

Desayunos UMU-Empresa:

Sector ganadería y salud y bienestar animal

JOAQUIN GADEA MATEOS
jgadea@um.es



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<https://www.um.es/fisiorep/>

¿Quiénes somos?

Departamento de Fisiología

Profesores (7)

Estudiantes de doctorado (2)

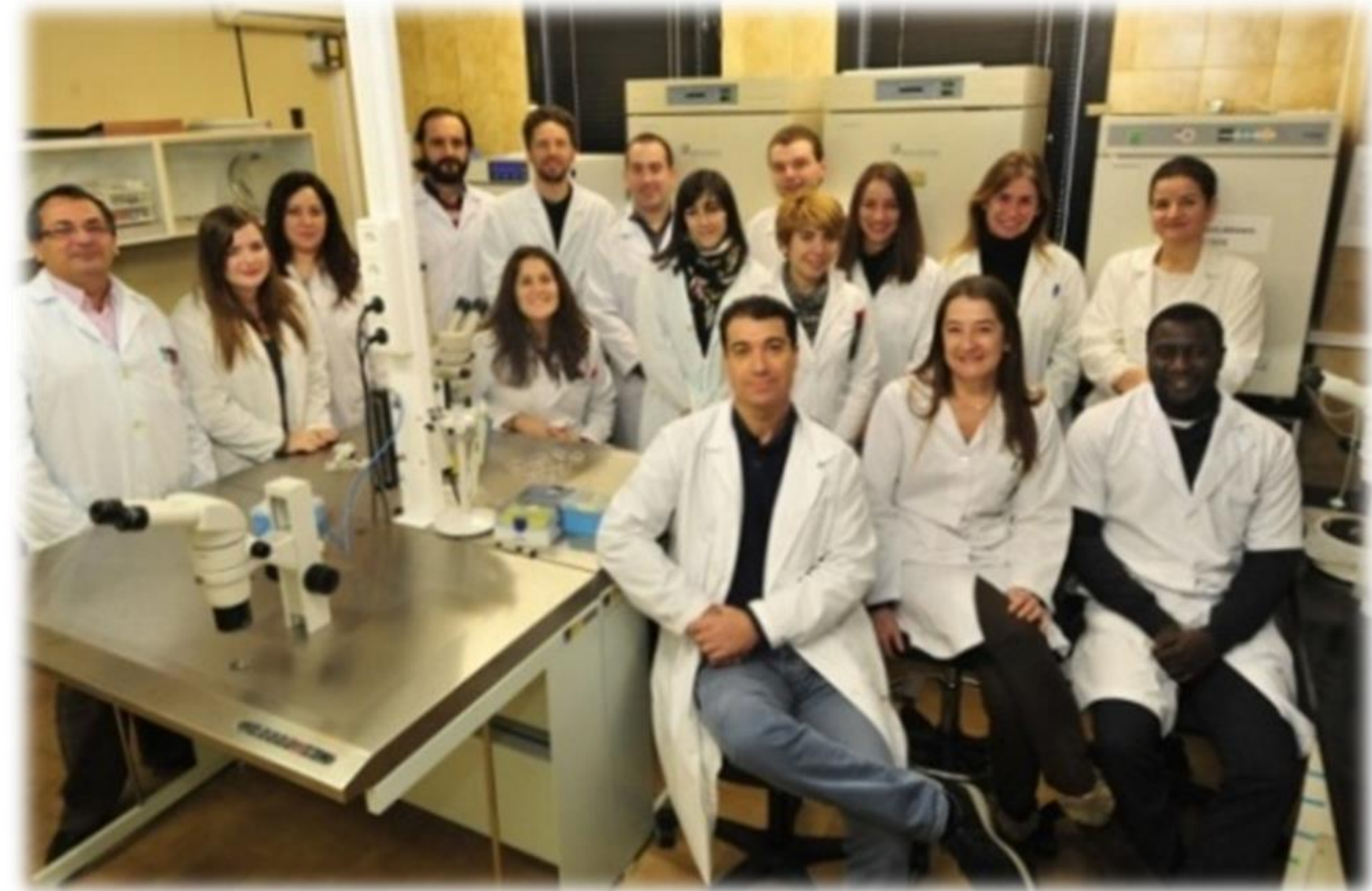
Investigadores Postdoc (3)

Investigadores en proyectos (4)

Colaboradores externos (2)

Personal Técnico y administrativo (2)

Visitantes (variable)

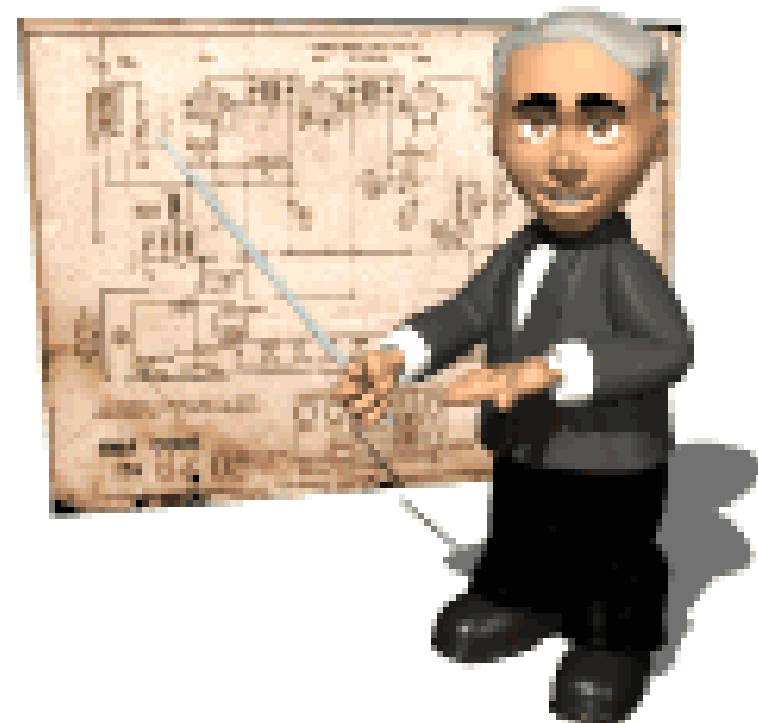


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¿Qué hacemos?

Docencia

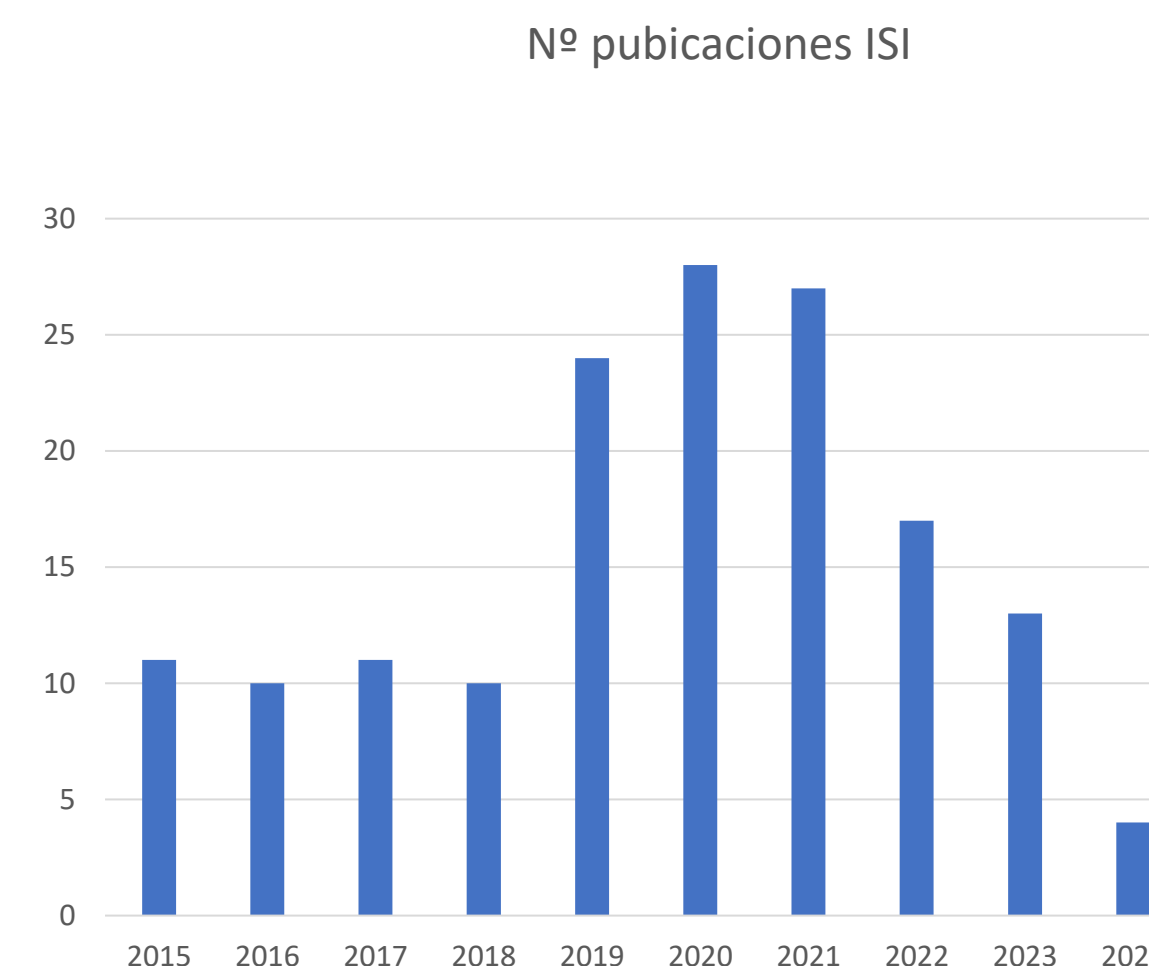


- Fisiología en **Grado** de Veterinaria
- **Máster** en Biología y Tecnología de la Reproducción
- **Doctorado** en Biología y Tecnología de la Salud Reproductiva

Investigación

Biología Reproductiva

Periodo 2015-2024
145 artículos en revistas ISI



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¿Qué hacemos?

