



Bruno Hernaez de la Plaza

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Summary: Experienced virologist with more than 20 years of continuous research work focused on diverse aspects mainly concerning **the biology of diverse large nucleocytoplasmic viruses and more recently airborne virus detection. My research interests :**

- African swine fever virus interactions (ASFV) with their host cell at INIA and CBM.
- Poxvirus modulation of immune host response at CBM.
- Detection of airborne viruses (including Sars-CoV2) at CBM.

From the beginning...

* I obtained my **Degree in Biology** (Genetics) by UCM in 1998. Later, in 2004, I received my **PhD in Biology by UCM with the highest qualification. The corresponding research work**, under the supervision of C. Alonso and J.M. Escribano **at the Biotechnology department from INIA**, consisted on uncovering the function of some previously undescribed early ASFV proteins.

* **During my first postdoctoral period at INIA** I made relevant contributions to the analysis of early interactions of ASFV with diverse pathways of the infected cell, such as virus entry, intracellular transport, apoptosis or autophagy. This period allow me to participate in diverse relevant research projects (Wellcome Trust Foundation or Consolider Program), to develop new antivirals and vaccination strategies on the ASF disease model. At the same time, I could establish relationships with other relevant research groups in UAM or CreSA, as well as to perform an **international stay** at the Institute for Animal Health (Pirbright, UK).

* In **2012, I moved to Centro de Biología Molecular Severo Ochoa (CBMSO-CSIC)** with **G. Andrés to further dissect the ASFV entry mechanism** in its natural target cell, by using a combination of electron microscopy techniques with inducible recombinant viruses.

* **In 2013 I was awarded with a competitive international JAE-DOC contract from CSIC** and incorporated to the laboratory of **Dr. Antonio Alcami at the CBMSO** to lead a novel and ambitious project, which employed a next generation sequencing approach to the analysis of the host immune response modulation exerted by diverse poxviruses during the infection of mice, mainly using the mousepox model of pathogenesis. Since then, I have explored the possibility that poxvirus and herpesvirus immunomodulatory proteins have a potential therapeutic use to treat inflammatory human disorders.



... Till now:

More recently, I was included within an interdisciplinary project to determine the microbial part of the air pollution using metagenomic approaches. During 2020 In the context of another project I could implement this recent acquired knowledge to the detection of Sars-2 CoV in air samples from hospitals.

* **Teaching experience increasing since 2016:**

- Supervisor of a **doctoral thesis** (2 additional in progress), **2 Master thesis** (TFM) , **2 final degree works** (TFG) and **2 Erasmus students**.
- Accreditation from ANECA in 2017 for Profesor ayudante Doctor, Profesor Contratado Doctor y Profesor en Universidad Privada. - **I3 Program accreditation** after a favorable evaluation (2020).
- **Participation as teacher in 3 Master's Degree** from UAM every year.

General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

* Over **20 years of experience on virology with continued research activity.**

* **h index = 19** (Google Scholar) ; **18** (Scopus)

* **ANECA Accreditation as "Profesor Ayudante Doctor", "Profesor Contratado Doctor" and "Profesor de Universidad Privada" since 2017.**

* **I3 Program Accreditation** after favourable evaluation in 2020

* **Research Publications:**

- **31** publications in JCR journals (**23 of them are Q1** and 8 Q2). **30/31 in the Infectious diseases-Microbiology-Virology WOS areas**). All of them in generalist or virology journals, including diverse high impact journals (Science, Science Adv, Nat Comms, PLoS Pathogens, mBio, J Virol, Virology, ...). In the last 5 years, **8 publications exhibited an impact factor over 7.**

- 1 Book chapter.

- 3 Reviews.

- Publications **as leading author: 15 (almost half of them)** as first author and 7 as second author.

- **Citations received: 1245** (769 within last 5 years).

- Citations/publication: 40,16.

* **43 Communications to conferences** (30 international and 13 national).

* **Guest Associate Editor** for the topic Neuronal alterations caused by viral infections Frontiers in Cellular Neuroscience.

* **3 Patents.**

* **Experienced in supervising Thesis** (See teaching section) and students.

* Gained a competitive JAE-DOC postdoctoral contract from CSIC.



* Peer-Reviewer for diverse virology journals.



Bruno Hernaez de la Plaza

Surname(s): **Hernaez de la Plaza**
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ScopusID: **7801346775**
ResearcherID: **N-4547-2014**
Date of birth: **12/08/1974**
Gender: **Male**
Nationality: **Spain**
Contact aut. region/reg.: **Community of Madrid**
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Personal web page: **https://www.researchgate.net/profile/Bruno_Hernaez**

Current professional situation

Employing entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Department: Microbiología y Virología, Centro de Biología Molecular Severo Ochoa
Professional category: Postdoctoral Researcher
Start date: 10/07/2016
Type of contract: Temporary employment contract **Dedication regime:** Full time
Primary (UNESCO code): 241500 - Molecular biology; 242000 - Virology
Secondary (UNESCO code): 310900 - Veterinary sciences
Identify key words: Cell culture; Virus cultivation; Cell biology; Microbiology

Previous positions and activities

	Employing entity	Professional category	Start date
1	Consejo Superior de Investigaciones Científicas	Postdoctoral Researcher- JAEDOC	01/01/2013
2	FUNDACION SEVERO OCHOA	Postdoctoral Researcher	01/02/2012
3	Centre de Recerca en Sanitat Animal	Postdoctoral Researcher	01/02/2008
4	Universidad Autónoma de Madrid	Postdoctoral Researcher	01/06/2005
5	INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)	Postdoctoral Researcher	01/01/2005
6	INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)	PhD Student	01/01/2003
7	INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)	Technologist	01/11/1999



- 1** **Employing entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Department: Microbiología y Virología, Centro de Biología Molecular Severo Ochoa
Professional category: Postdoctoral Researcher- JAEDOC
Start-End date: 01/01/2013 - 31/12/2015 **Duration:** 3 years
Type of contract: Temporary employment contract
- 2** **Employing entity:** FUNDACION SEVERO OCHOA
Department: Centro de Biología Molecular Severo Ochoa
Professional category: Postdoctoral Researcher
Start-End date: 01/02/2012 - 31/12/2012 **Duration:** 11 months
Type of contract: Temporary employment contract
- 3** **Employing entity:** Centre de Recerca en Sanitat Animal **Type of entity:** Foundation
Department: Biotecnologia, INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Professional category: Postdoctoral Researcher
Start-End date: 01/02/2008 - 31/12/2011 **Duration:** 3 years - 11 months
Type of contract: Temporary employment contract
Dedication regime: Full time
- 4** **Employing entity:** Universidad Autónoma de Madrid **Type of entity:** University
Department: Facultad de Medicina
Professional category: Postdoctoral Researcher
Start-End date: 01/06/2005 - 31/01/2008 **Duration:** 2 years - 7 months
Type of contract: Temporary employment contract
Dedication regime: Full time
- 5** **Employing entity:** INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Professional category: Postdoctoral Researcher
Start-End date: 01/01/2005 - 31/05/2005 **Duration:** 6 months
- 6** **Employing entity:** INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Professional category: PhD Student **Educational Management (Yes/No):** No
Start-End date: 01/01/2003 - 01/11/2004
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
- 7** **Employing entity:** INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Professional category: Technologist
Start-End date: 01/11/1999 - 31/10/2002 **Duration:** 3 years



