

Cómo controlar el CAEV y otros lentivirus caprinos

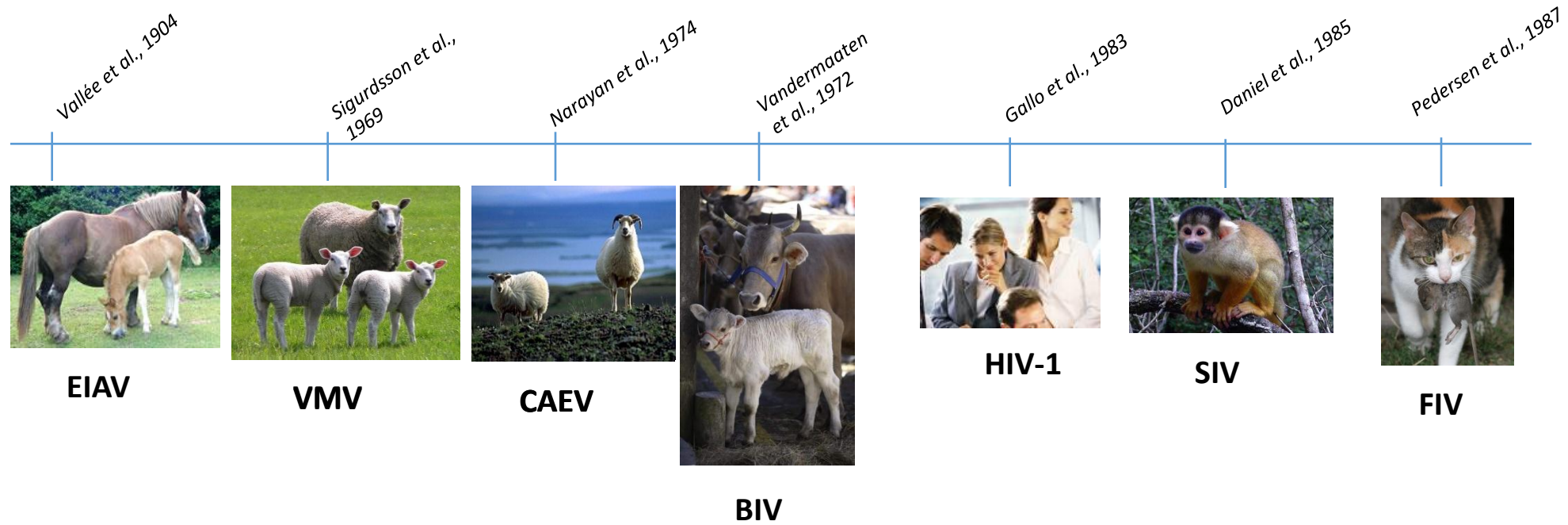


Ramsés Reina Arias

Instituto de Agrobiotecnología (CSIC-Gobierno de Navarra)



Lentivirus de pequeños rumiantes



Distribución mundial

Ausencia de tratamientos o vacunas

Diagnóstico serológico y sacrificio

Manifestaciones clínicas

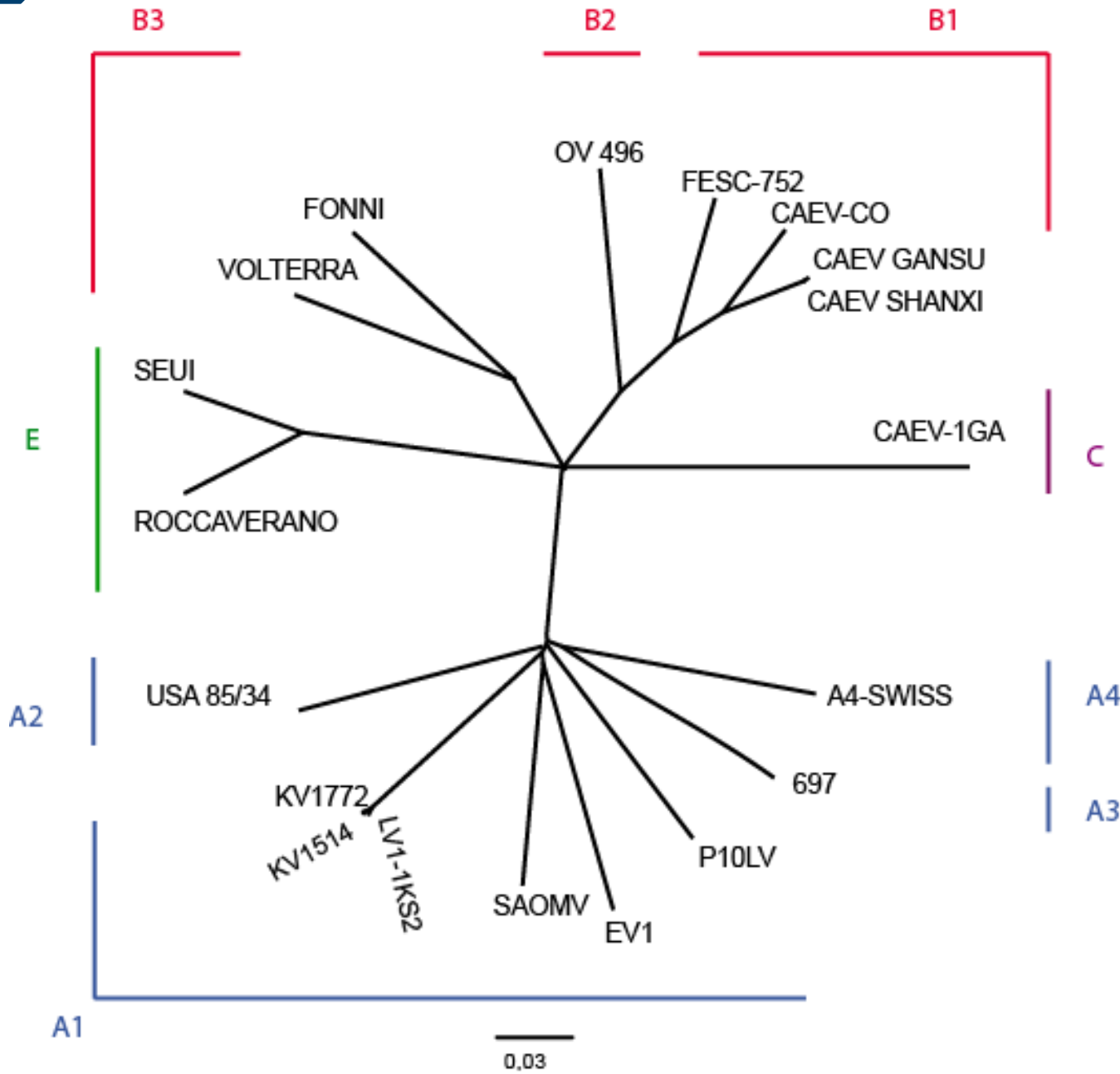


La infección se caracteriza por causar cuatro cuadros clínicos, pulmonar, mamario, articular y/o nervioso dependiendo del órgano afectado.

En todos ellos hay signos comunes como la inflamación, infiltración linfocitaria y fibrosis.

Aparición tardía.

Genotipos



Caprine Arthritis-Encephalitis Virus AGID

J Vet Diagn Invest 13:301–307 (2001)

Early detection of maedi-visna (ovine progressive pneumonia) virus seroconversion in field sheep samples

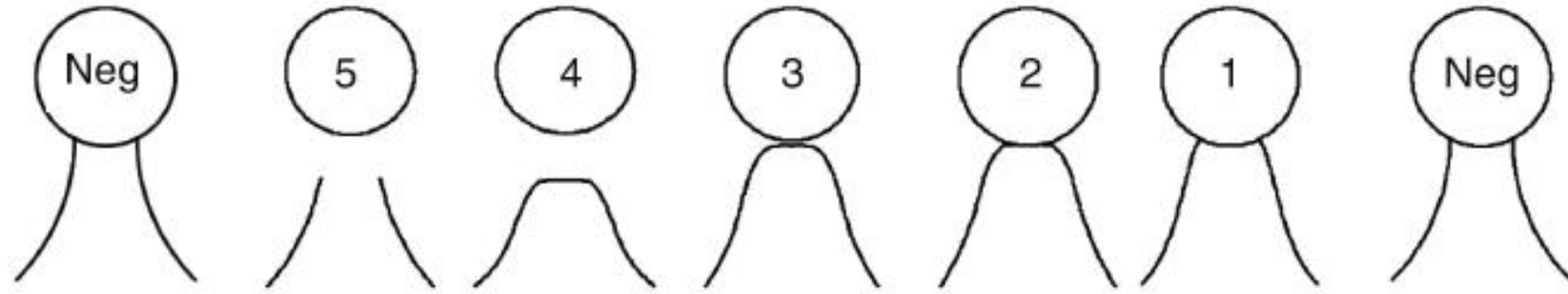
R. Varea, E. Monleón, C. Pacheco, L. Luján, R. Bolea, M. A. Vargas, G. Van Eynde, E. Saman, L. Dickson, G. Harkiss, B. Amorena, J. J. Badiola

Table 2. Differential ability of ELISA and AGID to detect early positive reactions to MVV in sheep sera, giving rise to discrepant results. All results* verified by western blotting.

Test	1 year	2 years	3 years	4 years	Total
ELISA	39 (39)	28 (14)	33 (11)	20 (5)	120 (69)
AGID	9 (9)	2 (1)	11 (10)
Total	48 (48)	30 (15)	33 (11)	20 (5)	131 (79)

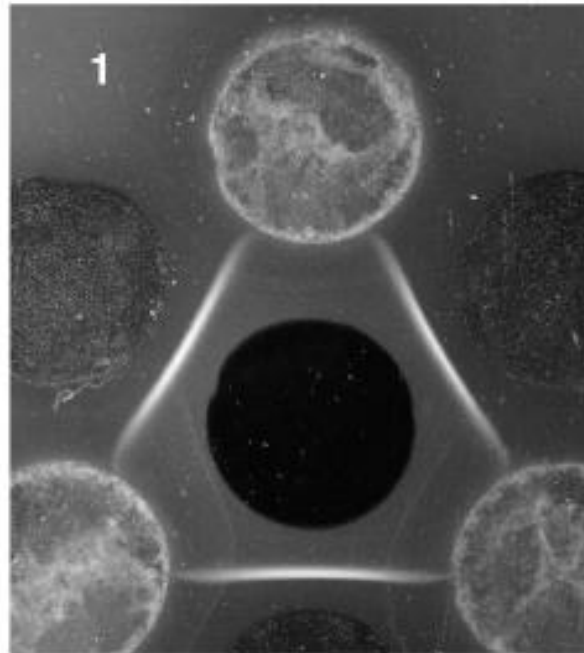


Ag CAEV pocillo central. Los pocillos externos contienen o sueros control que se sabe contienen Abs contra CAEV (C) o muestras clínicas para testar. En este test, hay una muestra positiva (+), indicado por las líneas de identidad entre ella y los pocillos adyacentes de control.