Transferencia

- **Patentes y Modelos de Utilidad**
- **Empresas de Base Tecnológica (EBT)**
- **Colaboraciones/contratos con empresas**



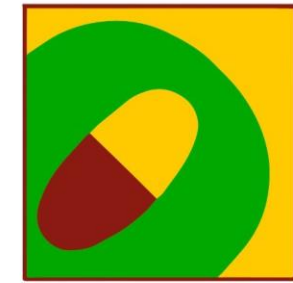
- **Colaboraciones/contratos con empresas (temas)**

- **Análisis seminal**
- **Manejo reproductivo**
- **Uso de hormonas reproductivas**
- **Fecundación in vitro**
- **Cerdos editados genéticamente**
- **otros**



- **Colaboraciones/contratos con empresas (algunos ejemplos)**

Asesoría técnica

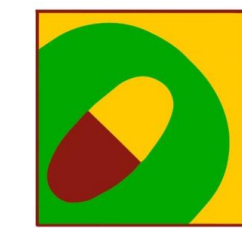


Ovigen



**Biogénesis
Bagó**

Formación específica y avanzada



Ovigen



Personal en formación (máster)



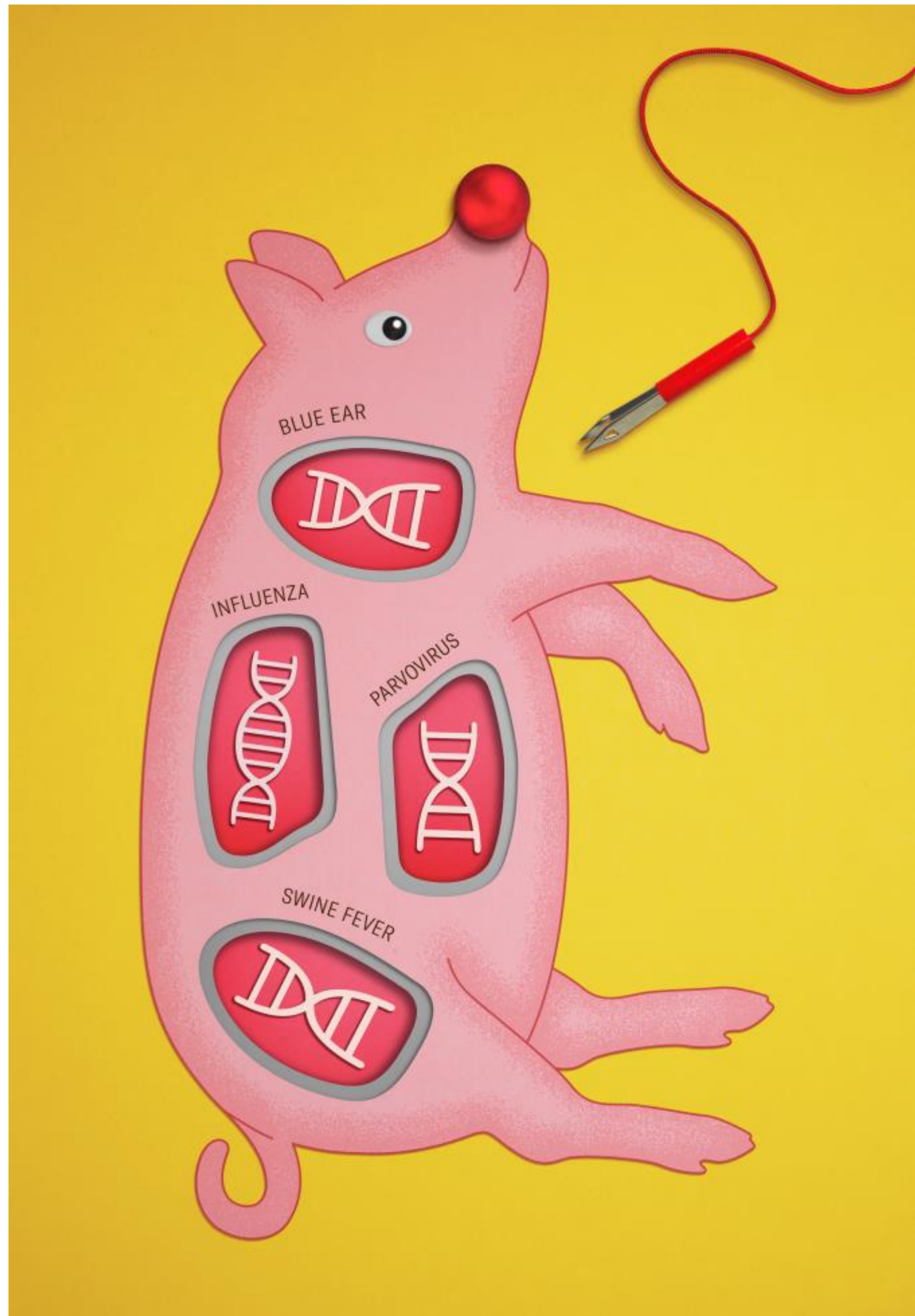
**Desarrollo de proyectos investigación
y desarrollo**



