs” 的研究论文。该论文揭示了乳猪食性转换

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前后对碳水化合物发挥主要代谢功能的具体微生物组成员,并报道了来自猪肠道的大量微生物参照基因组。

来源: 华中农业大学

发布日期:2019-03-27

全文链接:

<http://coi.hzau.edu.cn/info/1012/4750.htm>

#### 4. 哈尔滨兽医研究所国家非洲猪瘟专业实验室在我国非洲猪瘟流行毒株病原生物学研究方面取得进展

简介: 我国发生非洲猪瘟 (ASF) 疫情后, 中国农业科学院哈尔滨兽医研究所国家非洲猪瘟专业实验室按照农业农村部及中国农业科学院党组工作部署, 依托国家动物疫病防控高级别生物安全实验室, 紧急组织ASF科技攻关。目前, 已在非洲猪瘟病毒 (ASFV) 病原生物学和分子流行病学方面取得系列进展。该实验室成功分离了我国第一株ASFV, 对其感染性、致病力和传播能力等生物学特性进行了较为系统的研究, 并建立了动物感染模型; 初步阐明了我国ASFV流行毒株的基因组特点和进化关系, 为我国ASF疫情的有效防控提供了重要科学依据, 为检测技术和防治疫苗研发奠定了重要基础。相关研究结果先后发表在新发传染病专业期刊《Emerging Microbes and Infections》。

来源: 中国农业科学院哈尔滨兽医研究所

发布日期:2019-03-23

全文链接:

<http://www.hvri.ac.cn/xwzh/zhd/179513.htm>

## ➤ 学术文献

### 1 . Porcine Intestinal Enteroids: a New Model for Studying Enteric Coronavirus Porcine Epidemic Diarrhea Virus Infection and the Host Innate Response (猪肠道: 一种研究肠道冠状病毒猪流行性腹泻病毒感染和宿主先天反应的新模型)

简介: ABSTRACT Porcine epidemic diarrhea virus (PEDV), a member of the group of alphacoronaviruses, is the pathogen of a highly contagious gastrointestinal swine disease. The elucidation of the events associated with the intestinal epithelial response to PEDV infection has been limited by the absence of good in vitro porcine intestinal models that recapitulate the multicellular complexity of the gastrointestinal tract. Here, we generated swine enteroids from the intestinal crypt stem cells of the duodenum, jejunum, or ileum and found that the generated enteroids are able to satisfactorily recapitulate the complicated intestinal epithelium in vivo and are susceptible to infection by PEDV. PEDV infected multiple types of cells, including enterocytes, stem cells, and goblet cells, and exhibited segmental infection discrepancies compared with ileal enteroids and colonoids, and this finding was verified in vivo. Moreover, the clinical isolate PEDV-JMS propagated better in ileal enteroids than the cell-adapted isolate PEDV-CV777, and PEDV infection suppressed interferon (IFN) production early during the infection course. IFN lambda elicited a potent antiviral response

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and inhibited PEDV in enteroids more efficiently than IFN alpha (IFN- $\alpha$ ). Therefore, swine enteroids provide a novel in vitro model for exploring the pathogenesis of PEDV and for the in vitro study of the interplay between a host and a variety of swine enteric viruses.

来源: Journal of virology

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全文链接:

[http://agri.ckcest.cn/file1/M00/06/69/Csgk0Fy1V-OAUSjOAd\\_pbD-rxkE295.pdf](http://agri.ckcest.cn/file1/M00/06/69/Csgk0Fy1V-OAUSjOAd_pbD-rxkE295.pdf)