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Higher degree

Name of qualification: Graduate in Biological Sciences (Genetics)

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of qualification: 01/06/1998

Doctorates

Doctorate programme: Biochemistry and Molecular Biology

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of degree: 29/10/2004

Other postgraduate university studies

Postgraduate qualification: Diploma de Estudios Avanzados (DEA)

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Faculty, institute or centre: Facultad de Ciencias Biologicas

Date of qualification: 2001

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

- 1 **Training title:** Riesgo Biológico en centros de investigación
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
End date: 15/06/2020 **Duration in hours:** 3 hours
- 2 **Training title:** Iniciación a la programación en Python
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
End date: 15/05/2020 **Duration in hours:** 30 hours
- 3 **Training title:** Francés online Nivel B1
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
End date: 08/11/2019 **Duration in hours:** 80 hours



- 4 Training title:** Introducción a Linux
Awarding entity: Consejo Superior de Investigaciones Científicas
End date: 05/04/2019
Type of entity: State agency
Duration in hours: 25 hours
- 5 Training title:** Centenario Gripe española
Awarding entity: Fundación Ramón Areces
End date: 28/09/2018
Type of entity: Foundation
Duration in hours: 10 hours
- 6 Training title:** Python básico
Awarding entity: Consejo Superior de Investigaciones Científicas
End date: 22/06/2018
Type of entity: State agency
Duration in hours: 24 hours
- 7 Training title:** NGS and supercomputing: Life as a couple
Awarding entity: Centro de Biología Molecular Severo Ochoa
End date: 11/05/2017
Type of entity: State agency
Duration in hours: 8 hours
- 8 Training title:** Investigación sobre VIH
Awarding entity: Instituto de Salud Carlos III
End date: 11/04/2017
Type of entity: Public Research Body
Duration in hours: 5 hours
- 9 Training title:** Kinetics and affinity analyses with Biacore
Awarding entity: GE Healthcare
End date: 14/10/2014
Type of entity: Business
Duration in hours: 5 hours
- 10 Training title:** Advanced Cell Live Microscopy Workshop
Awarding entity: Centro Nacional de Investigaciones Oncológicas
End date: 23/06/2005
Type of entity: Healthcare Institutions
Duration in hours: 24 hours
- 11 Training title:** Oncogenes y cáncer.
Awarding entity: Departamento de Bioquímica y Biología Molecular IV (UCM)
End date: 10/05/2000
Type of entity: University Department
Duration in hours: 8 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
French		B1	A1	A1	B1
Spanish		C1	C1	C1	C1
English		C1	C1	C1	C1



Teaching experience

General teaching experience

- 1** **Type of teaching:** International teaching
Name of the course: Virología médica y Veterinaria
Type of programme: Master's degree **Type of teaching:** Virtual
Type of subject: Optional
University degree: Máster Universitario en Microbiología
Start date: 2020 **End date:** 2021
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 2
Entity: Universidad Autónoma de Madrid **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
City of entity: Madrid, Community of Madrid, Spain
Subject language: Spanish
- 2** **Type of teaching:** International teaching
Name of the course: Virología médica y Veterinaria
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
University degree: Máster Universitario en Microbiología
Start date: 2019 **End date:** 2020
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 2
Entity: Universidad Autónoma de Madrid **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
City of entity: Madrid, Community of Madrid, Spain
Subject language: Spanish
- 3** **Type of teaching:** International teaching
Name of the course: Biotecnología de Virus
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
University degree: Máster Universitario en Biotecnología
Start date: 2018 **End date:** 2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 2
Entity: Universidad Autónoma de Madrid **Type of entity:** University
Faculty, institute or centre: Facultad de Medicina
City of entity: Madrid, Community of Madrid, Spain
Subject language: English
- 4** **Type of teaching:** International teaching
Name of the course: Virología médica y Veterinaria
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional



University degree: Máster Universitario en Microbiología

Course given: 2

Start date: 2018

End date: 2019

Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 2

Entity: Universidad Autónoma de Madrid

Type of entity: University

Faculty, institute or centre: Facultad de Ciencias

City of entity: Madrid, Community of Madrid, Spain

Subject language: Spanish

5 Type of teaching: International teaching

Name of the course: Biotecnología de Virus

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Optional

University degree: Máster Universitario en Biotecnología

Start date: 2017

End date: 2018

Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 2

Entity: Universidad Autónoma de Madrid

Type of entity: University

Faculty, institute or centre: Facultad de Medicina

City of entity: Madrid, Community of Madrid, Spain

Subject language: English

6 Type of teaching: International teaching

Name of the course: Virología Funcional

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Optional

University degree: Máster Universitario de Biomoléculas

Start date: 2017

End date: 2018

Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 2

Entity: Universidad Autónoma de Madrid

Type of entity: University

Faculty, institute or centre: Facultad de Ciencias

City of entity: Madrid, Community of Madrid, Spain

Subject language: Spanish

7 Type of teaching: International teaching

Name of the course: Virología médica y Veterinaria

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Optional

University degree: Máster Universitario en Microbiología

Start date: 2017

End date: 2018

Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 2

Entity: Universidad Autónoma de Madrid

Type of entity: University

Faculty, institute or centre: Facultad de Ciencias

City of entity: Madrid, Community of Madrid, Spain

Subject language: Spanish



- 8** **Type of teaching:** International teaching
Name of the course: Virología Funcional
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
University degree: Máster Universitario de Biomoléculas
Start date: 2016 **End date:** 2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 2
Entity: Universidad Autónoma de Madrid **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
City of entity: Madrid, Community of Madrid, Spain
Subject language: Spanish