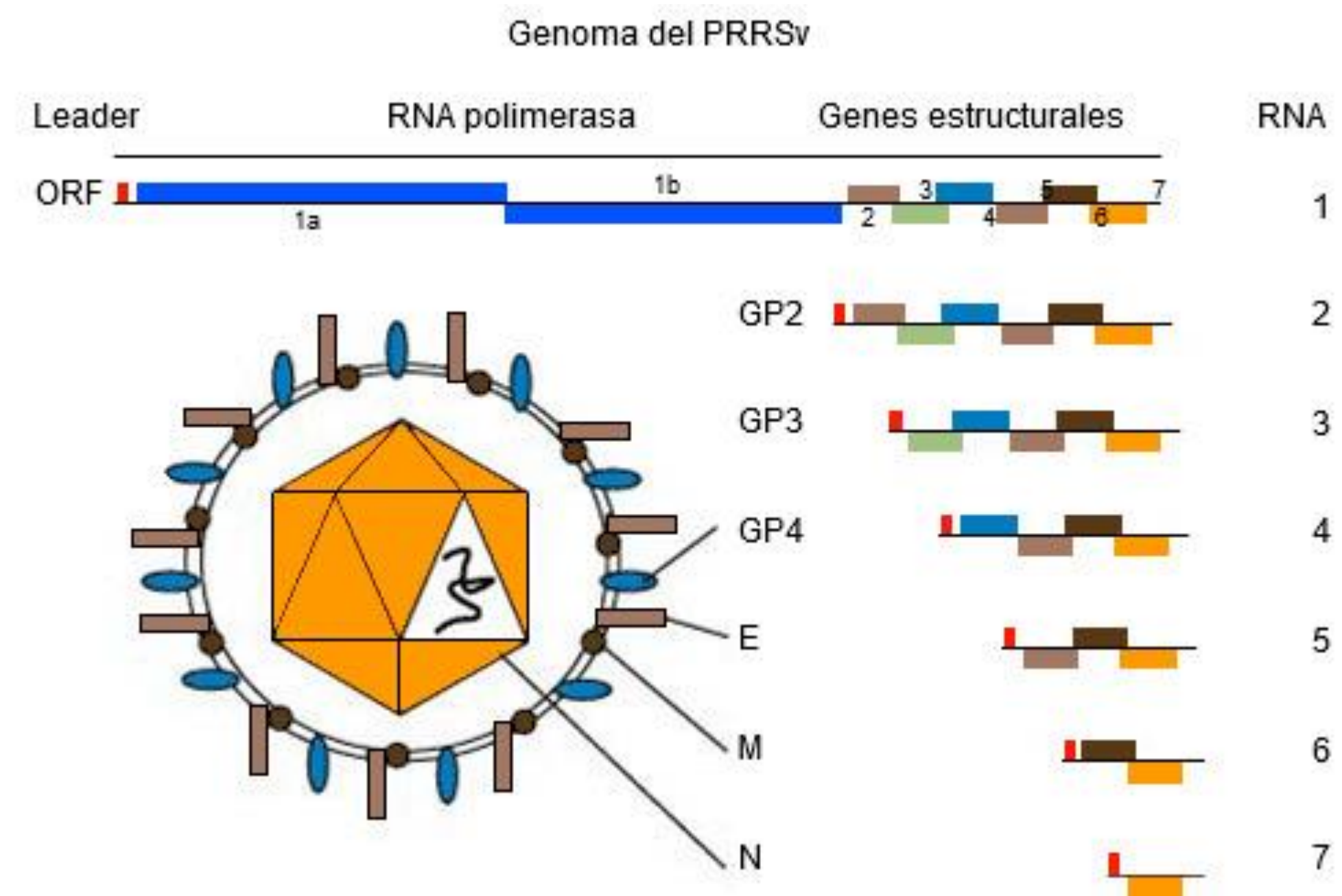
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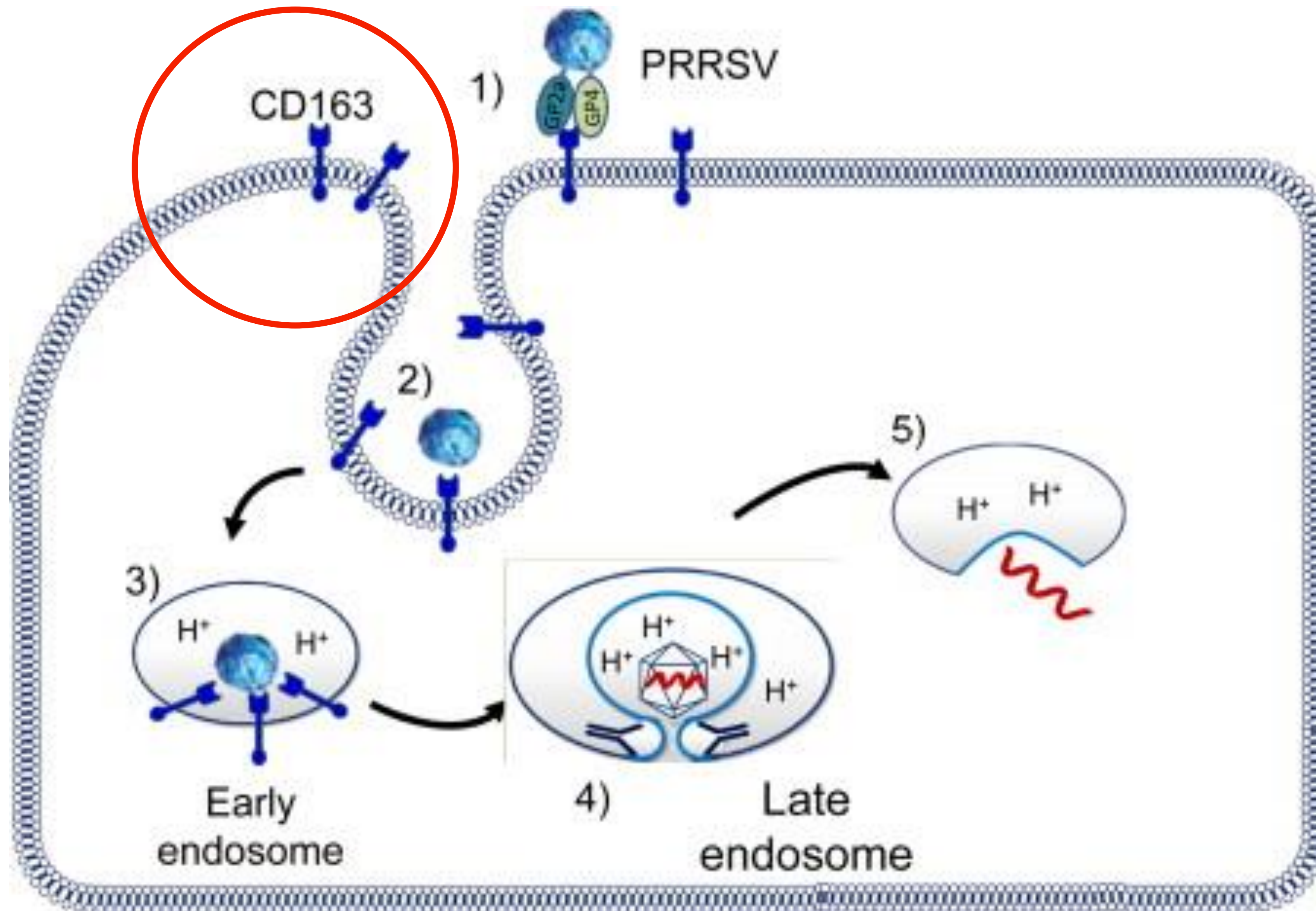
Resistencia a infecciones víricas (PRRS e influenza porcina)