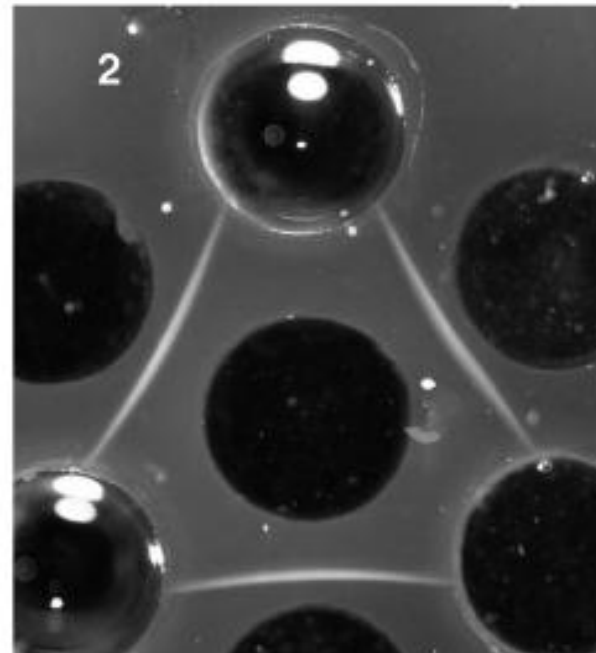


(b)

USDA



University of Kentucky



Interpretations:

POS

NEG

Diagnóstico

ELISA

CHEKIT



Virus completo (genotipo B)

ELITEST



p25 recombinante; TM sintético genotipo A

POURQUIER



p25 y TM recombinantes genotipo A

VMRD



ELISA Competitivo genotipo B

INGENASA

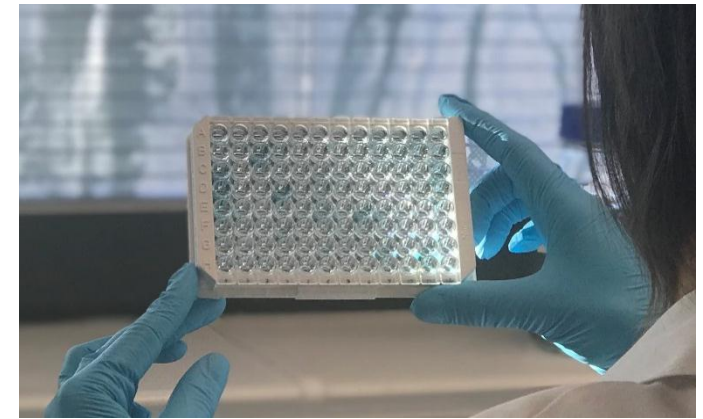


Péptidos sintéticos genotipos A y B

In3Diagnostic



P25 y TM recombinantes genotipos A, B y E



Letters

SURVEILLANCE

Concern over maedi visna breakdowns

WE would like to raise our concerns with veterinary colleagues over an apparent increase in the number of flocks in the maedi visna (MV) accreditation scheme that have had a breakdown with MV infection. Most of the blood testing for the MV accreditation scheme takes place during the summer months; however, so far this year there have been nine breakdowns with MV infection in accredited flocks and a further five flocks have had positives at qualifying tests. We first highlighted an increase in MV breakdowns in 2010 when there were 13 (Ritchie and Hosie 2010). Since then there have been between five and eight breakdowns each year in MV accredited flocks from the 2600 flocks in the scheme.

50 | *Veterinary Record* | July 12, 2014

ANIMAL HEALTH

Concern about 'out of sight, out of mind' attitude to maedi visna

Veterinary Microbiology 162 (2013) 572–581



Contents lists available at SciVerse ScienceDirect

Veterinary Microbiology

journal homepage: www.elsevier.com/locate/vetmic

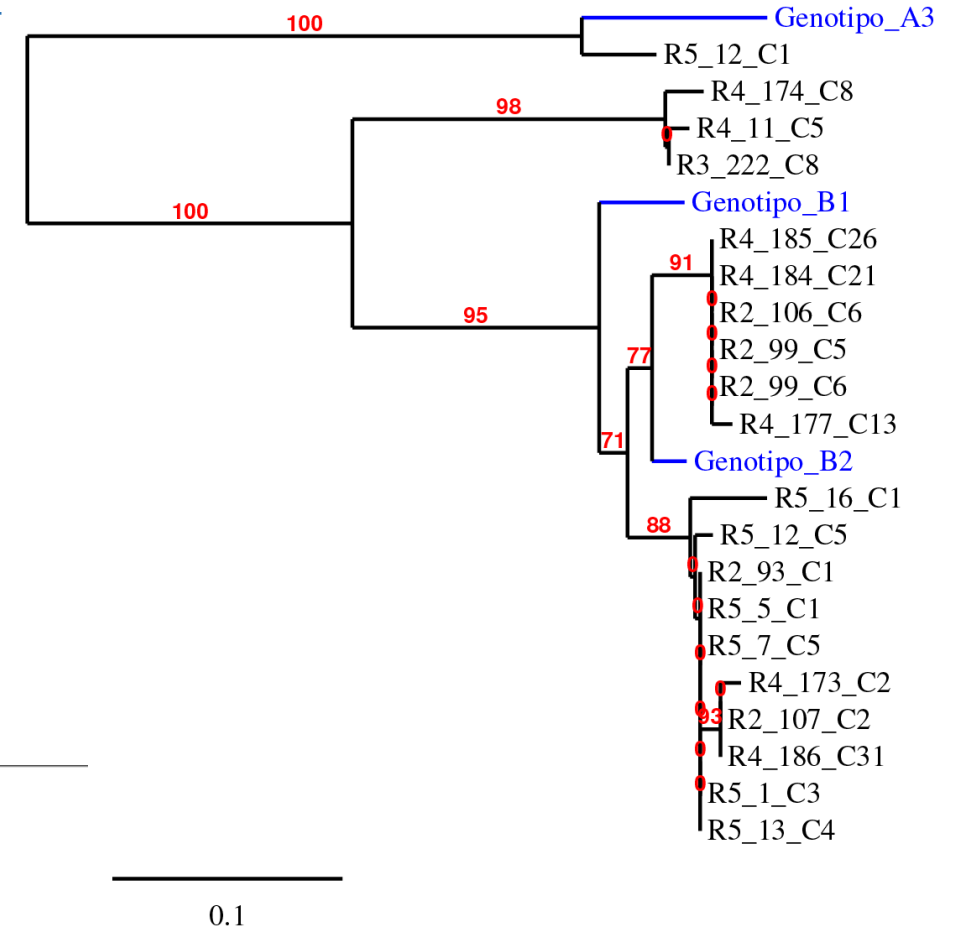
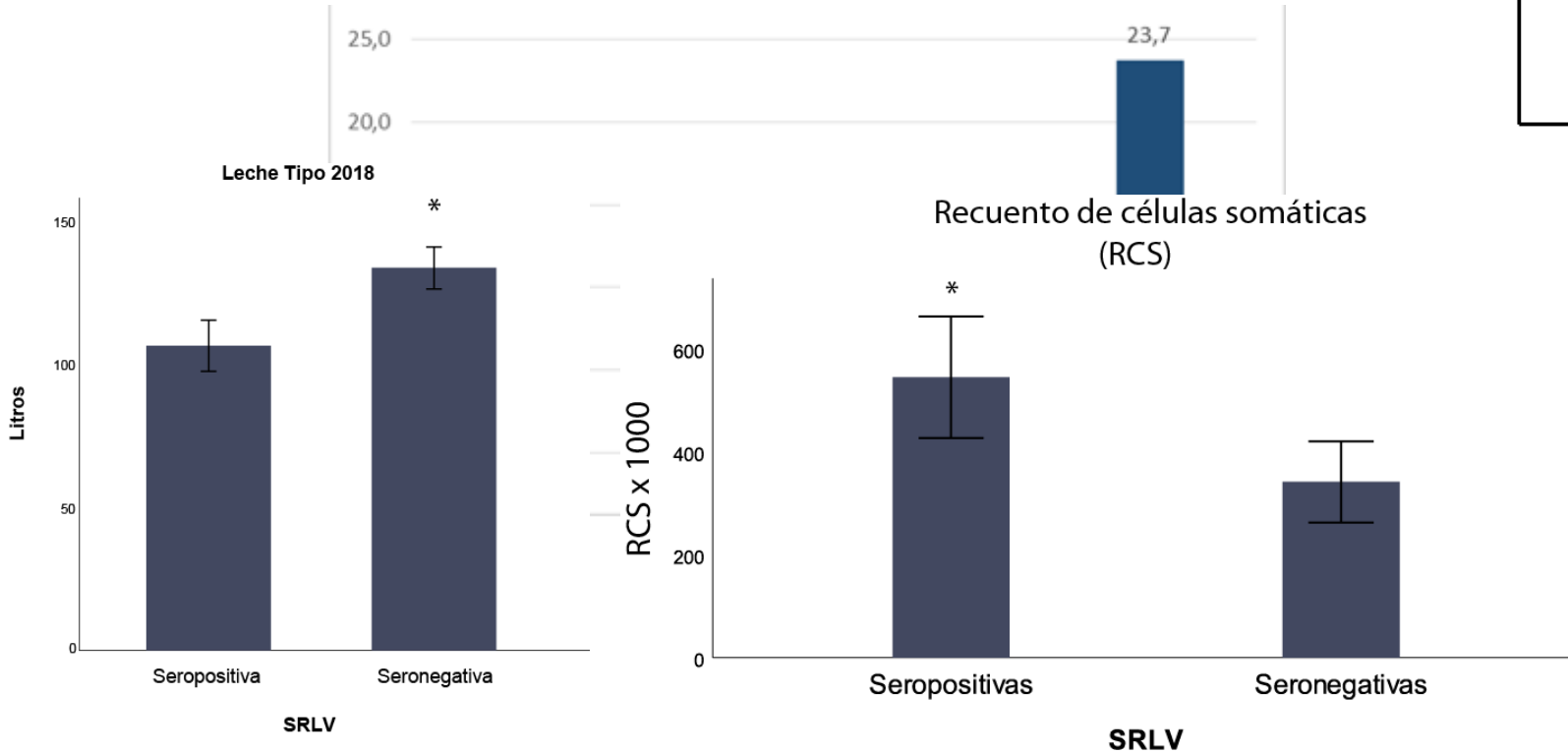


Virological and phylogenetic characterization of attenuated small ruminant lentivirus isolates eluding efficient serological detection

Laure Cardinaux^{a,b}, Marie-Luise Zahno^a, Martina Deubelbeiss^a, Reto Zanoni^a, Hans-Rudolf Vogt^a, Giuseppe Bertoni^{a,*}

¡Caracterización de estirpes circulantes!