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** (TFM) Evasión del sistema inmune por receptores solubles de citoquinas codificados por virus
Type of project: End of course project
Entity: Universidad Autónoma de Madrid **Type of entity:** University
Student: Francisco Javier Alvarez Miranda
Obtained qualification: Sobresaliente
Date of reading: 11/06/2020
- 2** **Project title:** (Erasmus Project) Nuclease activity of p26 domain from Schlafen ECTV gene
Entity: Surrey University **Type of entity:** University
Student: Lorena Mejias
Date of reading: 2020
- 3** **Project title:** (TFG) Evasión del sistema inmune por receptores solubles de citoquinas codificados por virus
Type of project: End of course project
Entity: Universidad Politécnica de Madrid **Type of entity:** University
Student: Francisco Javier Alvarez Miranda
Obtained qualification: Sobresaliente
Date of reading: 20/06/2019
- 4** **Project title:** Relevancia de la actividad viral anti-linfotoxina y el gen viral Schlafen en la patogénesis del virus ectromelia
Type of project: Doctoral thesis
Co-director of thesis: Bruno Hernaez; Antonio Alcami
Entity: Universidad Autónoma de Madrid **Type of entity:** University
City of entity: MAdrid,
Student: Graciela Alonso Castro
Obtained qualification: Sobresaliente Cum Laude
Date of reading: 22/02/2019
- 5** **Project title:** (TFG) Functional analyses of the diverse immunoglobulin-like domains in the vaccinia virus soluble type I interferon receptor.
Type of project: End of course project
Co-director of thesis: Antonio Alcami; Bruno Hernaez
Entity: Universidad Autónoma de Madrid **Type of entity:** University
Student: Antonio Santos del Peral



Date of reading: 2018

- 6** **Project title:** (Erasmus Project) Relevance of GAG binding properties in the viral TNFR from ectromelia virus
Entity: Surrey University **Type of entity:** University
Student: Rothera
Date of reading: 2018
- 7** **Project title:** (TFM) Mecanismo de acción del gen A179L Del virus de la peste porcina africana sobre la autofagia durante la infección
Type of project: Minor thesis
Co-director of thesis: Covadonga Alonso Martí; Bruno Hernáez de la Plaza
Entity: Universidad Complutense de Madrid. Facultad de **Type of entity:** University Department Veterinaria.
City of entity: Madrid, Community of Madrid, Spain
Student: Raquel Muñoz Moreno
Obtained qualification: Sobresaliente
Date of reading: 2011

Scientific and technological experience

Research and development groups/teams

- 1** **Name of the group:** AirCovid19
Aims of the group: Sars Cov2 detection from air samples
Type of collaboration: Co-authorship of projects and their development
Affiliation entity: Centro de Biología Molecular Severo **Type of entity:** State agency Ochoa
Start date: 26/03/2020
- 2** **Name of the group:** Immunovir
Aims of the group: Virus immunomodulation of host response
Type of collaboration: Co-authorship of publications
Affiliation entity: Centro de Biología Molecular Severo **Type of entity:** State agency Ochoa
Start date: 01/01/2013 **Duration:** 7 years
- 3** **Name of the group:** PORCIVIR
Aims of the group: Analyses of the factors contributing to pathogenesis of viral diseases affecting swine: antivirals and vaccines
Type of collaboration: Co-authorship of projects and their development
Affiliation entity: Centre de Recerca en Sanitat Animal **Type of entity:** Foundation
Start date: 01/02/2008 **Duration:** 4 years
- 4** **Name of the group:** ASFV Lab
Aims of the group: To improve understanding of ASFV host interactions at the molecular, cellular and whole animal level to underpin work leading to improved disease control, including development of vaccines.
Type of collaboration: Co-authorship of international collaboration
Affiliation entity: The Pirbright Institute **Type of entity:** R&D Centre
Start date: 01/06/2006 **Duration:** 3 months



- 5 Name of the group:** Cell-Virus Interactions Lab
Aims of the group: Analyze the virus interactions with diverse host molecular pathways
Type of collaboration: Co-authorship of publications
Affiliation entity: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Start date: 23/11/2001 **Duration:** 10 years - 3 months

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1 Name of the project:** Modulación de IFN y TNF por poxvirus
Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Antonio Alcami Pertejo
Funding entity or bodies: Ministerios de Ciencia, Innovación y Universidades
Start-End date: 01/01/2019 - 31/12/2021
- 2 Name of the project:** AirCovid19. Transmisión de SARS-CoV2 por el aire: detección en hospitales y tecnologías innovadoras.
Entity where project took place: Centro de Biología Molecular Severo Ochoa **Type of entity:** State agency
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Antonio Alcami
Funding entity or bodies: Instituto de Salud Carlos III **Type of entity:** Public Research Body
Start-End date: 20/04/2020 - 20/04/2021
Total amount: 490.000 €
- 3 Name of the project:** Estudio preclínico de una proteína recombinante como molécula terapéutica y validación clínica de su forma nativa como biomarcador diagnóstico no invasivo para la esclerosis múltiple
Entity where project took place: Instituto de Investigación Biomédica de Málaga (IBIMA) **Type of entity:** CIBER
City of entity: Málaga, Andalusia, Spain
Name principal investigator (PI, Co-PI....): Begoña Oliver
Nº of researchers: 8
Start-End date: 01/01/2019 - 31/12/2020
Total amount: 97.350 €
- 4 Name of the project:** Nuevos Mecanismos de Modulación por Virus y su contribución a la patogénesis
Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Start-End date: 01/01/2016 - 31/12/2018
- 5 Name of the project:** Conocer y modelizar la contaminación biológica del aire urbano (AIRBIOTA)
Entity where project took place: Consejo Superior de Investigaciones Científicas y Universidad Politécnica de Madrid



City of entity: Madrid, Community of Madrid, Spain

Name principal investigator (PI, Co-PI....): Diego Alejandro Moreno Gomez; Antonio Javier Alcami Pertejo

Funding entity or bodies:

Comunidad de Madrid

Type of entity: 00

City funding entity: Madrid, Community of Madrid, Spain

Start-End date: 01/11/2014 - 01/11/2017

Total amount: 704.950 €

6 Name of the project: Caracterización molecular, estructural y funcional de la interacción del virus de la peste porcina africana con membranas celulares durante la entrada, el ensamblaje y la salida de la célula huésped. BFU2009-08085/BMC

Entity where project took place: FUNDACION SEVERO OCHOA

Name principal investigator (PI, Co-PI....): GERMAN ANDRES HERNANDEZ

Funding entity or bodies:

DGI, MINISTERIO DE CIENCIA E INNOVACION

Type of entity: State agency

Start-End date: 2009 - 2012

7 Name of the project: PATOGENIA DE INFECCIONES VIRICAS DEL CERDO. (PORCIVIR). PROGRAMA CONSOLIDER-INGENIO 2010

Degree of contribution: Researcher

Entity where project took place: Centre de Recerca en Sanitat Animal **Type of entity:** Foundation

Name principal investigator (PI, Co-PI....): MARIANO DOMINGO; JOSE ANGEL MARTINEZ ESCRIBANO

N° of researchers: 20

Type of participation: Others

Start-End date: 2007 - 2011

Total amount: 5.000.000 €

Sub-project amount: 400.000 €

8 Name of the project: Desarrollo de moléculas antivirales basadas en la interacción de los virus con la dineína. Proyecto Petri PET2006_0785