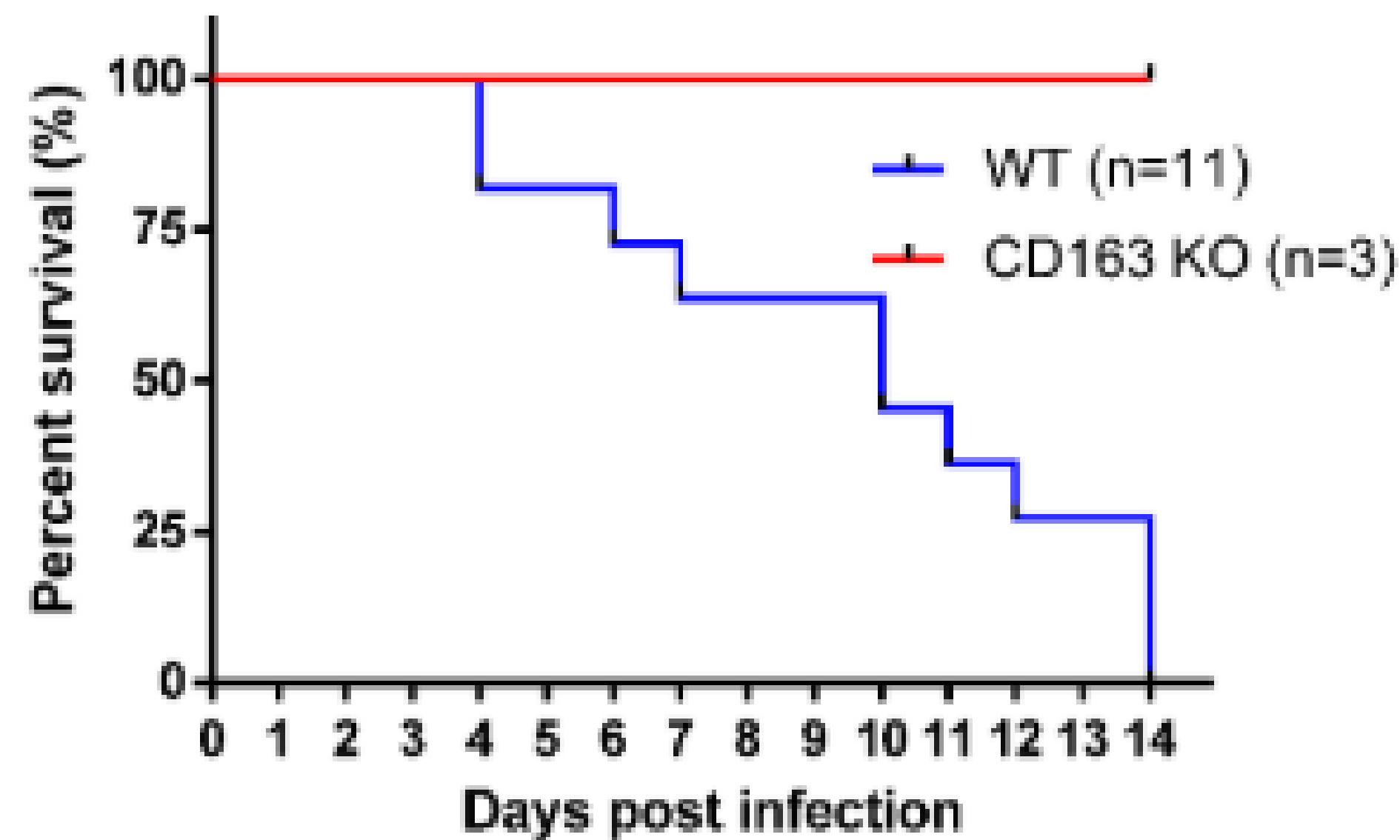
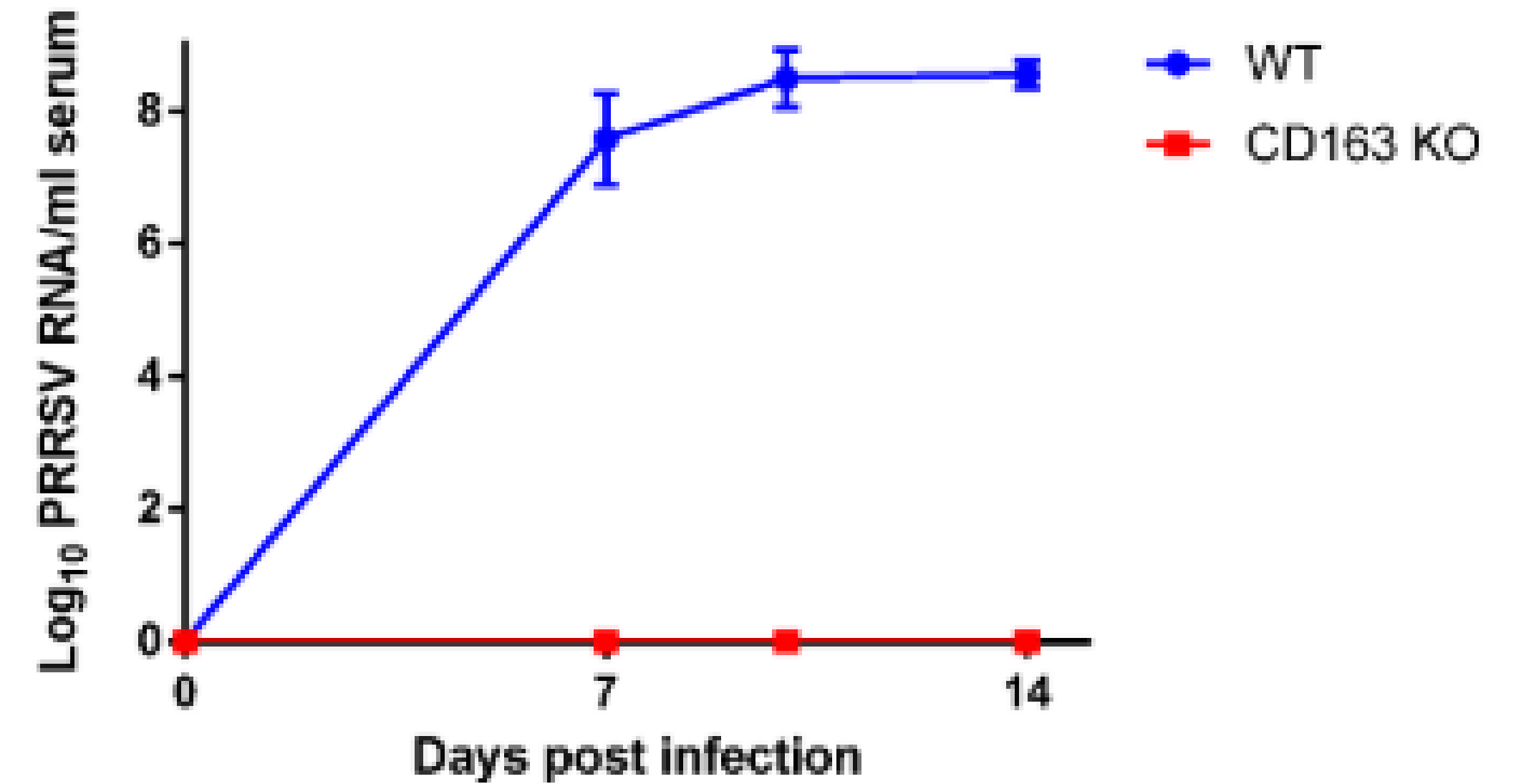
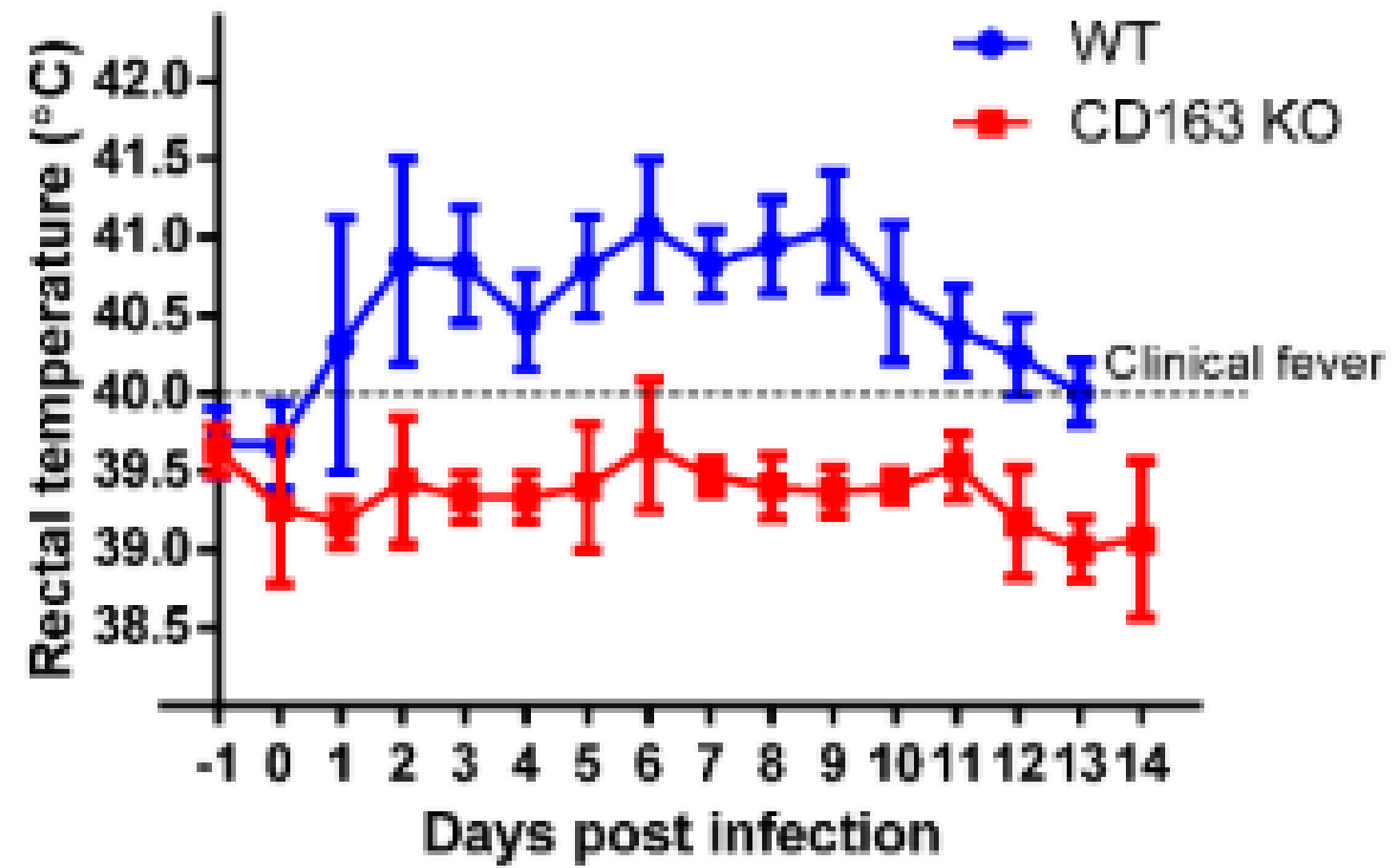
Selman Design



Mecanismo de infección del PRRSV

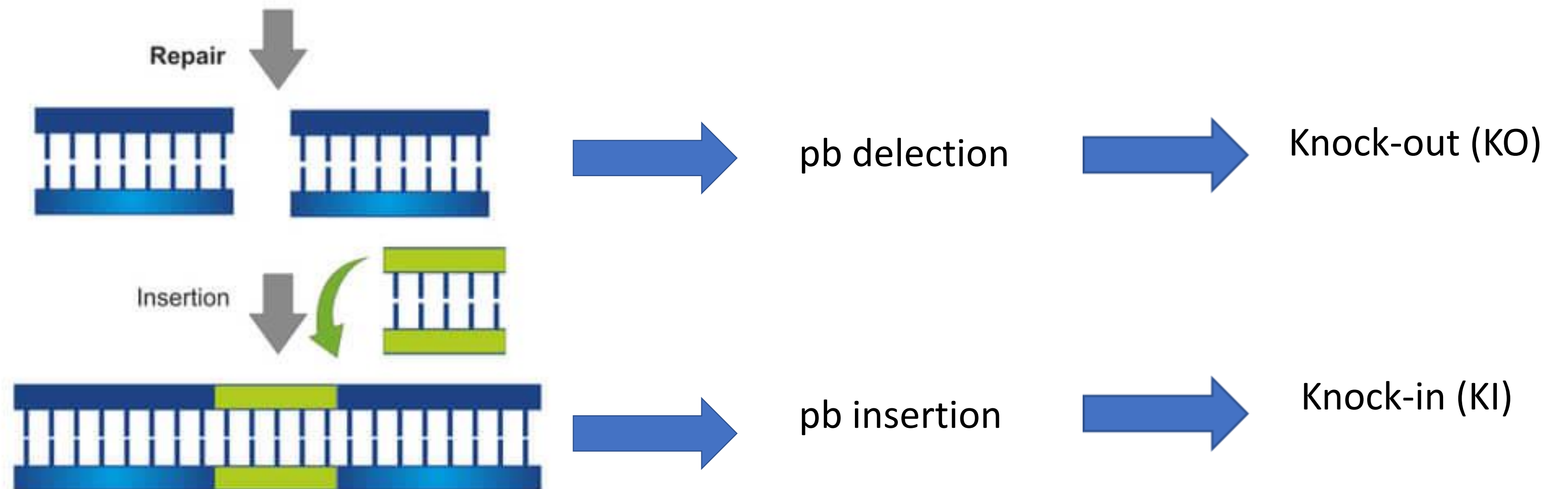
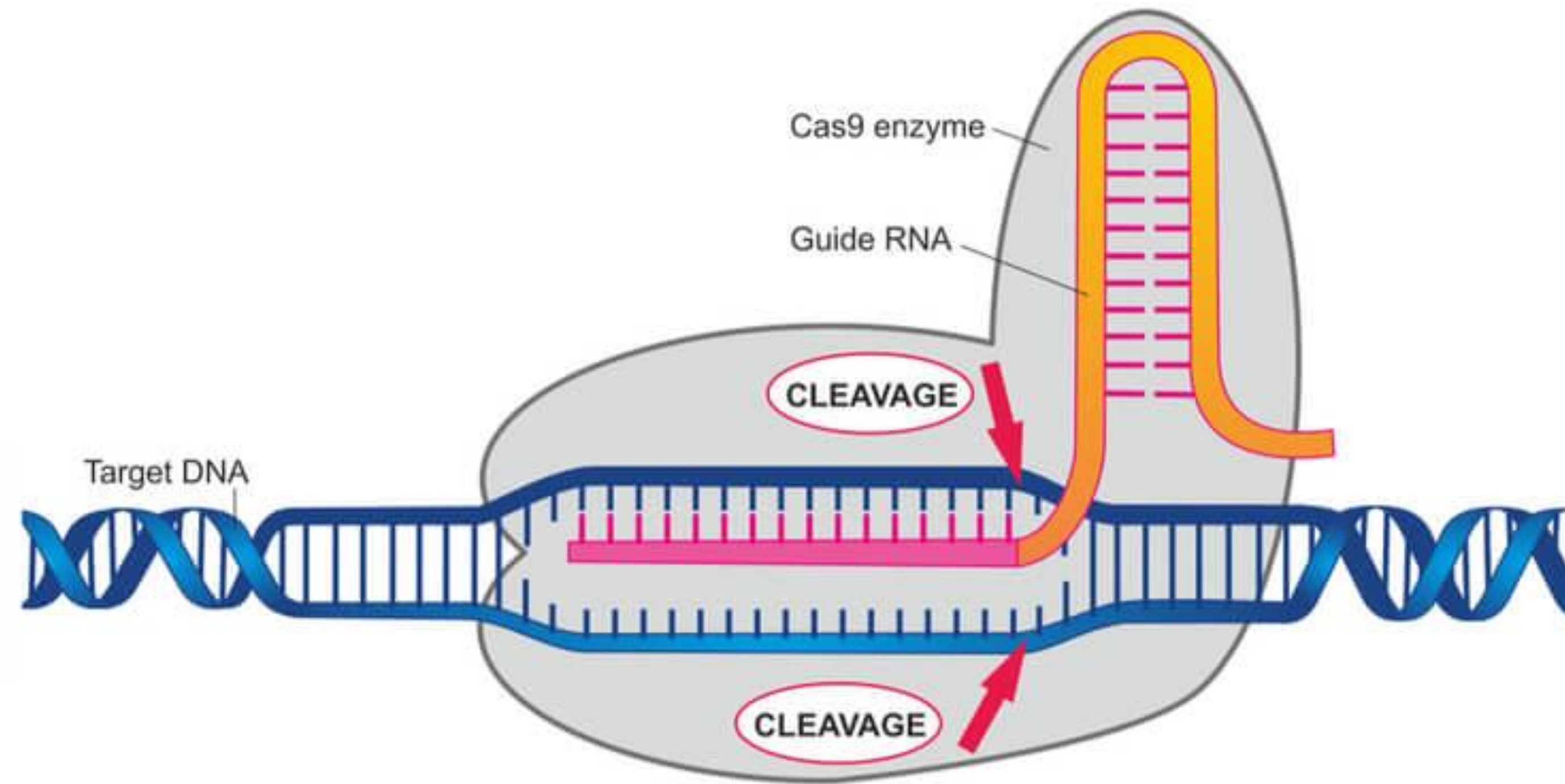


