

Introducción a fin de proyecto VLP-BVD. Gestión de la propiedad intelectual

Workshop II
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Mejorar la **productividad animal** con productos y servicios que permitan **evitar o disminuir el uso de antibióticos** (vacunas, aditivos naturales, diagnóstico mejorado)



Aumentamos la actividad económica veterinaria por medio de conocimiento académico





Probiotic
poultry

Probiotic
piglets



Brucellin BM



Universidad
de Navarra



Disentery
vaccine



Aquilón
CyL, S.L.



YogDog



Glässer
vaccine



IRTA
CReSA



UAB
Universitat Autònoma
de Barcelona

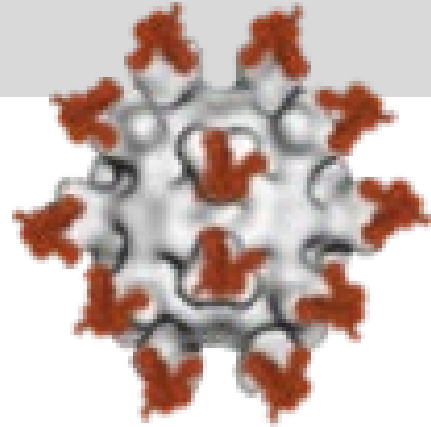


VLP-BVD
AQUILON



Vacuna VLP-BVDV

Biotecnología innovadora aplicada a la medicina veterinaria



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 858247



Horizonte 2020 es el Programa Marco de Investigación e Innovación de la Unión Europea para el periodo 2014-2020

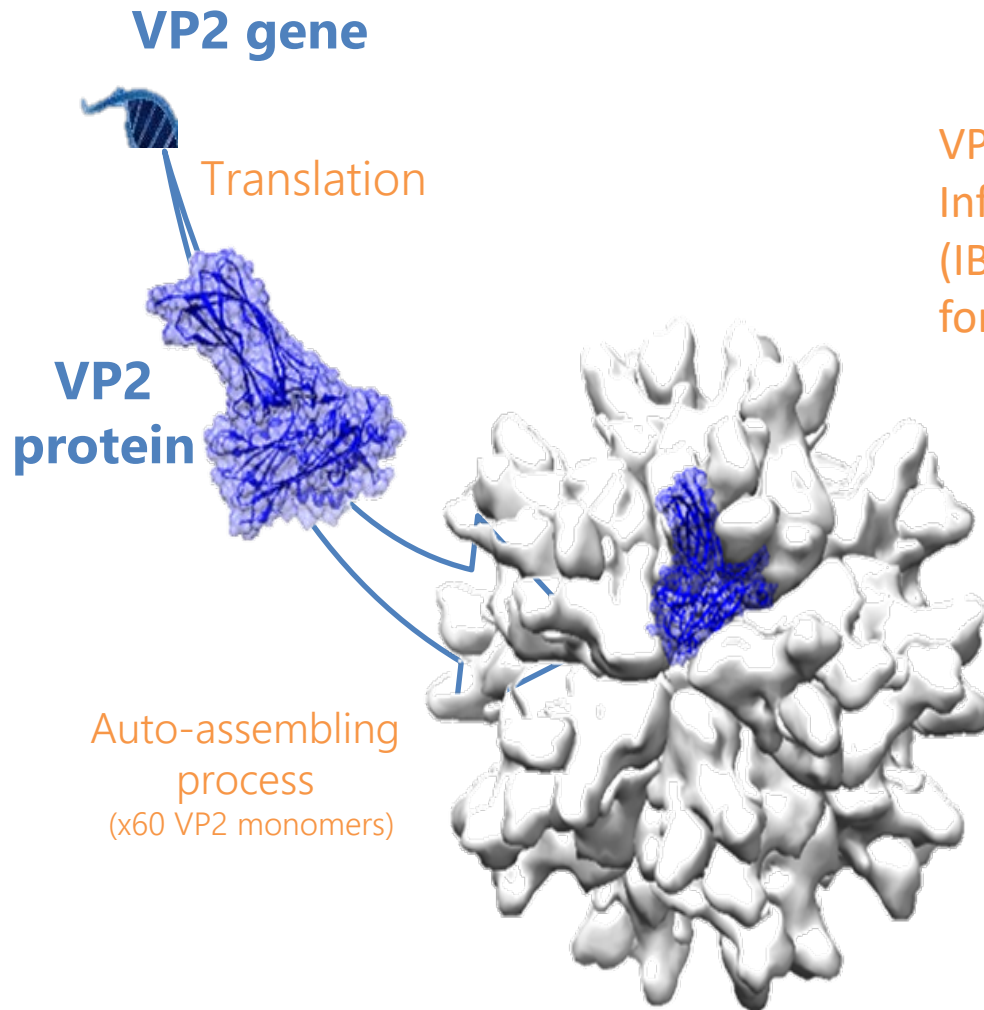
Total proyecto 2.2M euros, subvencionado al 70% por la Comisión Europea (1.55M)