Entity where project took place: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)

Name principal investigator (PI, Co-PI....): COVADONGA ALONSO MARTI

N° of researchers: 3

Funding entity or bodies:

DGI, MINISTERIO DE EDUCACION Y CIENCIA

Start-End date: 2008 - 2010

Total amount: 88.000 €

9 Name of the project: Development of African Swine Fever virus vaccines

Entity where project took place: Universidad Autónoma de Madrid **Type of entity:** University

Name principal investigator (PI, Co-PI....): MARIA LUISA SALAS; M. PARKHOUSE; ENRIQUE TABARES; L. DIXON

Funding entity or bodies:

WELLCOME TRUST FOUNDATION

Type of entity: Foundation

Start-End date: 2005 - 2009

Total amount: 444,24 €



- 10** **Name of the project:** Identificación de mecanismos moleculares de patogenicidad del virus de la Peste porcina africana (VPPA) mediante el estudio de sus interacciones con dianas celulares. Proyecto BIO2006-00651
Entity where project took place: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Name principal investigator (PI, Co-PI....): COVADONGA ALONSO MARTI
Nº of researchers: 5
Start-End date: 2005 - 2008
Total amount: 154.700 €
- 11** **Name of the project:** Caracterización de los ligandos celulares de los genes reguladores de la apoptosis del virus de la Peste porcina africana
Entity where project took place: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Funding entity or bodies:
Programa Sectorial de Promocion General del Conocimiento, DGES
Start-End date: 2000 - 2002
- 12** **Name of the project:** Interaccion de proteínas del macrófago porcino con proteínas viricas críticas en regulación de apoptosis. SC-00-049
Entity where project took place: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Name principal investigator (PI, Co-PI....): C. ALONSO
Funding entity or bodies:
Programa Sectorial I+D Agrario y alimentario, Ministerio de Agricultura, **Type of entity:** Public Research Body
Start-End date: 2000 - 2002
- 13** **Name of the project:** The potential and application of virus host evasion genes that modify apoptosis and cytokine responses. QLK3-2000-00362
Entity where project took place: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Name principal investigator (PI, Co-PI....): MICHAEL PARKHOUSE; ANTONIO ALCAMI; LINDA DIXON; COVADONGA ALONSO
Funding entity or bodies:
European Union. "5TH FRAMEWORK PROGRAMME"
Start-End date: 2000 - 2002

Results

Industrial and intellectual property

- 1** **Title registered industrial property:** Proteína recombinante como antiviral para el virus de la inmunodeficiencia humana (VIH)
Inventors/authors/obtainers: Begoña Oliver; Isaac Hurtado; Bruno Hernaez; Esther Calonge; José Alcamí; Jose Pavía; Antonio Alcamí; Oscar Fernandez
Entity holder of rights: Instituto de Investigación Biomédica de Malaga IBIMA
Nº of application: 2020/54
Country of inscription: Spain, Andalusia
Date of register: 03/06/2020
- 2** **Title registered industrial property:** NEW ANTIVIRAL PEPTIDES WHICH PREVENT THE BINDING OF THE VIRUS TO DLC8
Inventors/authors/obtainers: COVADONGA ALONSO MARTI; BRUNO HERNAEZ DE LA PLAZA; JOSE ANGEL MARTINEZ ESCRIBANO
Entity holder of rights: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Country of inscription: Spain
Date of register: 24/10/2008
Conferral date: 15/04/2011
Operating aut.region/region: Belgium / France / Germany / Greece / Italy / Luxembourg / Holland / Portugal / United Kingdom / United States of America
Companies: ALTERNATIVE GENE EXPRESIÓN, S.L.
- 3** **Title registered industrial property:** SISTEMA PARA PRODUCIR PEPTIDOS Y PROTEINAS, MULTIMERICOS Y SUS APLICACIONES
Inventors/authors/obtainers: JOSE ANGEL MARTINEZ ESCRIBANO; FELIX GIL DONES; INMACULADA GALINDO BARREALES; COVADONGA ALONSO MARTI; BRUNO HERNAEZ DE LA PLAZA; EDUARDO GOMEZ CASADO
Entity holder of rights: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Country of inscription: Spain
Date of register: 2008
Companies: ALTERNATIVE GENE EXPRESIÓN, S.L.
- 4** **Title registered industrial property:** Nuevos peptidos antivirales que impiden la union de virus a DLC8
Inventors/authors/obtainers: BRUNO HERNAEZ DE LA PLAZA; JOSE ANGEL MARTINEZ ESCRIBANO; COVADONGA ALONSO MARTI
Entity holder of rights: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Country of inscription: Spain
Date of register: 2007
Companies: ALTERNATIVE GENE EXPRESIÓN, S.L.



Scientific and technological activities

Scientific production

1 **H index:** 19
Date of application: 15/12/2020
Fuente de Índice H: GOOGLE SCHOLAR

2 **H index:** 18
Date of application: 15/12/2020
Fuente de Índice H: SCOPUS

Publications, scientific and technical documents

1 Covadonga Alonso; James Miskin; Bruno Hernáez; Patricia Fernandez-Zapatero; Lourdes Soto; Carmen Cantó; Ignacio Rodr??guez-Crespo; Linda Dixon; José M. Escribano. African Swine Fever Virus Protein p54 Interacts with the Microtubular Motor Complex through Direct Binding to Light-Chain Dynein. *Journal of Virology*. 75 - 20, pp. 9819 - 9827. 2001. Available on-line at: <<http://jvi.asm.org/content/75/20/9819.abstract>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Impact source: ISI

Category: Virology

Impact index in year of publication: 5,076

Journal in the top 25%: Yes

Source of citations: WOS

Citations: 98

Relevant results: For the first time the role of African swine fever protein p54 is elucidated. p54 is involved in virus intracellular transport by direct interaction with dynein.