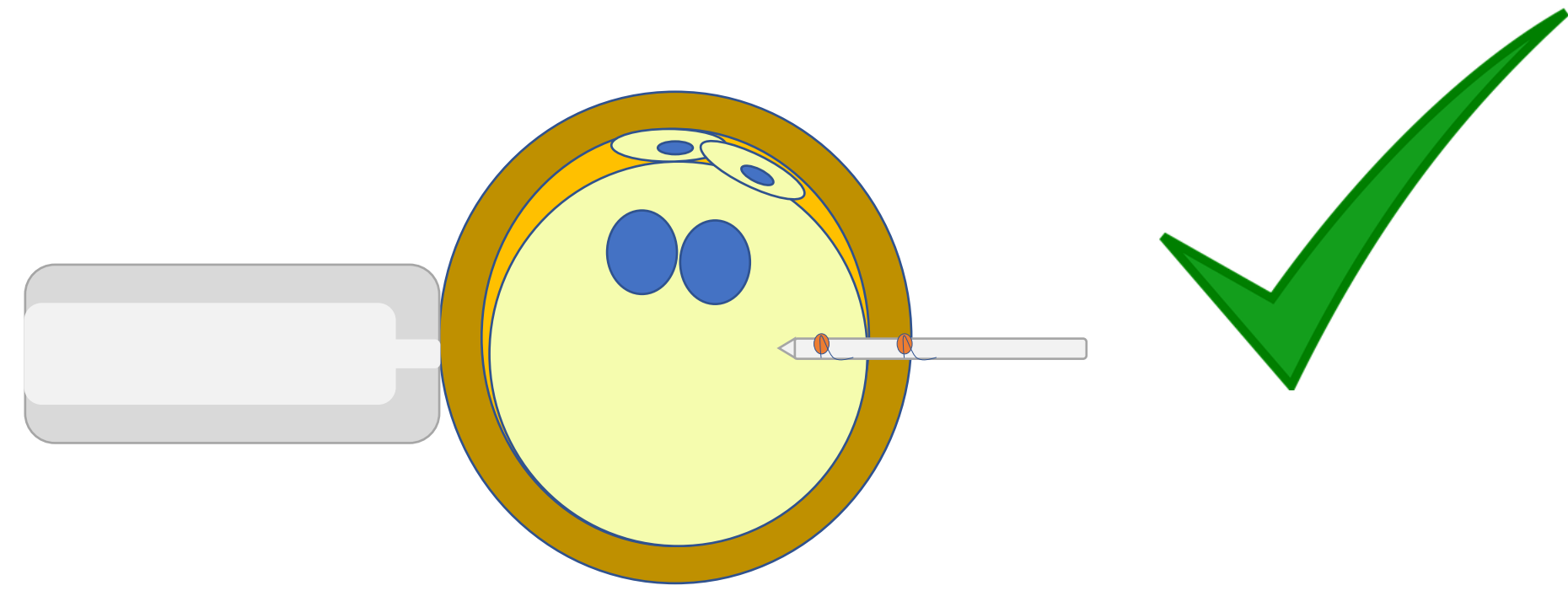
Efecto de la generación de un cerdo KO en CD163 en la infección por PRRSV