En Navarra, empleando un solo test se detecta la mitad de los animales seropositivos



- No se recomienda la puesta en marcha de planes de control
- Diseño de ELISAs **de amplio espectro**
- Métodos de control alternativos



Contents lists available at ScienceDirect

Preventive Veterinary Medicine

journal homepage: www.elsevier.com/locate/prevetmed



Short communication

Successful Visna/maedi control in a highly infected ovine dairy flock using serologic segregation and management strategies

M. Pérez^a, J.A. Muñoz^b, E. Biecas^c, E. Salazar^c, R. Bolea^c, D. de Andrés^d, B. Amorena^d, J.J. Badiola^c, R. Reina^d, L. Luján^{c,✉}

- Encalostramiento artificial
- Separación en dos rebaños
- Desvieje selectivo
- Sacrificio de seropositivos y descendencia
- Recría exclusiva de madres negativas



Contents lists available at ScienceDirect

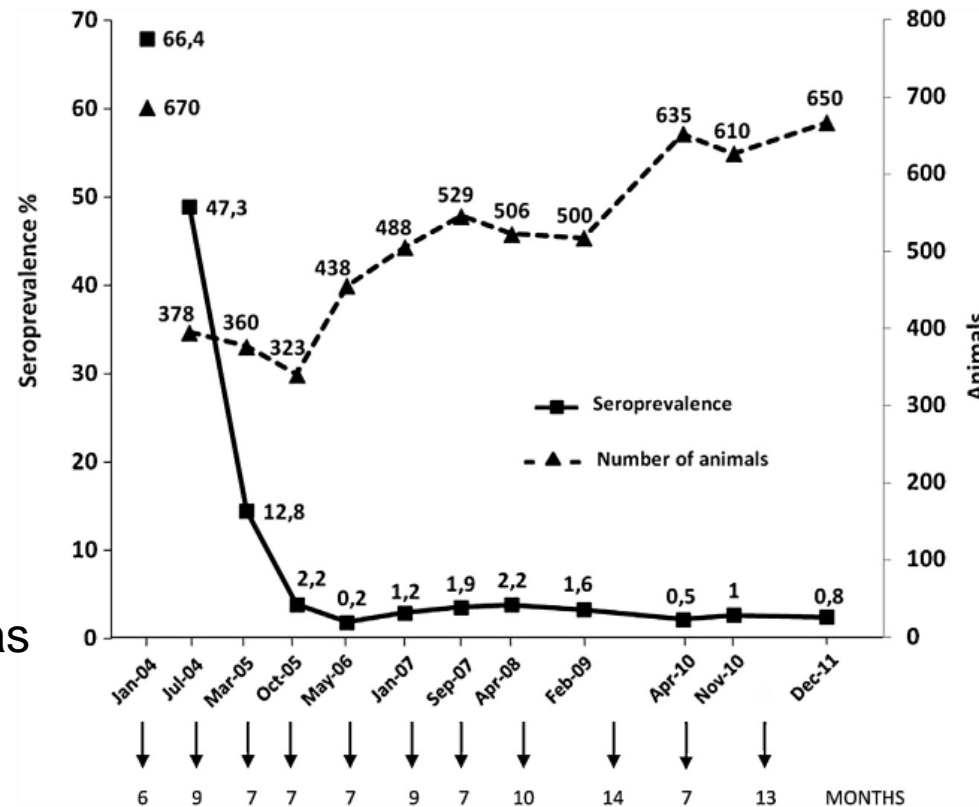
The Veterinary Journal

journal homepage: www.elsevier.com/locate/tvjl



Visna/maedi virus serology in sheep: Survey, risk factors and implementation of a successful control programme in Aragón (Spain)

M. Pérez^a, E. Biecas^a, X. de Andrés^b, I. Leginagoikoa^c, E. Salazar^a, E. Berriatua^d, R. Reina^b, R. Bolea^a, D. de Andrés^b, R.A. Juste^c, J. Cancer^e, J. Gracia^e, B. Amorena^b, J.J. Badiola^a, L. Luján^{a,*}



Genome-Wide Association Identifies Multiple Genomic Regions Associated with Susceptibility to and Control of Ovine Lentivirus

Stephen N. White^{1,2*}, Michelle R. Mousel³, Lynn M. Herrmann-Hoesing², James O. Reynolds¹, Kreg A. Leymaster⁴, Holly L. Neibergs⁵, Gregory S. Lewis³, Donald P. Knowles^{1,2}

Reduced Lentivirus Susceptibility in Sheep with *TMEM154* Mutations

Michael P. Heaton^{1*}, Michael L. Clawson¹, Carol G. Chitko-Mckown¹, Kreg A. Leymaster¹, Timothy P. L. Smith¹, Gregory P. Harhay¹, Stephen N. White², Lynn M. Herrmann-Hoesing², Michelle R. Mousel³, Gregory S. Lewis³, Theodore S. Kalbfleisch⁴, James E. Keen⁵, William W. Laegreid⁶

Molaei et al. *Vet Res* (2018) 49:36
<https://doi.org/10.1186/s13567-018-0533-y>



RESEARCH ARTICLE

Open Access

First survey on association of *TMEM154* and *CCR5* variants with serological maedi-visna status of sheep in German flocks

Vahid Molaei¹, Marwa Eltanany and Gesine Lühken^{1*}



- Proteínas de membrana supuestamente relacionadas con la entrada
- Alta variabilidad en las proteínas ENV de los distintos genotipos y estirpes



Common promoter deletion is associated with 3.9-fold differential transcription of ovine *CCR5* and reduced proviral level of ovine progressive pneumonia virus

S. N. White^{*,†,‡}, M. R. Mousel[§], J. O. Reynolds^{*}, G. S. Lewis[§] and L. M. Herrmann-Hoesing^{*,†}

Tropical Animal Health and Production (2019) 51:729–733
<https://doi.org/10.1007/s11250-018-1728-y>