Descripción del producto

Breakthrough recombinant vaccine against the Bovine Viral Diarrhea virus (BVDv):

- **Non-live** to avoid the potential safety issues related to attenuated vaccines.
- **Broad-spectrum** vaccine able to generate humoral and cellular response to all variants of the BVDv.
- **Tagged** to facilitate the differentiation between infected and vaccinated animals (DIVA) and the development of new diagnostic tests.
- **Save and efficacious** protecting animals against the disease and the fetal transmission of the virus.
- **Cost-effective:** simple scaling up and manufacturing process.

The Chimeric – Virus Like Particles (Ch-VLPs) platform



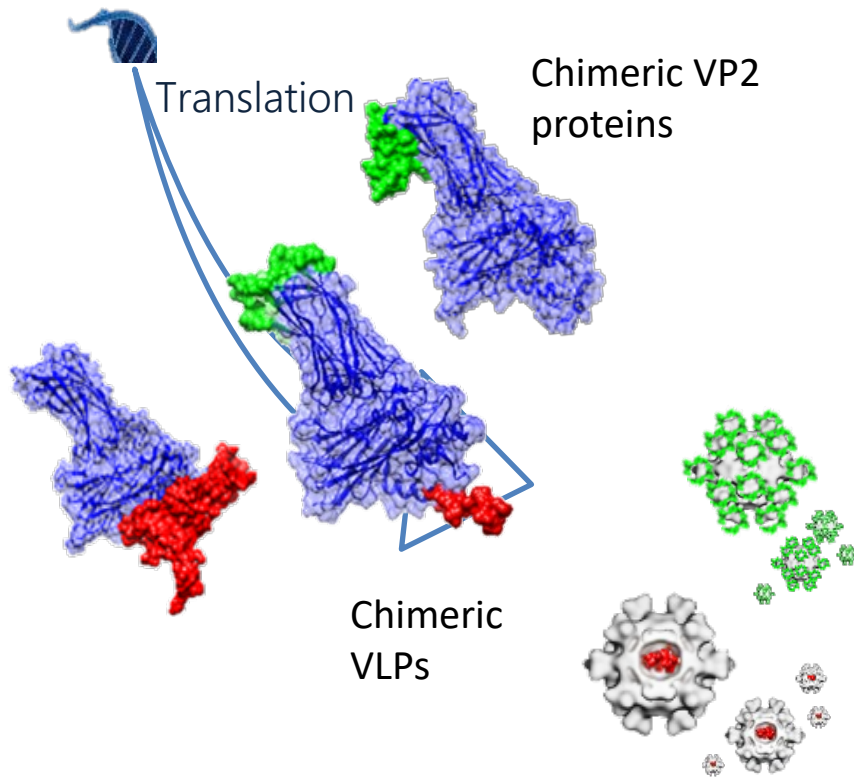
VP2 protein is a structural protein of the Infectious Bursitis virus /Gumboro disease (IBDV) what naturally autoassemble forming Virus-Like Particles



The Chimeric – Virus Like Particles (Ch-VLPs) platform

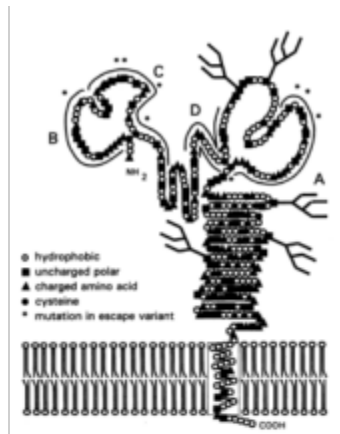
Chimeric VP2 gene

Fusion of VP2 + antigenic sequences

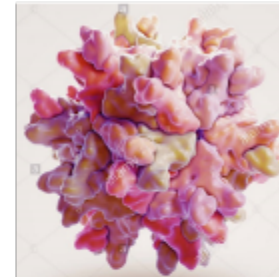


By displaying selected epitopes, we can design chimeric virus like particles to stimulate the most adequate response against the target pathology.