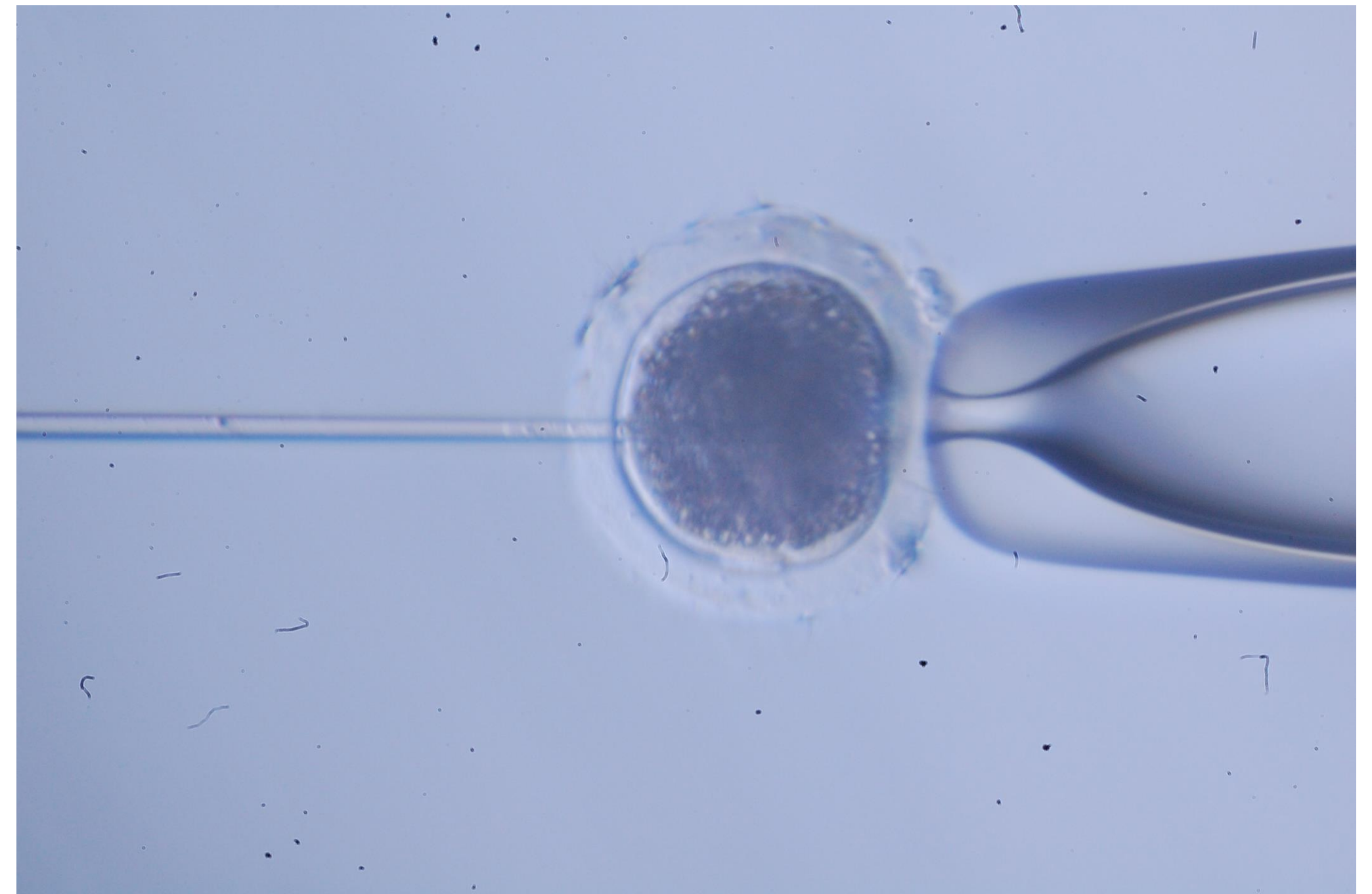
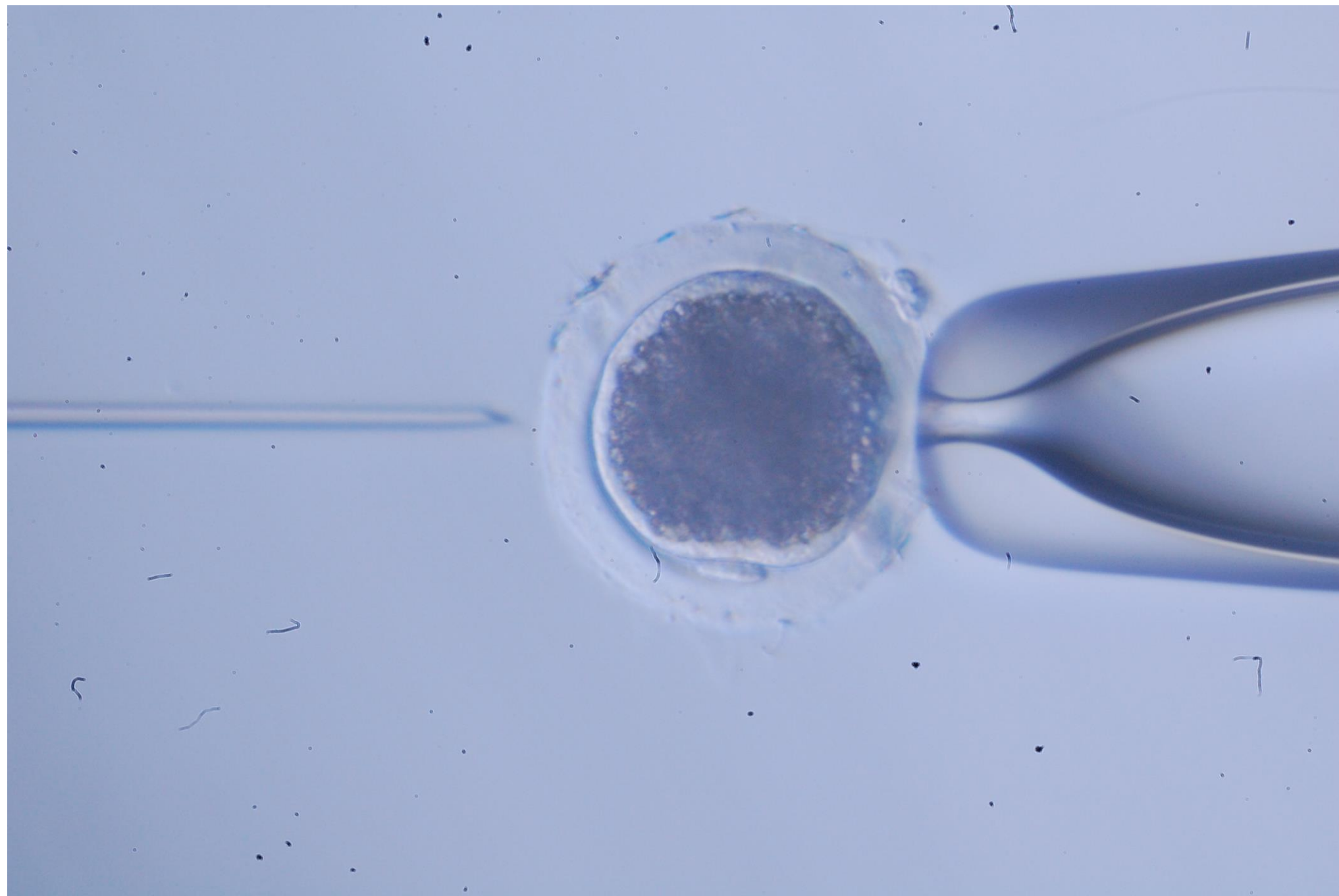
Yang et al 2018,
Antiviral Research