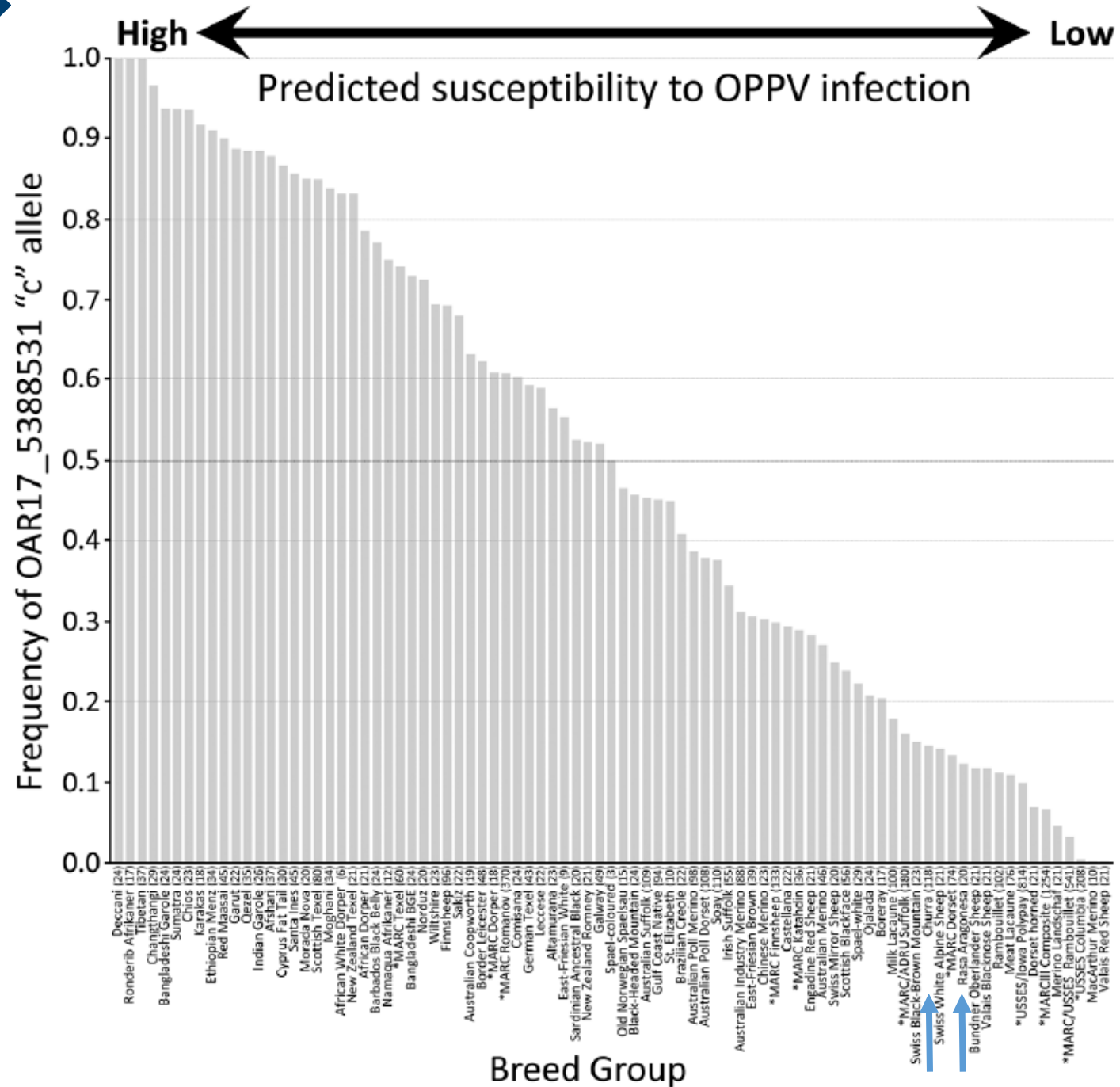
SHORT COMMUNICATIONS



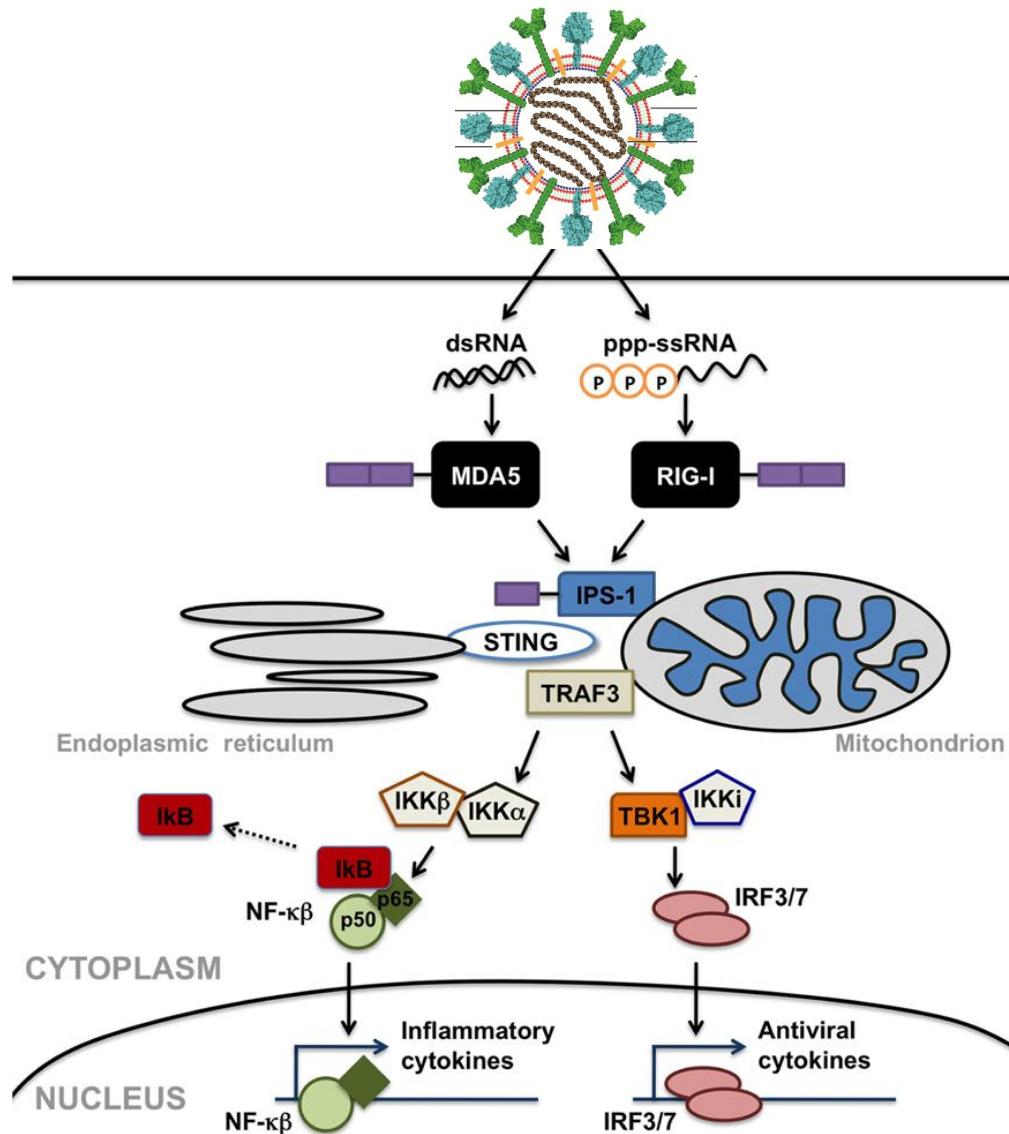
Genome scan for the possibility of identifying candidate resistance genes for goat lentiviral infections in the Italian Garfagnina goat breed

Francesca Cecchi¹ · Christos Dadousis² · Riccardo Bozzi² · Filippo Fratini¹ · Claudia Russo¹ · Patrizia Bandecchi¹ · Carlo Cantile¹ · Maurizio Mazzei¹

Selección genética



¿Es válido en todas las razas y frente a todos los genotipos?



Furr and Marriott. 2012. *Front. Microbiol.*



Vaccine
Volume 33, Issue 45, 9 November 2015, Pages 6061-6065



Development of an AIDS vaccine using Sendai virus vectors

Hiroshi Ishii^a, Tetsuro Matano^{a, b, c, d, e}



Vaccine
Volume 26, Issue 48, 11 November 2008, Pages 6124-6131



Potent specific immune responses induced by prime-boost-boost strategies based on DNA, adenovirus, and Sendai virus vectors expressing gag gene of Chinese HIV-1 subtype B

Shuangqing Yu^a, Xia Feng^a, Tsugumine Shu^{b, c, d, e}, Tetsuro Matano^c, Mamoru Hasegawa^b, Xiaoli Wang^d, Hongtao Ma^d, Hongxia Li^a, Zelin Li^d, Yi Zeng^{a, d, e, f}

The Journal of Infectious Diseases

MAJOR ARTICLE

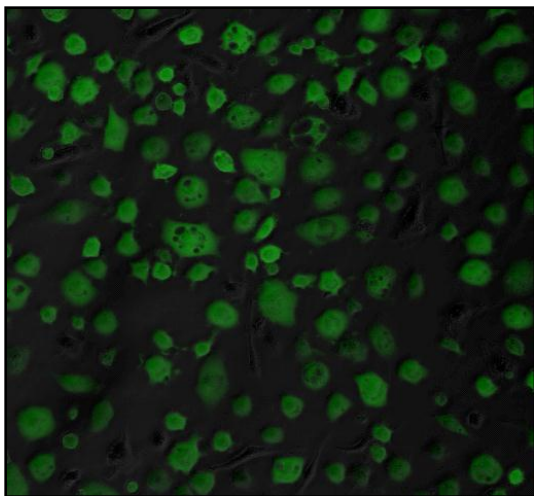


First-in-Human Evaluation of the Safety and Immunogenicity of an Intranasally Administered Replication-Competent Sendai Virus-Vectored HIV Type 1 Gag Vaccine: Induction of Potent T-Cell or Antibody Responses in Prime-Boost Regimens

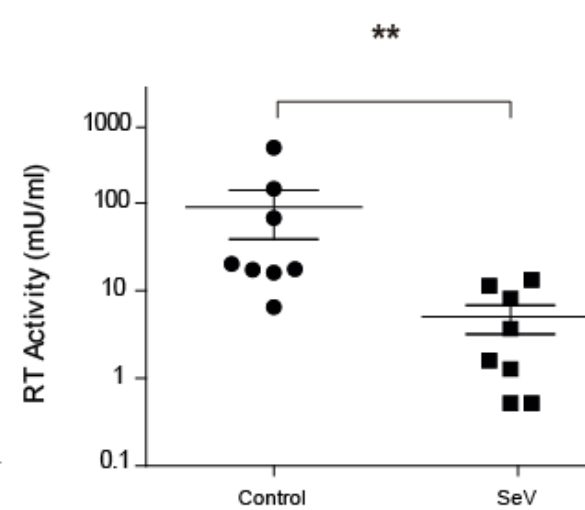
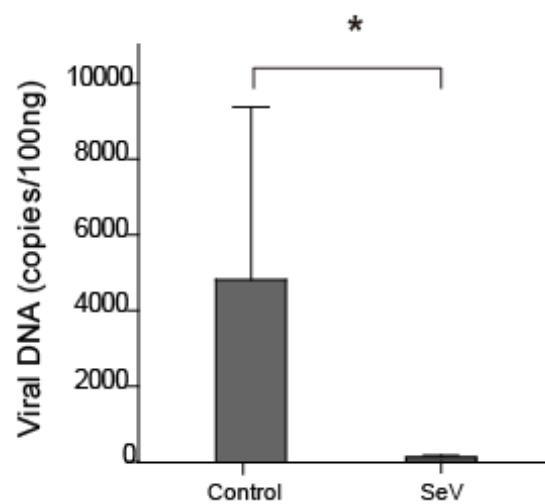
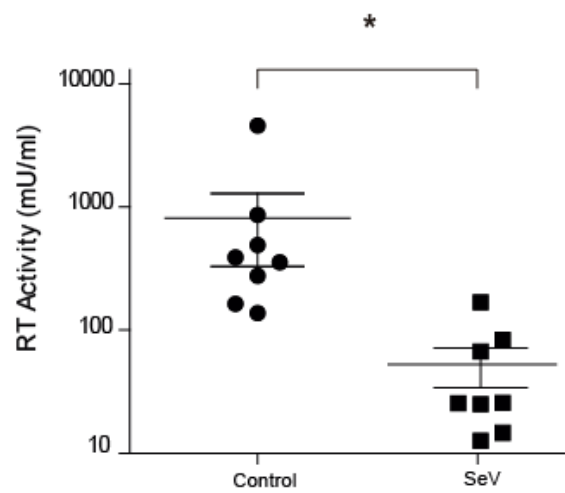
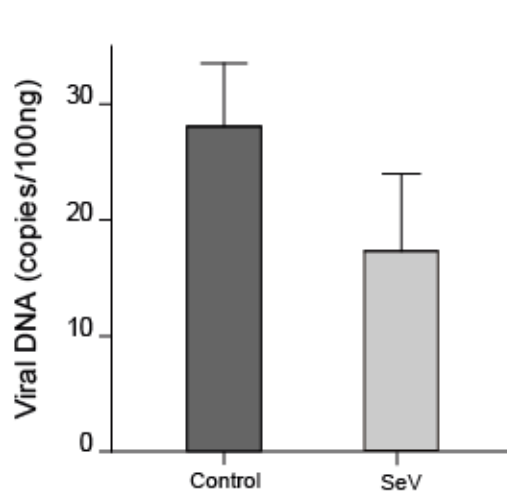
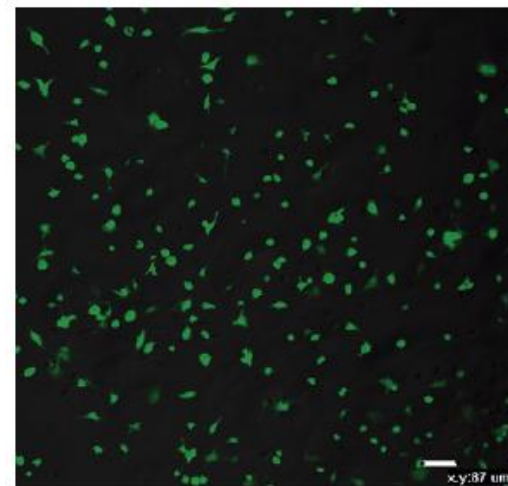
Julien Nyombayire,¹ Omu Anzala,² Brian Gazzard,³ Etienne Karita,¹ Philip Bergin,⁴ Peter Hayes,⁴ Jakub Kopycinski,⁴ Gloria Omosa-Manyonyi,² Akil Jackson,³ Jean Bizimana,¹ Bashir Farah,² Eddy Sayeed,⁵ Christopher L. Parks,⁵ Makoto Inoue,⁷ Takashi Hironaka,⁷ Hiroto Hara,⁷ Tsugumine Shu,⁷ Tetsuro Matano,^{8,9} Len Dally,⁶ Burc Barin,⁶ Harriet Park,⁷ Jill Gilmour,⁷ Angela Lombardo,⁵ Jean-Louis Excler,^{5,10} Patricia Fast,^{5,10} Dagna S. Laufer,^{5,10} and Josephine H. Cox^{5,10,11}, the S001 Study Team