Reviews in journals: 92

Relevant publication: No

2 Bruno Hernáez; Gema D??az-Gil; Mónica Garc??a-Gallo; José Ignacio Quetglas; Ignacio Rodr??guez-Crespo; Linda Dixon; José M Escribano; Covadonga Alonso. The African swine fever virus dynein-binding protein p54 induces infected cell apoptosis. *FEBS Letters*. 569 - 1-3, pp. 224 - 228. Elsevier, 2004. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0014579304007070>>. ISSN 0014-5793

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Source of citations: WOS

Citations: 23

Relevant results: The first African swine fever virus with pro-apoptotic activity during early infection

Reviews in journals: 22

Relevant publication: No

3 Patricia Alfonso; José Rivera; Bruno Hernáez; Covadonga Alonso; José M. Escribano. Identification of cellular proteins modified in response to African swine fever virus infection by proteomics. *PROTEOMICS*. 4 - 7, pp. 2037 - 2046. WILEY-VCH Verlag, 2004. Available on-line at: <<http://dx.doi.org/10.1002/pmic.200300742>>. ISSN 1615-9861

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Source of citations: WOS

Reviews in journals: 50

Relevant publication: No

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Citations: 55

- 4** Bruno Hernaez; Jose M. Escribano; Covadonga Alonso. Visualization of the African swine fever virus infection in living cells by incorporation into the virus particle of green fluorescent protein-p54 membrane protein chimera. *Virology*. 350 - 1, pp. 1 - 14. San Diego(United States of America): 2006. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0042682206000353>>. ISSN 0042-6822

DOI: 10.1016/j.virol.2006.01.021

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 3

Impact source: ISI

Impact index in year of publication: 3.525

Position of publication: 12

Category: Science Edition - VIROLOGY

Journal in the top 25%: No

No. of journals in the cat.: 33

Source of citations: WOS

Citations: 25

Relevant results: For the first time we could follow African swine fever infection by generating recombinant virus expressing a viral protein fused to GFP.

Reviews in journals: 20

Relevant publication: No

- 5** Bruno Hernaez; Jose M. Escribano; Covadonga Alonso. African swine fever virus protein p30 interaction with heterogeneous nuclear ribonucleoprotein K (hnRNP-K) during infection. *FEBS Letters*. 582 - 23-24, pp. 3275 - 3280. AmsterdamElsevier, 2008. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0014579308007199>>. ISSN 0014-5793

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 3

Impact source: ISI

Impact index in year of publication: 3,582

Source of citations: WOS

Category: Molecular Biology

Journal in the top 25%: Yes

Citations: 11

Relevant results: A new role for African swine fever virus protein p30 in the regulation of host cell gene expression

Reviews in journals: 9

Relevant publication: No

- 6** Inmaculada Galindo; Bruno Hernaez; Gema Díaz-Gil; Jose M. Escribano; Covadonga Alonso. A179L, a viral Bcl-2 homologue, targets the core Bcl-2 apoptotic machinery and its upstream $\{BH3\}$ activators with selective binding restrictions for Bid and Noxa. *Virology*. 375 - 2, pp. 561 - 572. San Diego(United States of America): Elsevier, 2008. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0042682208000639>>. ISSN 0042-6822

DOI: 10.1016/j.virol.2008.01.050

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 5



Impact source: ISI
Impact index in year of publication: 3.367
Position of publication: 12
Source of citations: WOS
Reviews in journals: 15
Relevant publication: No

Category: Virology
Journal in the top 25%: No
No. of journals in the cat.: 33
Citations: 15

- 7** Bruno Hernández; Teresa Tarragó; Ernest Giralt; Jose M. Escribano; Covadonga Alonso. Small Peptide Inhibitors Disrupt a High-Affinity Interaction between Cytoplasmic Dynein and a Viral Cargo Protein. *Journal of Virology*. 84 - 20, pp. 10792 - 10801. Washington(United States of America): 2010. Available on-line at: <<http://jvi.asm.org/content/84/20/10792.abstract>>. ISSN 1098-5514

DOI: 10.1128/JVI.01168-10

Type of production: Scientific paper
Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 5

Impact source: ISI
Impact index in year of publication: 5,076
Position of publication: 5

Category: Science Edition - VIROLOGY

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Source of citations: WOS

Citations: 12

Relevant results: A novel strategy to block virus intracellular transport by using viral peptides. A patent was obtained from this work.

Reviews in journals: 9

Relevant publication: No

- 8** I Galindo; B Hernández; J Berná; J Fenoll; J L Cenis; J M Escribano; C Alonso. Comparative inhibitory activity of the stilbenes resveratrol and oxyresveratrol on African swine fever virus replication. *Antiviral research*. 91 - 1, pp. 57 - 120. Amsterdam2011. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0166354211002920>>. ISSN 1872-9096

DOI: 10.1016/j.antiviral.2011.04.013

Type of production: Scientific paper
Position of signature: 2

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 7

Impact source: ISI
Impact index in year of publication: 3,43
Position of publication: 4

Category: Science Edition - VIROLOGY

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Source of citations: WOS

Citations: 20

Reviews in journals: 6

Relevant publication: No

- 9** Inmaculada Galindo Barreales; Bruno Hernaez de la Plaza; R Muñoz-Moreno; Migueñl angel Cuesta Geijo; Inmaculada Dalmau Mena; Covadonga Alonso Marti. The ATF6 branch of unfolded protein response and apoptosis are activated to promote African swine fever virus infection. *Cell Death and Disease*. 3, pp. e341 - e. Nature, 2012. ISSN 2041-4889

DOI: 10.1038/cddis.2012.81

Type of production: Scientific paper
Position of signature: 2

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee



Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 6,044

Position of publication: 38

Source of citations: WOS

Reviews in journals: 14

Relevant publication: No

Category: Science Edition - CELL BIOLOGY

Journal in the top 25%: Yes

No. of journals in the cat.: 187

Citations: 20

- 10** Jose I. Quetglas; Bruno Hernández; Inmaculada Galindo; Raquel Muñoz-Moreno; Miguel A. Cuesta-Geijo; Covadonga Alonso. Small Rho GTPases and Cholesterol Biosynthetic Pathway Intermediates in African Swine Fever Virus Infection. *Journal of Virology*. 86 - 3, pp. 1758 - 1767. Washington(United States of America): 2012. Available on-line at: <<http://jvi.asm.org/content/86/3/1758.abstract>>. ISSN 1098-5514

DOI: 10.1128/JVI.05666-11

Type of production: Scientific paper

Position of signature: 2

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 5,076

Position of publication: 5

Source of citations: WOS

Reviews in journals: 10

Relevant publication: No

Category: Science Edition - VIROLOGY

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Citations: 15

- 11** Miguel Angel Cuesta Geijo; Inmaculada Galindo; Bruno Hernaez; Jose Ignacio Quetglas Mas; Inmaculada Dalmau Mena; Covadonga Alonso Marti. Endosomal Maturation, Rab7 GTPase and Phosphoinositides in African Swine Fever Virus Entry. *PLoS ONE*. 7 - 11, pp. e48853 - e48853. Public Library of Science, 2012. Available on-line at: <<http://dx.doi.org/10.1371/journal.pone.0048853>>.