Crispr-Cas technology



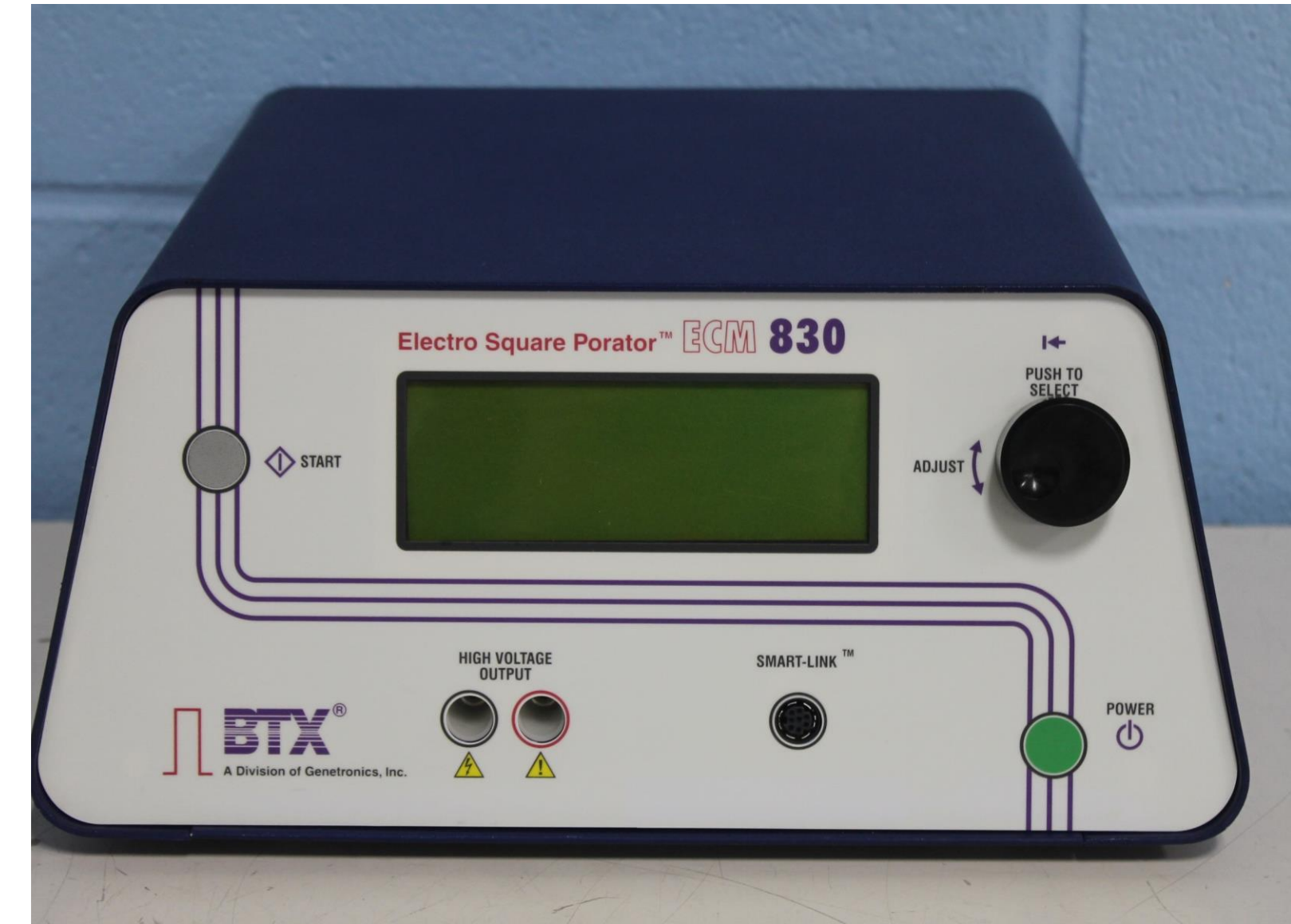
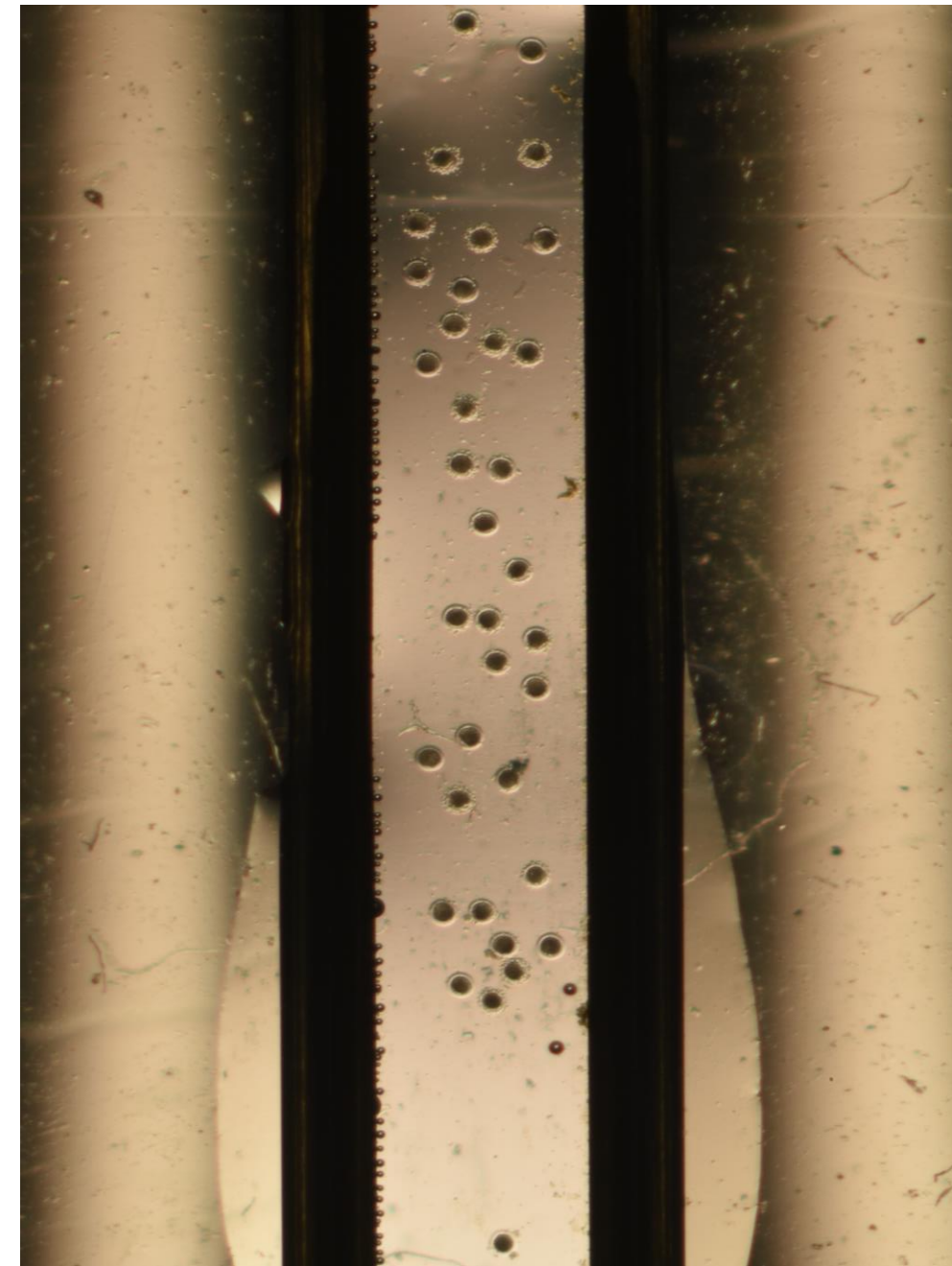
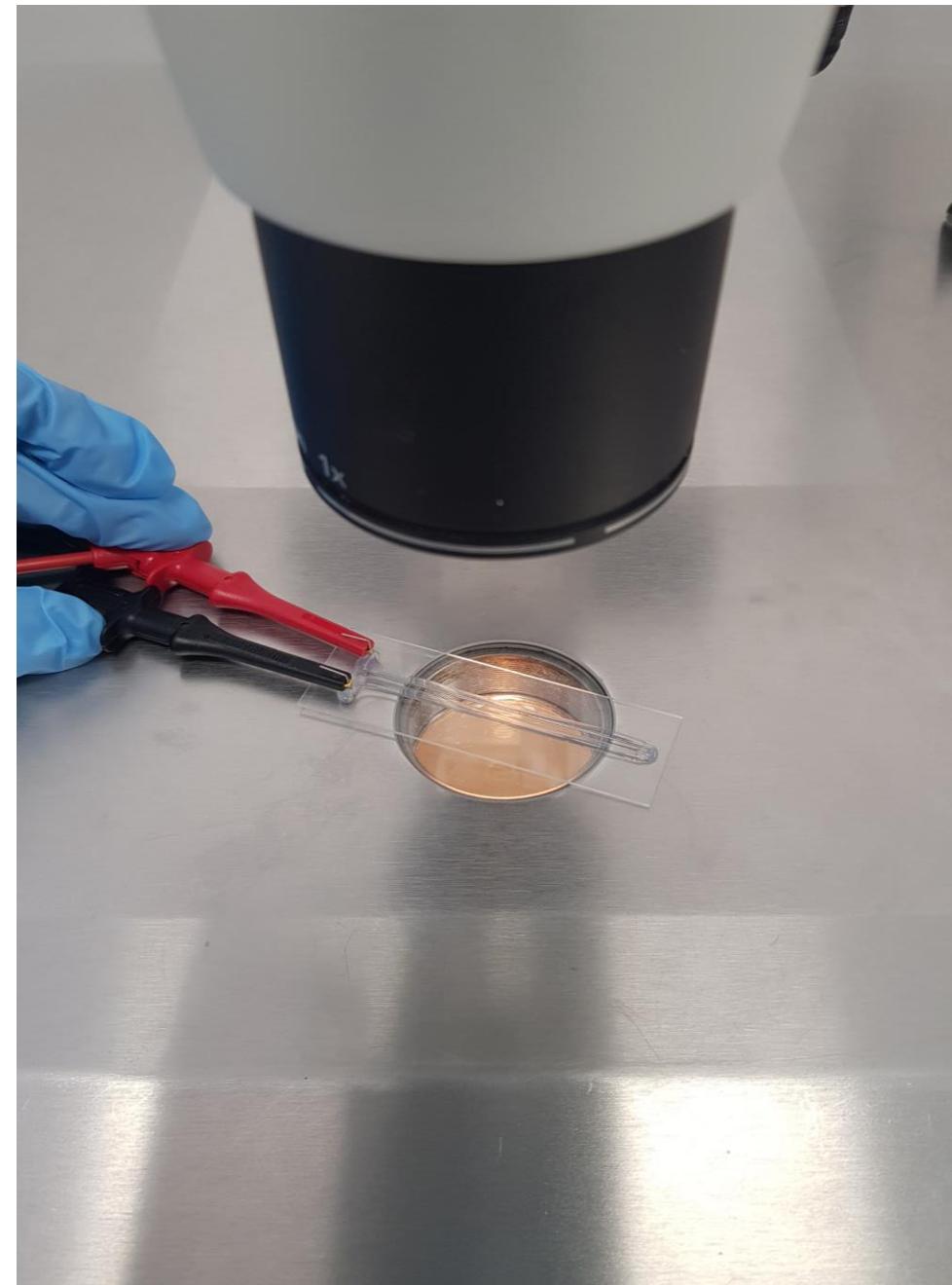
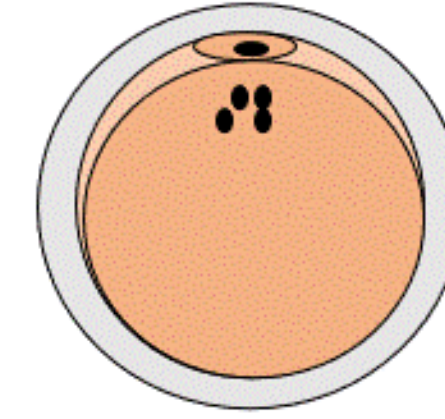