SeV-GFP

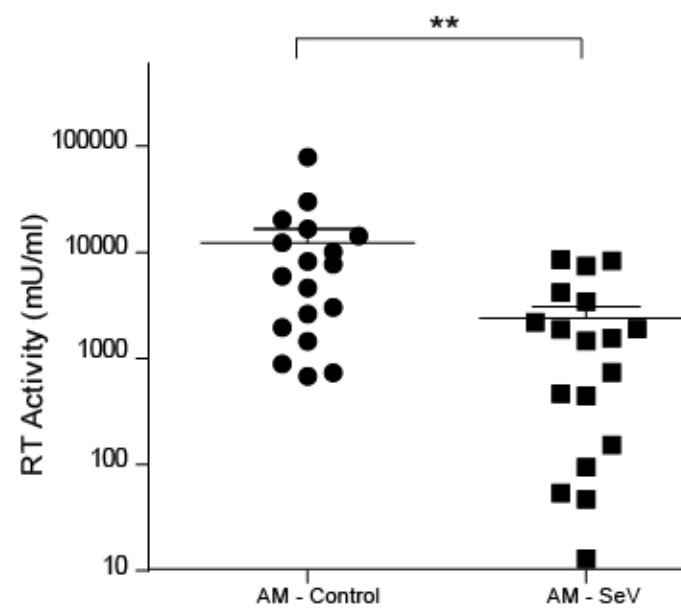
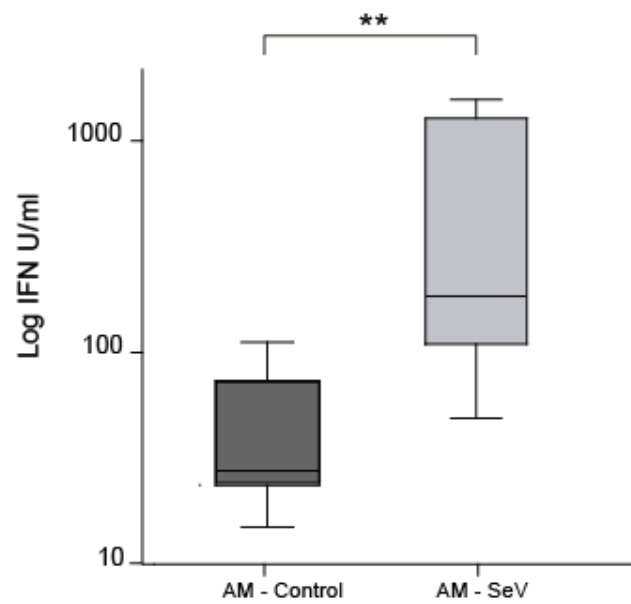
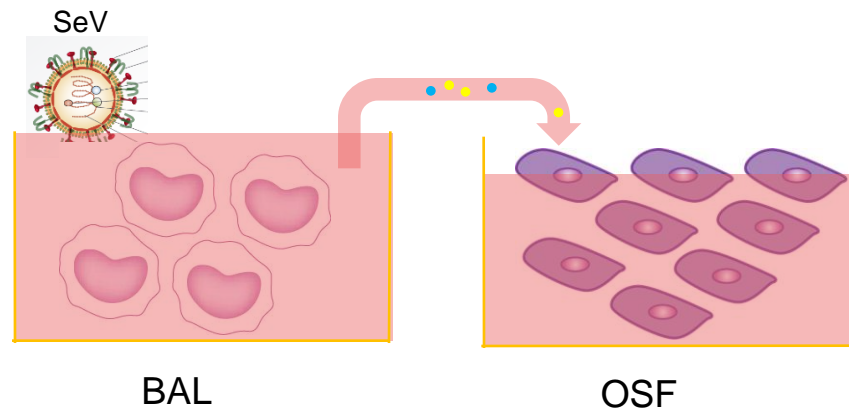
BAL *in vivo*



BDM *in vitro*



Vacunación



Conclusiones



- Caracterización de estirpes circulantes
- Métodos ELISA combinados
- Desarrollo métodos moleculares (PCR)
- Manejo específico dependiendo de la prevalencia
- Desarrollo de estrategias de inmunización
- Control de SRLV en ambas especies

Muchas gracias...



Irache Echeverría

Lorena de Pablo

IdAB

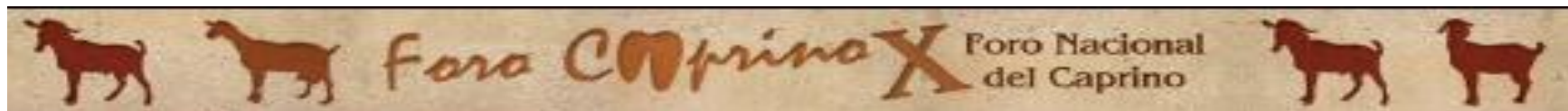
Instituto de Agrobiotecnología
Agrobioteknologiako Institutua



Unión Europea

Fondo Europeo Agrícola
de Desarrollo Rural

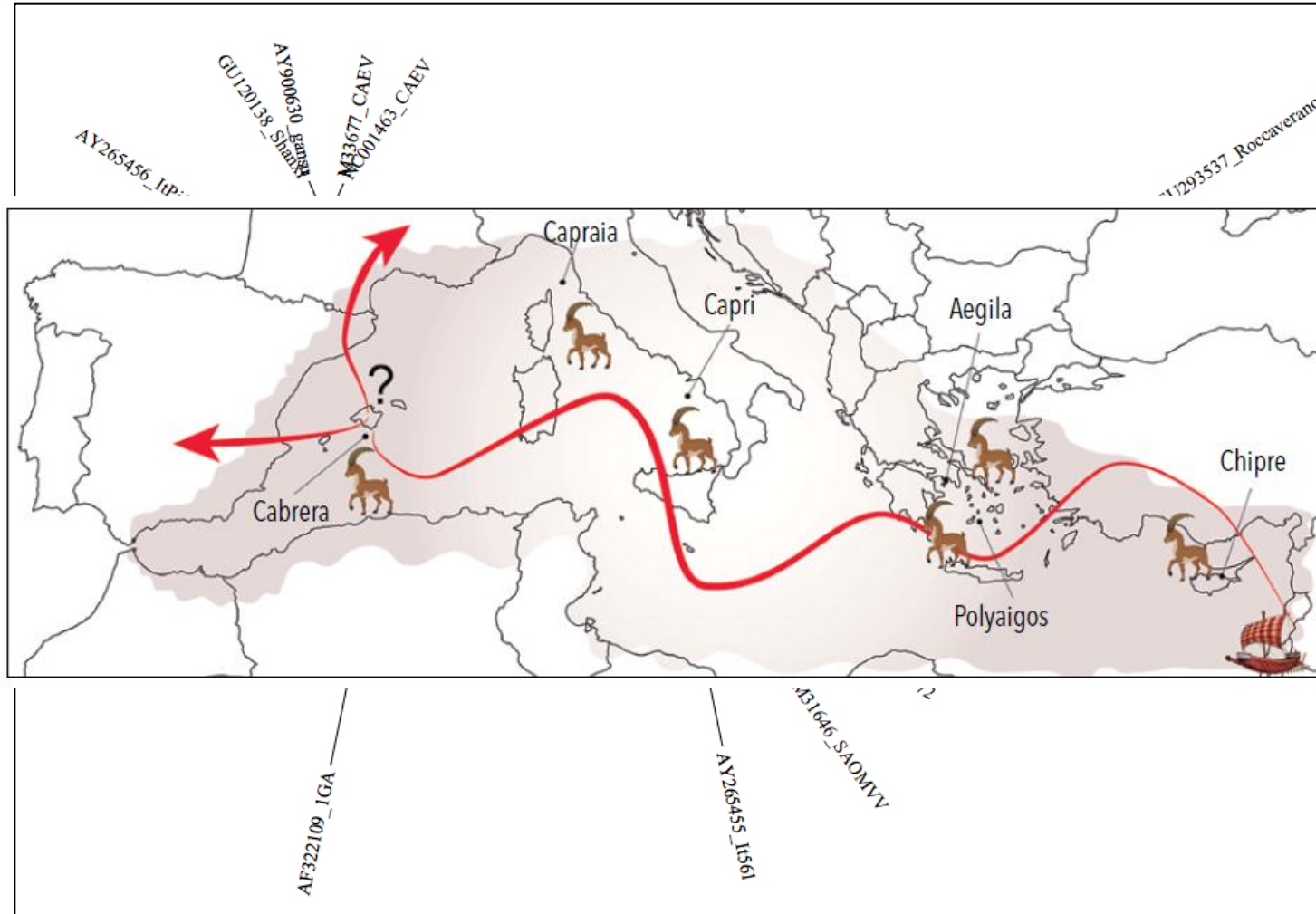
Europa invierte en las zonas rurales

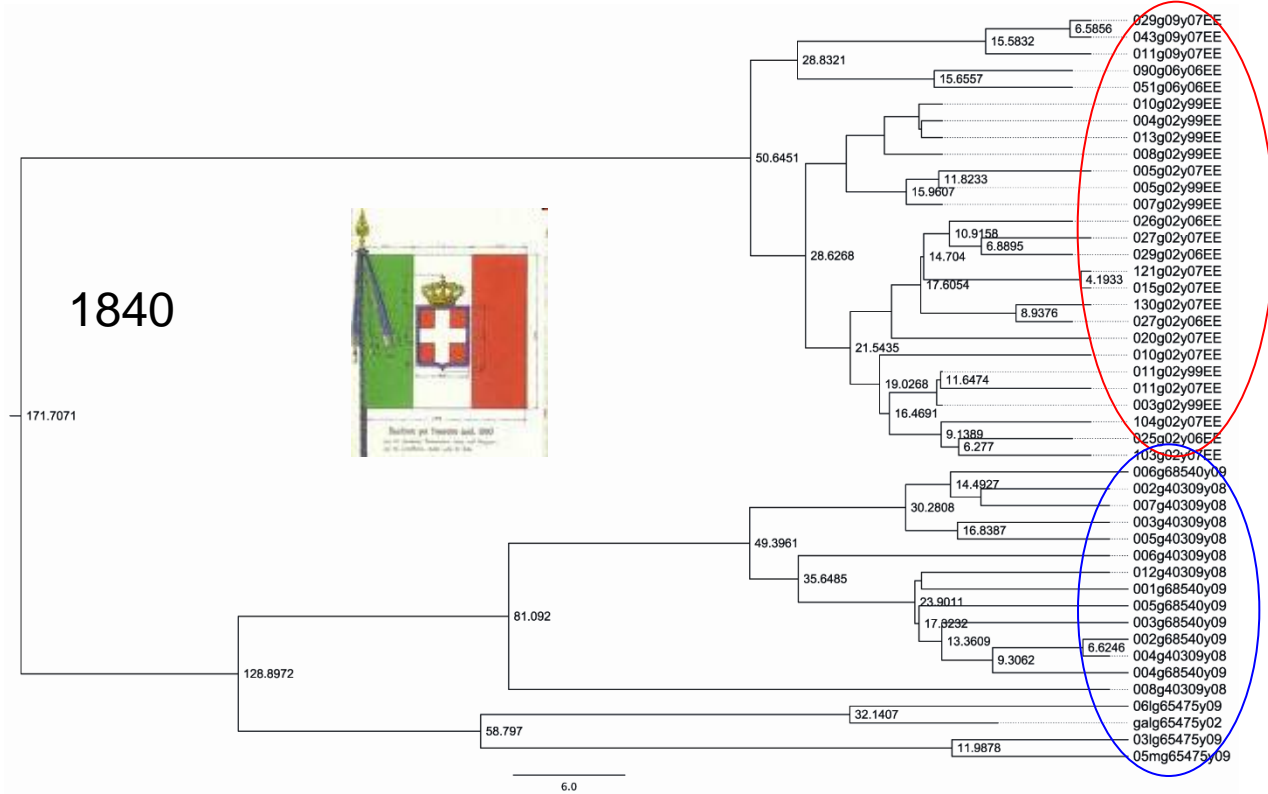
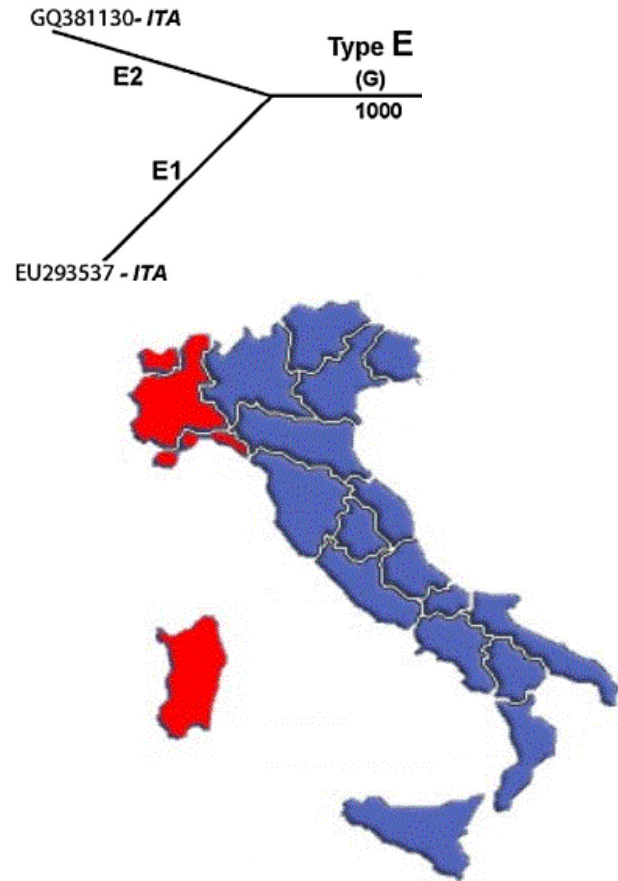