DOI: 10.1371/journal.pone.0048853

Type of production: Scientific paper

Position of signature: 3

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Impact source: JCR

Impact index in year of publication:

Position of publication: 11

Source of citations: WOS

Reviews in journals: 4

Relevant publication: No

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 63

Citations: 17

- 12** Bruno Hernaez; Covadonga Alonso. Dynamin- and Clathrin-Dependent Endocytosis in African Swine Fever Virus Entry. *Journal of Virology*. 84 - 4, pp. 2100 - 2109. Washington(United States of America): 2010. Available on-line at: <<http://jvi.asm.org/content/84/4/2100.abstract>>. ISSN 1098-5514

DOI: 10.1128/JVI.01557-09

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 2

Impact source: ISI

Category: Science Edition - VIROLOGY



Impact index in year of publication: 5,076
Position of publication: 5

Journal in the top 25%: Yes
No. of journals in the cat.: 33

Source of citations: WOS

Citations: 41

Relevant results: Describes for the first time the endocytic pathway used by African swine fever virus to entry in host cell. At that moment it represented one of the largest viruses entering by clathrin based endocytosis.

Reviews in journals: 26

Relevant publication: Yes

- 13** David Olnagier; Ensieh Farahani; Jacob Thyrsted; Julia Blay-Cadanet; Angela Herengt; Manja Idorn; Alon Hait; Bruno Hernaez; Alice Knudsen; Marie Beck Iversen; Mirjam Schilling; Sofie Jorgensen; Michelle Thomsen; Michael Lappe; Victoria H Gilchrist; Anne Louise Hansen; Rasmus Ottosen; Charlotte Moller; Demi van der Horst; Suraj Peri; Jinrong Huang; Martin Jakobsen; Esben B Svenningsen; Thomas B Poulsen; Lydia Bartsch; Anne L Thielke; Yonglun Luo; Camilla G Nielsen; Antonio Alcamí; Tommy Alain; John Hiscott; Trine Mogensen; Soren Paludan; Christian K Holm. SARS-CoV2-mediated suppression of NRF2-signaling reveals potent antiviral and anti-inflammatory activity of 4-octyl-itaconate and dimethyl fumarate. Nature Communications. 11 - 1, NATURE RESEARCH, 02/10/2020.

DOI: 10.1038/s41467-020-18764-3

Type of production: Scientific paper

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Impact source: ISI

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Impact index in year of publication: 12,12

Journal in the top 25%: Yes

Relevant results: Antiviral strategies to inhibit Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV2) and the pathogenic consequences of COVID-19 are urgently required. Here, we demonstrate that the NRF2 antioxidant gene expression pathway is suppressed in biopsies obtained from COVID-19 patients. Further, we uncover that NRF2 agonists 4-octyl-itaconate (4-OI) and the clinically approved dimethyl fumarate (DMF) induce a cellular antiviral program that potently inhibits replication of SARS-CoV2 across cell lines. The inhibitory effect of 4-OI and DMF extends to the replication of several other pathogenic viruses including Herpes Simplex Virus-1 and-2, Vaccinia virus, and Zika virus through a type I interferon (IFN)-independent mechanism. In addition, 4-OI and DMF limit host inflammatory responses to SARS-CoV2 infection associated with airway COVID-19 pathology. In conclusion, NRF2 agonists 4-OI and DMF induce a distinct IFN-independent antiviral program that is broadly effective in limiting virus replication and in suppressing the pro-inflammatory responses of human pathogenic viruses, including SARS-CoV2.

Relevant publication: Yes

- 14** Bruno Hernaez; Graciela Alonso; Iliana Georgana; Misbah El-Jesr; Rocio Martin; Kathy Shair; Cornelius Fisher; Sascha Sauer; Carlos Maluquer-de.Motes; Antonio Alcamí. Viral cGAMP nuclease reveals the essential role of DNA sensing in protection against acute lethal virus infection. Science Advances. 6 - 38, MER ASSOC ADVANCEMENT SCIENCE, 18/09/2020.

DOI: 10.1126/sciadv.abb4565

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Impact source: ISI

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Impact index in year of publication: 13,12

Journal in the top 25%: Yes

Relevant results: Cells contain numerous immune sensors to detect virus infection. The cyclic GMP-AMP (cGAMP) synthase (cGAS) recognizes cytosolic DNA and activates innate immune responses via stimulator of interferon genes (STING), but the impact of DNA sensing pathways on host protective responses has not been fully defined. We demonstrate that cGAS/STING activation is required to resist lethal poxvirus infection.



We identified viral Schlafen (vSlfn) as the main STING inhibitor, and ectromelia virus was severely attenuated in the absence of vSlfn. Both vSlfn-mediated virulence and STING inhibitory activity were mapped to the recently discovered poxins cGAMP nuclease domain. Animals were protected from subcutaneous, respiratory, and intravenous infection in the absence of vSlfn, and interferon was the main antiviral protective mechanism controlled by the DNA sensing pathway. Our findings support the idea that manipulation of DNA sensing is an efficient therapeutic strategy in diseases triggered by viral infection or tissue damage-mediated release of self-DNA.

Relevant publication: Yes

- 15** Bruno Hernaez; Juan Manuel Alonso-Lobo; Inma Montanuy; Cornelius Fischer; Sascha Sauer; Luis Sigal; Noemi Sevilla; Antonio Alcamí. A virus-encoded type I interferon decoy receptor enables evasion of host immunity through cell-surface binding. *Nature communications*. 9 - 5440, Nature Publishing Group, 21/12/2018. Available on-line at: <<https://www.nature.com/articles/s41467-018-07772-z>>.

DOI: 10.1038/s41467-018-07772-z

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 8

Impact source: ISI

Impact index in year of publication: 12,12

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

Relevant results: The specific contribution of the cell binding properties in the poxvirus inhibitor of Interferon pathogenesis is determined using the samllpox model of infection in mice. A potential therapeutic application for these properties of the interferon inhibitor is first described.

Relevant publication: Yes

- 16** Bruno Hernández; Graciela Alonso; Juan Manuel Alonso Lobo; Alberto Rastrojo; Cornelius Fischer; Sascha Sauer; Begoña Aguado; Antonio Alcamí. RNA-seq based transcriptome analysis of the type-I interferon host response upon vaccinia virus infection of mouse cells. *Journal of Immunological Research*. Hindawi, 24/02/2017.

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 8

Impact source: ISI

Impact index in year of publication: 3,32

Position of publication: 81

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Immunology

Journal in the top 25%: No

No. of journals in the cat.: 159

Relevant results: A transcriptomic analysis of the Vaccinia induced changes in host gene expression profile during infection, using a mouse cell line. This work is mainly focused on the interferon related pathways and the mechanism of action of B18 poxvirus protein. Additionally to the previously known interferon blocking properties of poxvirus protein B18, we demonstrate for the first time the absence of additional functions of B18 after binding to cell surface around infected cells.