CRISPR intracytoplasmic microinjection

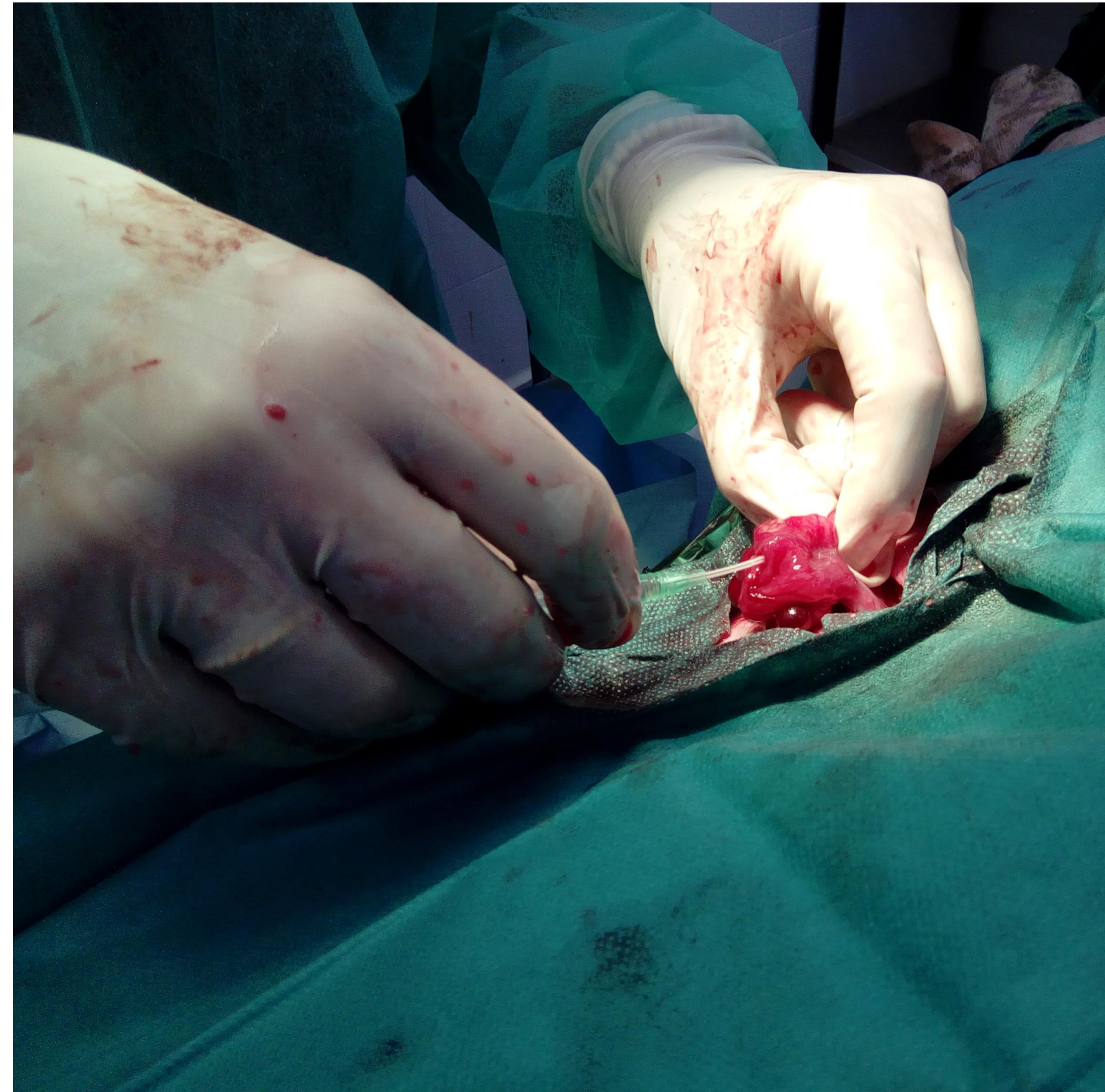
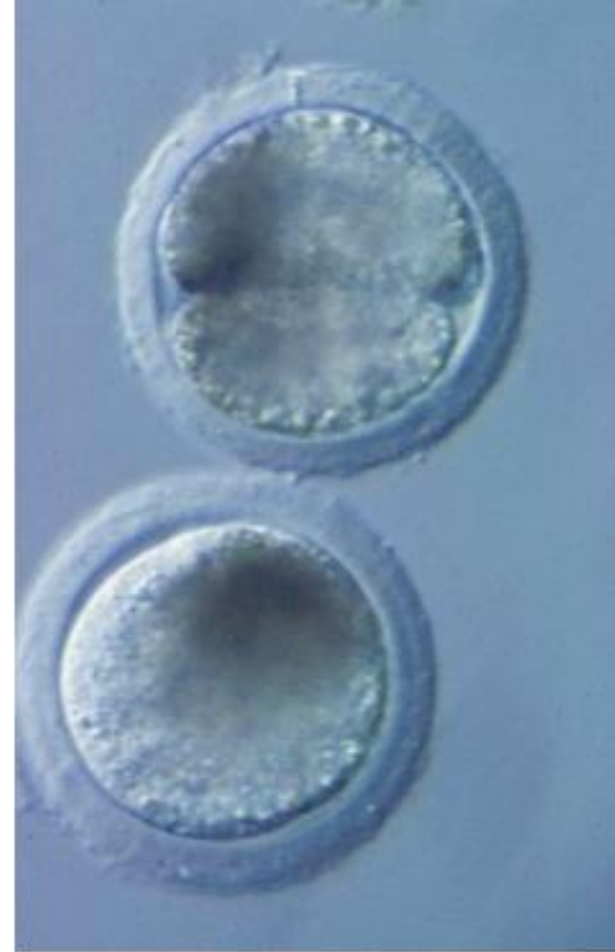


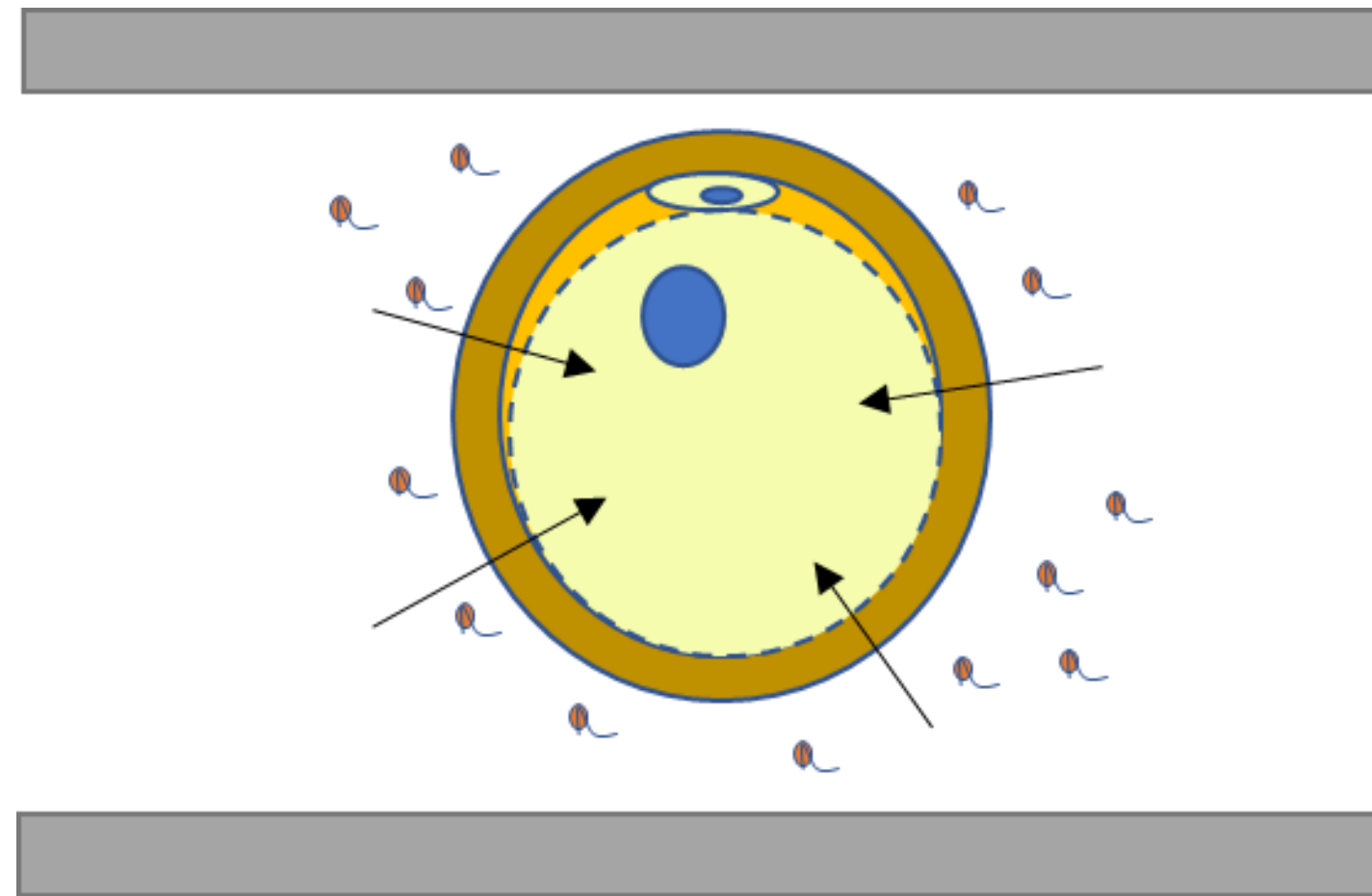


Electroporation



Transferencia de embriones





Electroporation

Lipofection

Resistencia a infecciones víricas (PRRS e influenza porcina)

Article

Production of Genetically Modified Porcine Embryos via Lipofection of Zona-Pellucida-Intact Oocytes Using the CRISPR/Cas9 System

Celia Piñero-Silva ¹, Sergio Navarro-Serna ¹, Ramsés Belda-Pérez ^{1,2} and Joaquín Gadea ^{1,*}

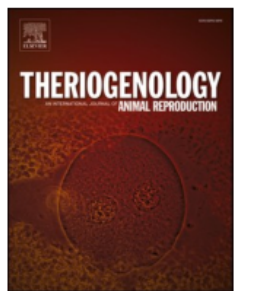
Theriogenology 218 (2024) 111–118



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Theriogenology

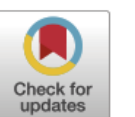
journal homepage: www.theriojournal.com



Original Research Article

Oocyte electroporation prior to *in vitro* fertilization is an efficient method to generate single, double, and multiple knockout porcine embryos of interest in biomedicine and animal production

Sergio Navarro-Serna ^{a,1}, Celia Piñero-Silva ^{a,1}, Irene Fernández-Martín ^a, Martxel Dehesa-Etxebeste ^b, Adolfo López de Munain ^{b,c,d,e}, Joaquín Gadea ^{a,*}





Bio-models in development

Calcium signalling: TPC2, TPC1, PLCzeta (reproduction)

Neuromuscular diseases: CALP3, FUS-ALS

Porcine diseases resistance: PRRS and Influenza

Xenotransplantation: GGTA1, CMAH, B4GALNT2, GHR

Cardiopathies: xxx

Hearing loss: yyyy



Gracias

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