Chimeric VLP – BVD = VLPs + BVD epitopes of E2

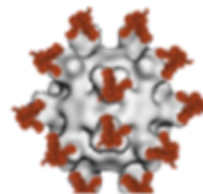


+



Selection of antigenic peptides from
BVD's protein E2

Gumboro virus -
empty capsid



Chimeric VLP-BVD particles exposing high
density antigenic BVDv peptides:
ACTIVE SUBSTANCE OF THE VACCINE

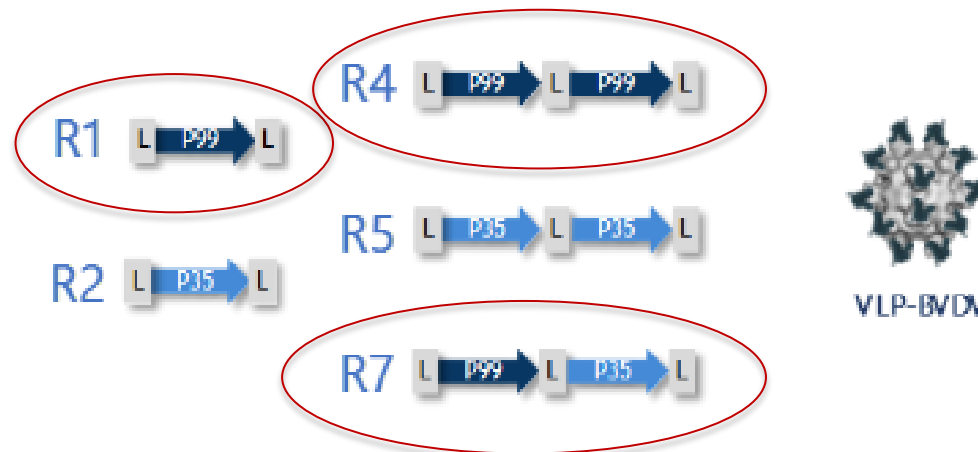


Selección de péptidos/epítomos mas reactivos

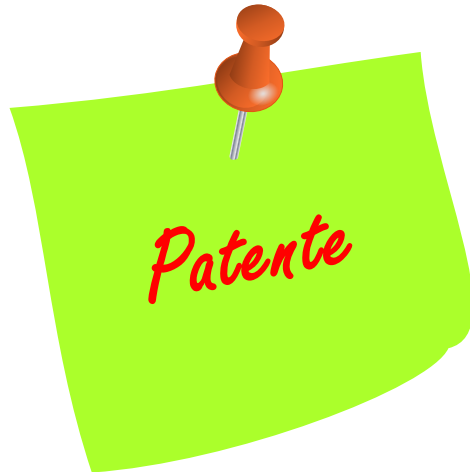
Definición *in silico* de los principales epítomos neutralizantes de la proteína E2
 Selección *in vitro* de los epítomos específicamente reconocidos por sueros anti-BVDv

ID	Code
P099N	P099A1b-c2-Bnh
P035C	P035A1a-c2-Bcoo

Ch-VLP-BVD candidates



Gestión de la propiedad intelectual



Oficina Española
de Patentes y Marcas

Acknowledgement of receipt

We hereby acknowledge receipt of your request for grant of a European patent as follows:

Submission number	300427051
Application number	EP21382933.6
File No. to be used for priority declarations	EP21382933
Date of receipt	15 October 2021
Your reference	P21714EP00
Applicant	AQUILÓN CYL, S.L.
Country	ES
Title	VACCINE COMPOSITIONS AGAINST BOVINE VIRAL DIARRHEA VIRUS



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