Relevant publication: Yes

- 17** Bruno Hernaez; Milagros Guerra; Maria Luisa Salas; German Andres. African Swine Fever Virus Undergoes Outer Envelope Disruption, Capsid Disassembly and Inner Envelope Fusion before Core Release from Multivesicular Endosomes. *PLoS PATHOGENS*. 12 - 4, San Francisco (United States of America): pLos, 25/04/2016. Available on-line at: <<http://journals.plos.org/plospathogens/article?id=10.1371%2Fjournal.ppat.1005595>>.

DOI: 10.1371/journal.ppat.1005595

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 4

Impact source: ISI

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: virology

Impact index in year of publication: 7.75
Position of publication: 3

Source of citations: WOS

Journal in the top 25%: Yes
No. of journals in the cat.: 37

Citations: 1

Relevant results: The entry of ASFV remained unclear and somehow controversial. This report clarified using highly purified virus combined with to dissect the entry and endosomal transit of ASFV in the swine macrophage, the natural host target cell. ASFV can enter cells by clathrin endocytosis and also by a non-induced macropinosytic mechanism. This work also described how the virus gets naked along its transit inside the cell and revealed the viral inner envelope as the viral component of the fusion with the endosomal membrane, with a special relevance for ASFV protein E248R.

Relevant publication: Yes

- 18** Bruno Hernaez de la Plaza; Marta Cabezas; Raquel Muñoz Moreno; Inmaculada Galindo; Miguel Angel Cuesta Geijo; Covadonga Alonso Marti. A179L, a new viral Bcl2 homolog targeting Beclin 1 autophagy related protein. *Current Molecular Medicine*. 13 - 2, pp. 305 - 316. Bentham Science Publishers, 2013. Available on-line at: <<http://eurekaselect.com/105965/article>>. ISSN 1566-5240

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 4.197

Position of publication: 27

Category: Medicine, Research & Experimental

Journal in the top 25%: Yes

No. of journals in the cat.: 121

Source of citations: WOS

Citations: 7

Relevant results: Describes for the first time a novel role for ASFV gene A179L in the regulation of host cell autophagy, as a defence mechanism.

Relevant publication: Yes

- 19** María Moros; Bruno Hernáez; Elina Garet; Jorge T. Dias; Berta Sáez; Valeria Grazú; África González-Fernández; Covadonga Alonso; Jesús M. de la Fuente. Monosaccharides versus PEG-Functionalized NPs: Influence in the Cellular Uptake. *ACS Nano*. 6 - 2, pp. 1565 - 1577. Washington(United States of America): ACS Publications, 2012. Available on-line at: <<http://pubs.acs.org/doi/abs/10.1021/nn204543c>>.

DOI: 10.1021/nn204543c

Type of production: Scientific paper

Position of signature: 2

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 9

Impact source: ISI

Impact index in year of publication: 12,062

Position of publication: 8

Category: Science Edition - CHEMISTRY, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 163

Source of citations: WOS

Citations: 108

Relevant results: Nanoparticles has been proposed as efficient biotools to deliver drugs, or chemical compounds to cells in a specific manner. This work represents an analysis of the entry of a new class of functionalized nanoparticles in mammalian cells.

Relevant publication: Yes

- 20** Tania Matamoros; Ali Alejo; Javier Maria Rodriguez; Bruno Hernaez; Milagros Guerra; Alberto Fraile-Ramos; German Andres. African Swine Fever Virus Protein pE199L Mediates Virus Entry by Enabling Membrane Fusion and Core Penetration. *mBio*. 11 - 4, pp. e00789-20. AMER SOC MICROBIOLOGY, 11/08/2020.

DOI: 10.1128/mBio.00789-20.

Type of production: Scientific paper

Format: Journal

Corresponding author: No

Impact source: ISI

Category: Microbiology

Impact index in year of publication: 6.78

Journal in the top 25%: Yes

Relevant results: Despite extensive research, effective vaccines or antiviral strategies for African swine fever virus (ASFV) are still lacking and relevant gaps in knowledge of the fundamental biology of the viral infection cycle exist. In this study, we identified pE199L, a protein of the inner viral membrane that is required for virus entry. More specifically, pE199L is necessary for the fusion event that leads to the penetration of the genome-containing core in the host cell. Our results significantly increase our knowledge of the process of internalization of ASFV, which may instruct future research on antiviral strategies.

- 21** Desdin-Micó Gabriela; Gonzalo Soto-Heredero; Juan Francisco Aranda; Jorge Oller; Elisa Carrasco; Enrique Gabandé-Rodríguez; Eva Maria Blanco; Arantzazu Alfranca; Lorena Cusso; Manuel Desco; Borja Ibañez; Arantxa R. Gortazar; Pablo Fernandez-Marcos; María N. Navarro; Hernaez Bruno; Antonio Alcamí; Francesc Baixauli; María Mittelbrunn. T-cells with dysfunctional mitochondria induce multimorbidity and premature senescence. *Science*. 368 - 6497, pp. 1371. AAAS, 21/05/2020.

Type of production: Scientific paper

Format: Journal

Impact source: ISI

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Impact index in year of publication: 41,84

Journal in the top 25%: Yes

Relevant results: T cell metabolic failure induces the accumulation of circulating cytokines, which resembles the chronic inflammation that is characteristic of aging ("inflammaging").

- 22** Bruno Hernaez de la Plaza; Antonio Alcamí Pertejo. Virus-encode cytokine/chemokine decoy receptors. *Current Opinion in Immunology*. 66, pp. 50 - 56. Elsevier, 08/05/2020.

Type of production: Scientific paper

Format: Journal

Corresponding author: No

Impact source: ISI

Category: Immunology and Microbiology (miscellaneous)

Impact index in year of publication: 7.29

Journal in the top 25%: Yes

- 23** Isaac Hurtado-Guerrero; Bruno Hernaez; Maria Pinto-Medel; Esther Calonge; Jose L Rodriguez-Bada; Patricia Urbaneja; Ana Alonso; Natalia Mana-Vazquez; Pablo Aliaga; Shohreh Issazadeh-Navikas; Jose Pavia; Jose Alcamí; Antonio Alcamí; Oscar Fernandez; Begoña Oliver-Martos. Antiviral, Immunomodulatory and Antiproliferative Activities of Recombinant Soluble IFNAR2 without IFN- β Mediation. *Journal of Clinical Medicine*. 9 - 4, MPDI, 31/03/2020.

DOI: doi: 10.3390/jcm9040959

Type of production: Scientific paper

Format: Journal

Position of signature: 2

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Impact source: ISI

Category: Science Edition - MEDICINE, GENERAL & INTERNAL

Impact index in year of publication: 3,30

Journal in the top 25%: Yes

Relevant results: r-sIFNAR2 exerts immunomodulatory, antiproliferative and antiviral activities without IFN-ss mediation, and could be a promising treatment against viral infections and immune-mediated diseases.