Short
Communication

Characterization of new small ruminant lentivirus subtype B3 suggests animal trade within the Mediterranean Basin

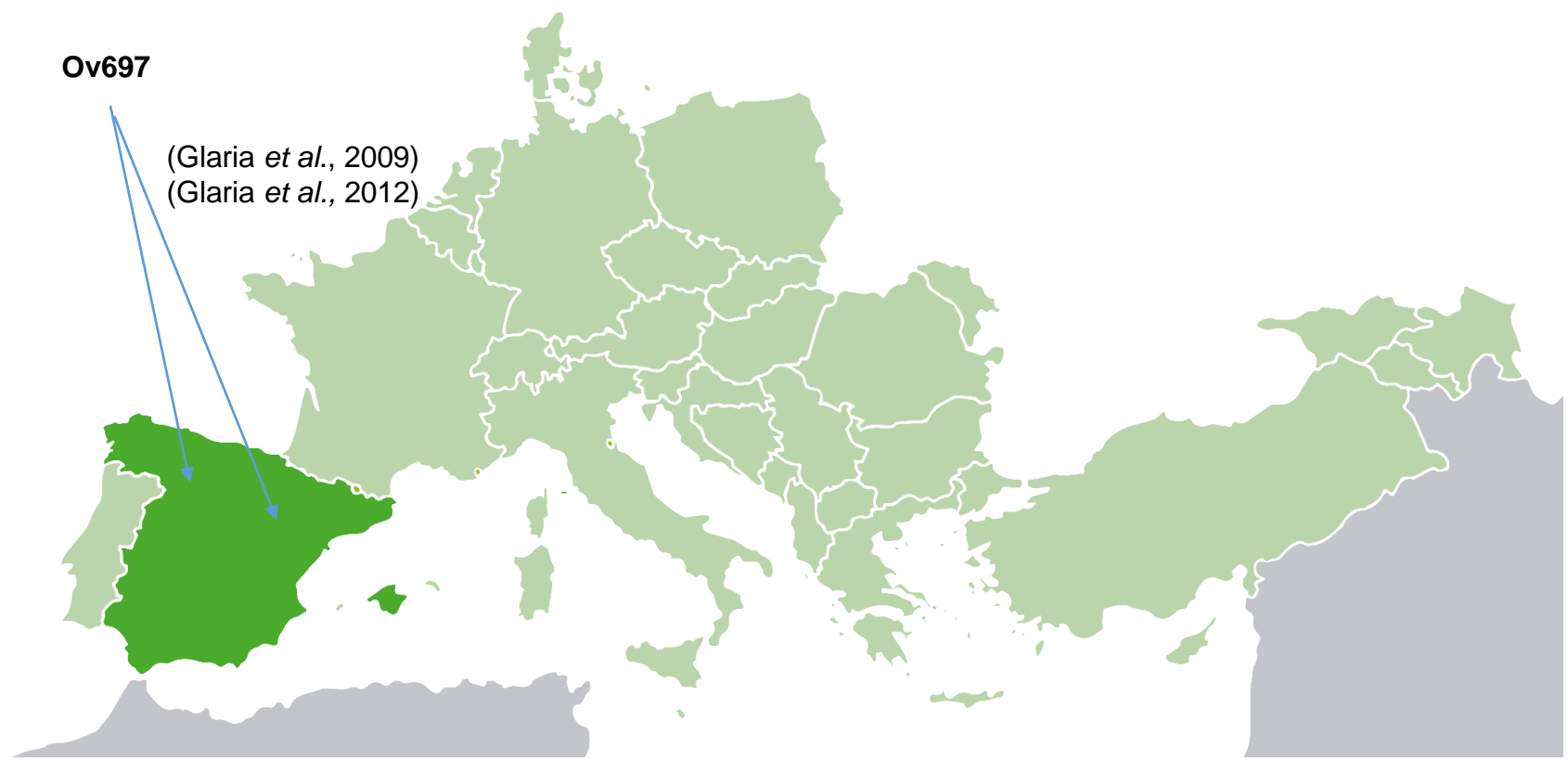
L. Bertolotti,^{1,2†} M. Mazzei,^{3†} G. Puggioni,⁴ M. L. Carrozza,⁵ S. Dei Giudici,⁴
D. Muz,⁶ M. Juganaru,¹ C. Patta,⁴ F. Tolari³ and S. Rosati¹

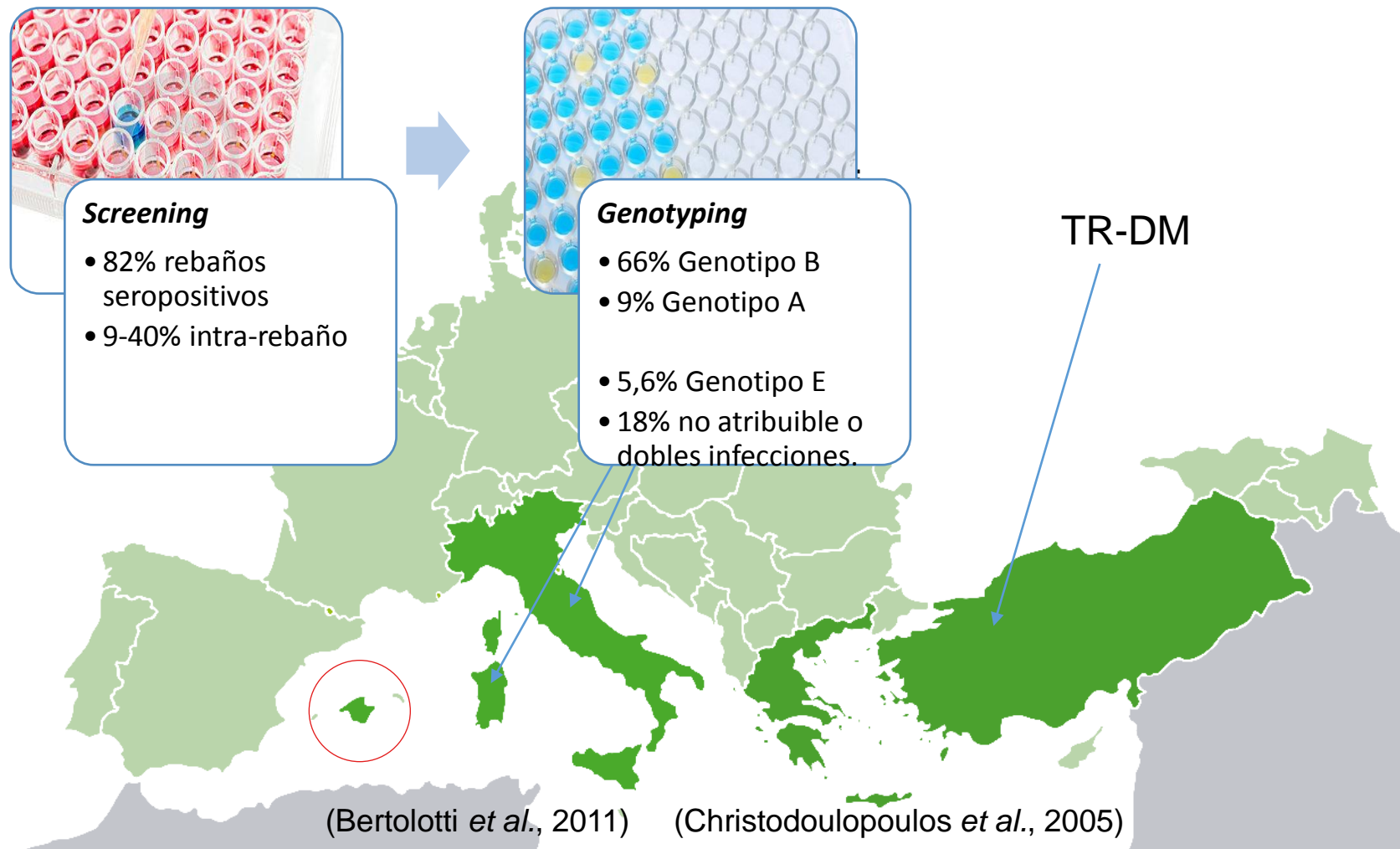




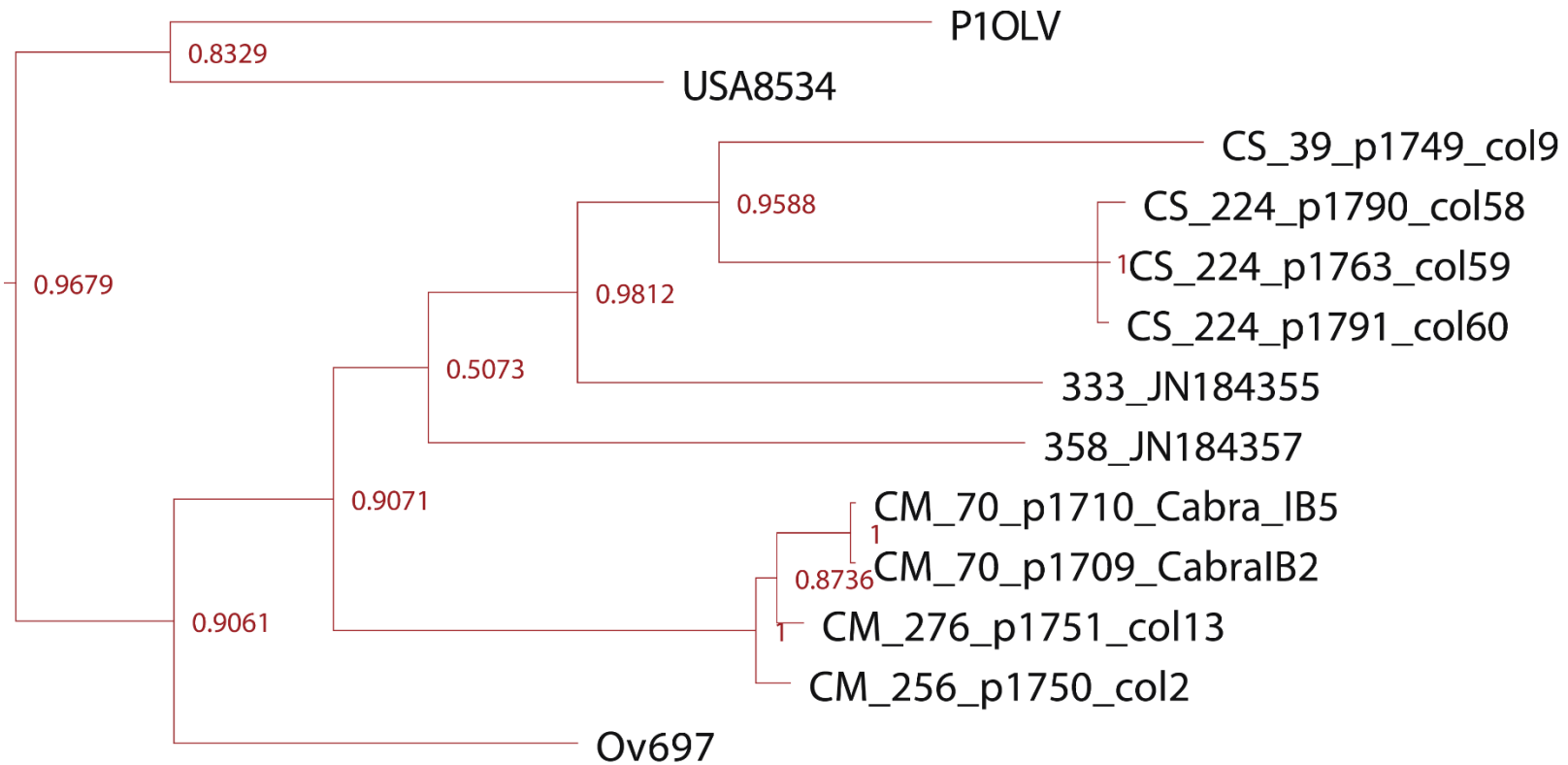
Proyecto Gobierno Italiano, PRIN
 Caracterización genética y biológica del lentivirus caprino, genotipo E.
 Responsable: Sergio Rosati.



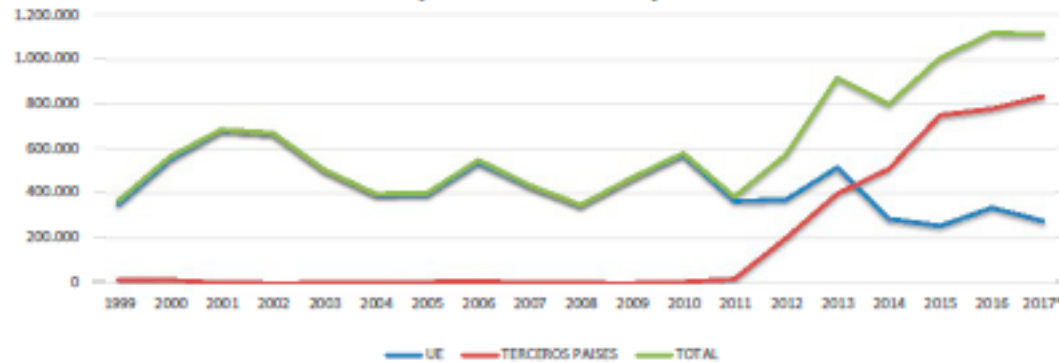




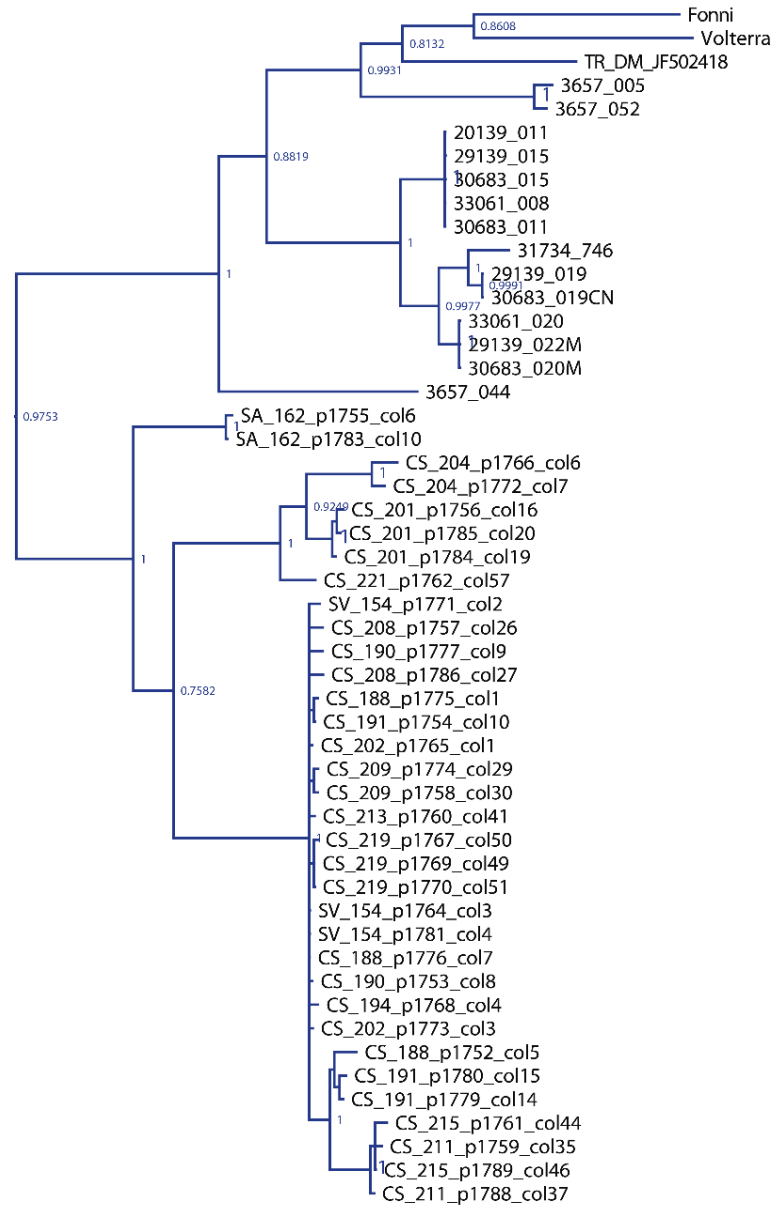
Contribución a la epidemiología molecular y al control innato de las infecciones lentivirales ovi-caprinas. LENTIMOL. Responsable: Ramsés Reina



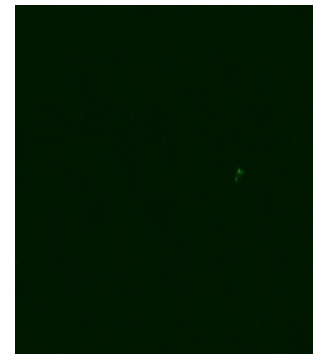
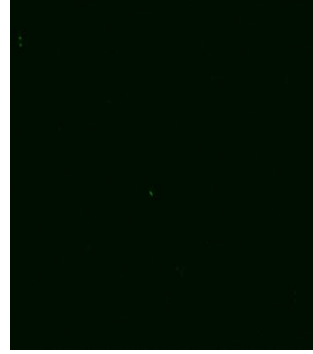
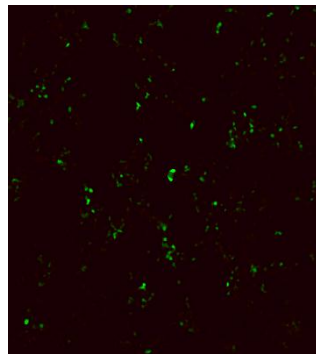
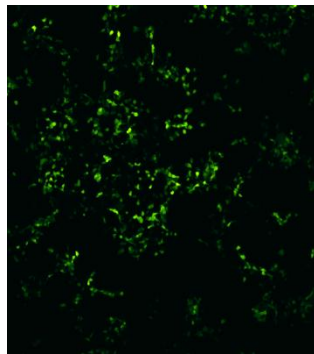
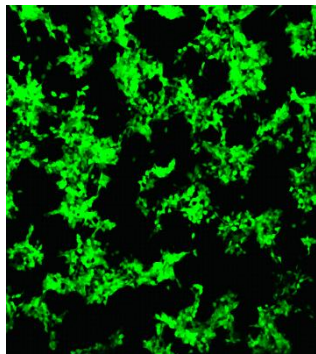
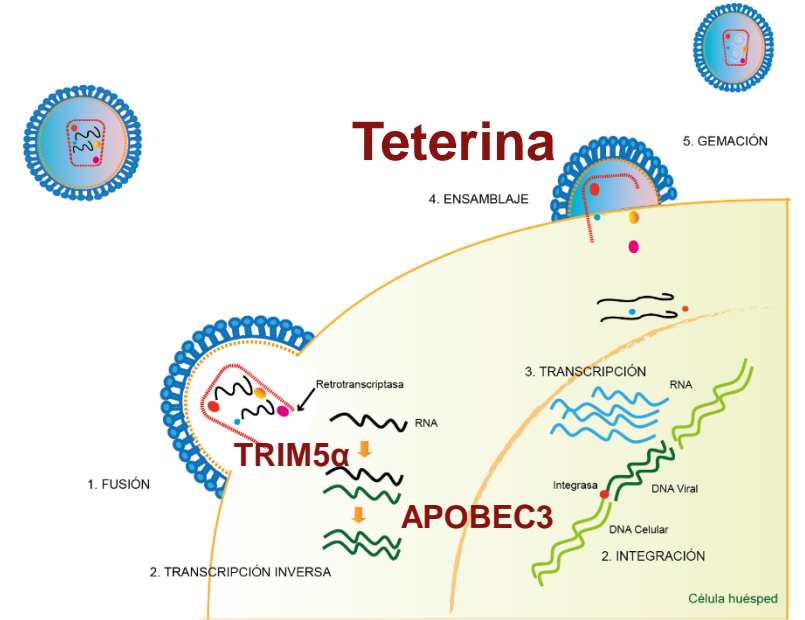
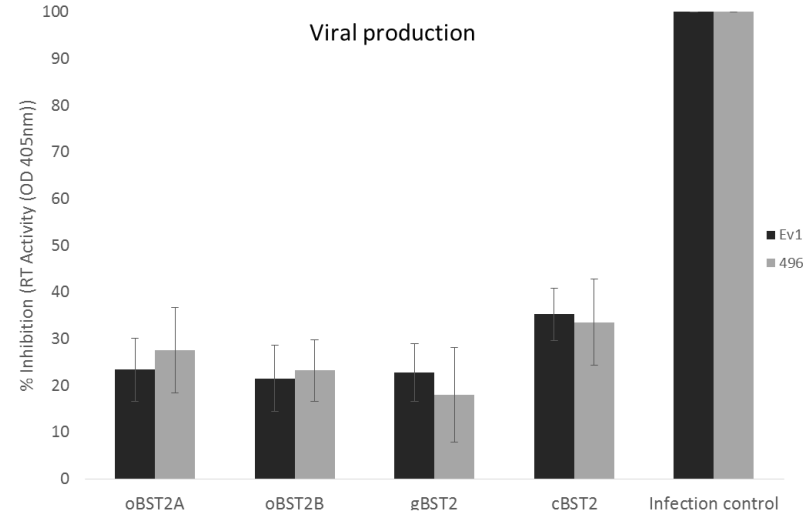
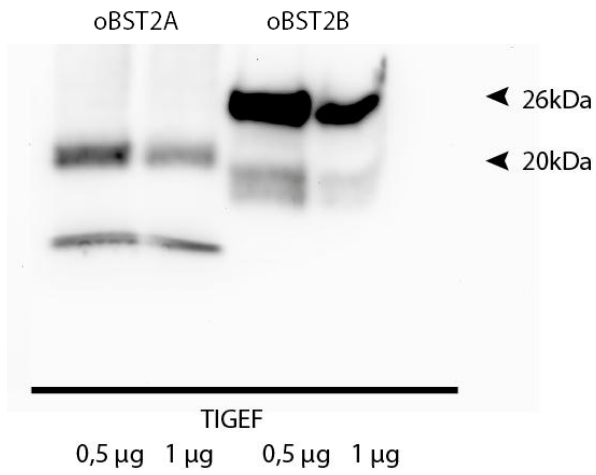
EVOLUCIÓN DE LAS EXPORTACIONES DE ANIMALES VIVOS DE OVINO Y CAPRINO (UD ARANCELARIAS) 1999-2017*



- OIE declaración obligatoria
- Restricciones al comercio en la UE



Interferón-I (Teterina)



HIV-1 control

oBST2A+HIV-1

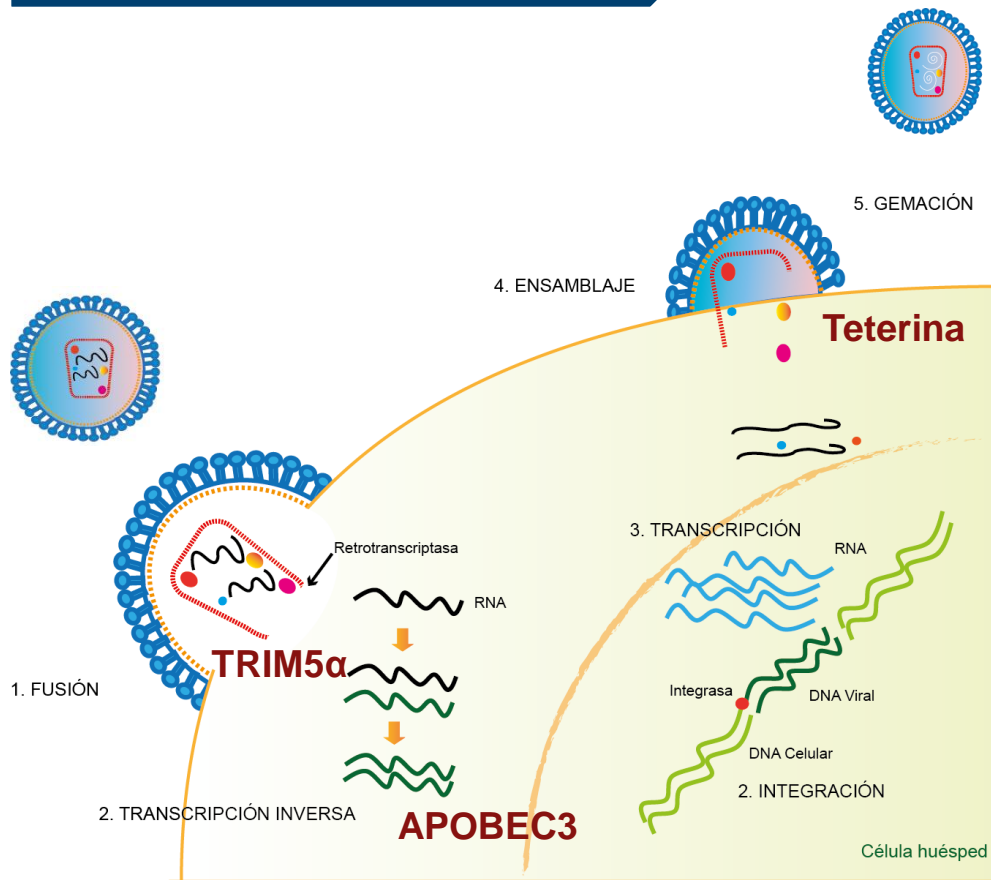
oBST2B+HIV-1

cBST2+HIV-1

gBST2+HIV-1


Análisis de la restricción homóloga y heteróloga
Identificación de la contramedida viral (Env, Rtm,...)

Interferón-I (APOBEC3)

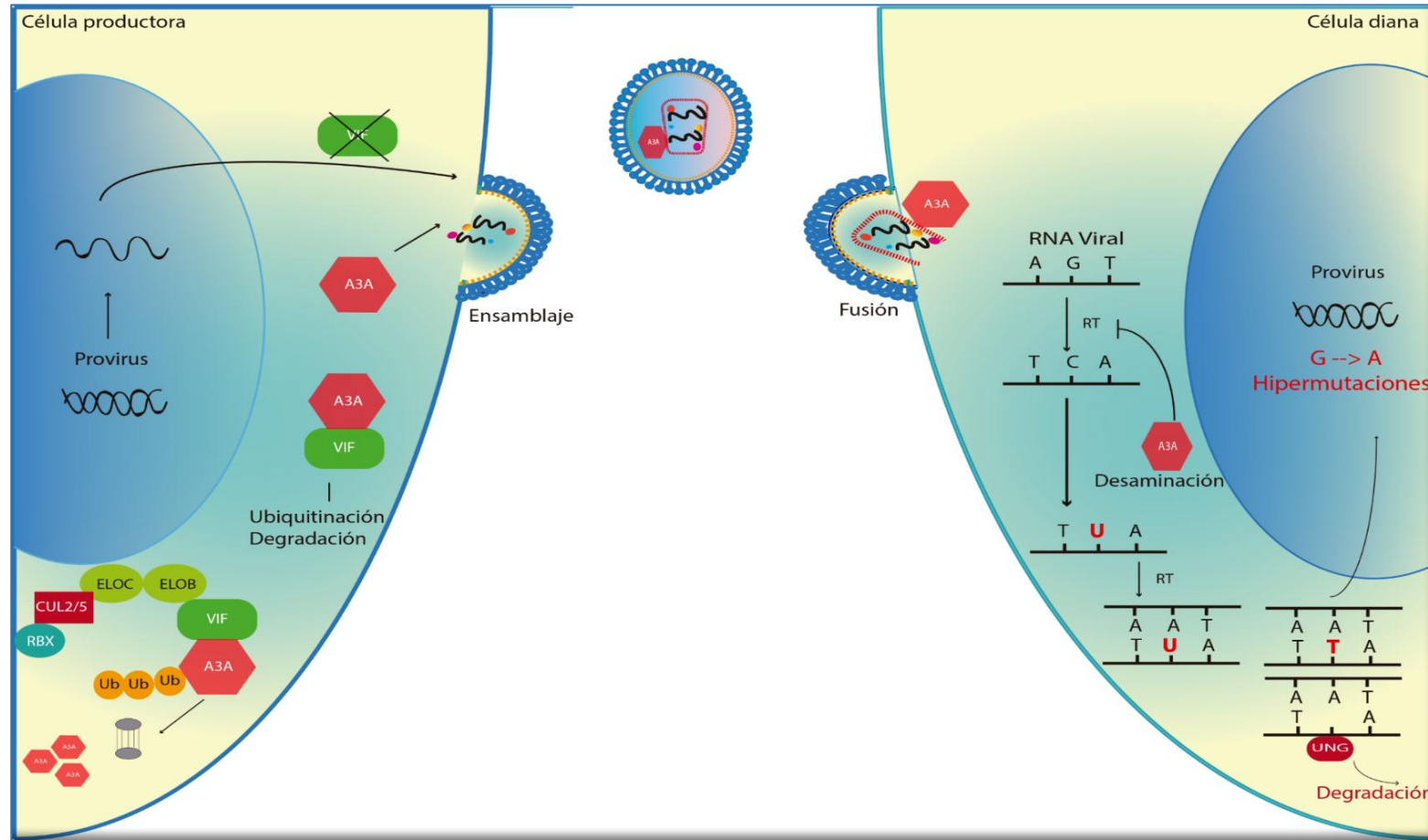


Article

Characterization of Ovine A3Z1 Restriction Properties against Small Ruminant Lentiviruses (SRLVs)

Lorena de Pablo-Maiso ¹, Idoia Glaria ¹, Helena Crespo ¹, Estanislao Nistal-Villán ², Valgerdur Andrésdóttir ³, Damián de Andrés ¹, Beatriz Amorena ¹ and Ramsés Reina ^{1,*} 

Interferón-I (APOBEC3)



- Resistencia a Vif
- Selección genética
- Tratamiento