- 24** Ali; Begoña; Sergio; Mar; Margarida; Bruno; Antonio. Chemokines cooperate with TNF to provide protective anti-viral immunity and to enhance inflammation. *Nature Communications*. 9 - 1790, Nature Publishing group, 03/05/2018.

Type of production: Scientific paper

Format: Journal



Corresponding author: No

Impact source: ISI

Impact index in year of publication: 12,12

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

Relevant results: By using the mousepox model of infection, a specific set of chemokines enhance the inflammatory and protective anti-viral responses mediated by TNF and lymphotoxin, and illustrate how viruses optimize anti-TNF strategies with the addition of a chemokine binding domain as soluble decoy receptors.

- 25** Bruno; Antonio. New insights into the immunomodulatory properties of poxvirus cytokine decoy receptors at the cell surface. Faculty 1000 Reserach. 7, Faculty 1000, 2018.

DOI: doi: 10.12688/f1000research.14238.1

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Total no. authors: 2

Relevant results: Review exploring the possibility that bibding to cell surfaces is required for efficient action of secreted viral immunomodulatory proteins.

- 26** Daniel Aguirre de Carcer; Bruno Hernaez; Alberto Rastrojo; Antonio Alcamí. Infection with diverse immune-modulating poxviruses elicits different compositional shifts in the mouse gut microbiome. PLoS One. 12 - 3, 2017.

DOI: 10.1371/journal.pone.0173697

Type of production: Scientific paper

Position of signature: 2

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Multidisciplinary

Journal in the top 25%: Yes

Impact source: ISI

Impact index in year of publication: 3,22

- 27** Haleh Heidarieh; Bruno Hernaez de la Plaza; Antonio Alcamí Pertejo. Immune modulation by virus-encoded chemokine binding proteins. Virus Research. 209, pp. 67 - 75. Elsevier, 2015. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0168170215001185>>.

DOI: doi: 10.1016/j.virusres.2015.02.028.

Type of production: Scientific paper

Position of signature: 2

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: Virology

Journal in the top 25%: No

No. of journals in the cat.: 33

Total no. authors: 3

Impact source: JCR

Impact index in year of publication: 2.526

Position of publication: 18

Source of citations: WOS

Citations: 5

Relevant publication: No

- 28** Covadonga Alonso Marti; Inmaculada Galindo; Miguel Angel Cuesta Geijo; Marta Cabezas; Bruno Hernaez de la Plaza; Raquel Muñoz Moreno; Raquel Muñoz Moreno. African Swine Fever Virus-Cell Interactions: From Virus Entry to Cell Survival. Virus Research. 173 - 1, pp. 42 - 57. Elsevier, 2013. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0168170212004686>>. ISSN 0168-1702

DOI: 10.1016/j.virusres.2012.12.006

Type of production: Scientific paper

Position of signature: 5

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee



Impact source: ISI
Impact index in year of publication: 2.745
Position of publication: 18
Source of citations: WOS
Relevant publication: No

Category: Science Edition - VIROLOGY
Journal in the top 25%: Yes
No. of journals in the cat.: 33
Citations: 11

- 29** Jose Rivera; Charles Abrams; Bruno Hernaez; Alberto Alcazar; Jose Angel Martinez Escribano; Linda Dixon; Covadonga Alonso. The MyD116 African swine fever virus homologue interacts with the catalytic subunit of protein phosphatase 1 and activates its phosphatase activity. *Journal of Virology*. 81 - 6, pp. 2923 - 2929. Washington(United States of America): 2007. Available on-line at: <<http://jvi.asm.org/content/81/6/2923.long>>. ISSN 0022-538X

DOI: 10.1128/JVI.020-17-06

Type of production: Scientific paper

Position of signature: 3

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 7

Impact source: ISI

Impact index in year of publication: 5.33

Position of publication: 5

Source of citations: WOS

Relevant publication: No

Category: Science Edition - VIROLOGY

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Citations: 28

- 30** B. Hernández; J.M. Escribano; C. Alonso. Switching on and Off the Cell Death Cascade: African Swine Fever Virus Apoptosis Regulation. *Viruses and Apoptosis*.36, pp. 57 - 69. Springer Berlin Heidelberg, 2004. Available on-line at: <http://dx.doi.org/10.1007/978-3-540-74264-7_4>. ISBN 978-3-540-74263-0

Type of production: Book chapter

Position of signature: 1

Format: Book

Degree of contribution: Author or co-author of chapter in book

Reviews in journals: 1

- 31** M. GARCIA-GALLO; P.ALFONSO; B. HERNAEZ; J.M. ESCRIBANO; C. ALONSO. Cellular proteins expression pattern at early times after African swine fever virus infection. 2ND EUROPEAN CONGRESS OF VIROLOGY, PROCEEDINGS. pp. 87 - 91. MEDIMOND PUBLISHING CO, VIA RUBBIANI 6/2, 40124 BOLOGNA, ITALY, 2004. ISBN 88-7587-076-4

Type of production: Book chapter

Format: Book

Degree of contribution: Author or co-author of chapter in book

Works submitted to national or international conferences

- 1** **Title of the work:** IDENTIFICATION OF SARS-COV2-MEDIATED SUPPRESSION OF NRF2 SIGNALING REVEALS A POTENT ANTIVIRAL AND ANTI-INFLAMMATORY ACTIVITY OF 4-OCTYL-ITACONATE AND DIMETHYL FUMARATE
Name of the conference: CYTOKINES20
Corresponding author: No
City of event: Seattle, United States of America
Date of event: 01/11/2020
End date: 04/11/2020
Organising entity: International Cytokine and Interferon Society



- 2** **Title of the work:** Poxin/vSchlafen: a novel viral strategy to subvert cytosolic DNA sensing.
Name of the conference: Viruses 2020
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Barcelona, Catalonia, Spain
Date of event: 05/02/2020
End date: 07/02/2020
Organising entity: Viruses
Bruno Hernaez; Graciela Alonso; Illiana Georgana; Misbah El-Jesr; Antonio Alcami; Carlos Maluquer de Motes.
- Geographical area:** European Union
Reasons for participation: Review before acceptance
- 3** **Title of the work:** Global transcriptomic analysis of the modulation of the immune response by the ectromelia virus TNF receptor: contribution of the TNF and chemokine binding domains
Name of the conference: 3rd European Chemokine and Cell migration Conference (ECM2019)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Salamanca, Castile and León, Spain
Date of event: 26/06/2019
End date: 29/06/2019
Organising entity: Fundacion General Universidad Salamanca
With external admission assessment committee: Yes
Type of contribution: Scientific paper
Bruno Hernaez; Graciela Alonso; Alberto Rastrojo; Cornelius Fischer; Begoña Aguado; Sascha Sauer; Antonio Alcami.
- Geographical area:** European Union
Reasons for participation: Upon invitation
- 4** **Title of the work:** Cell surface binding activity is required for efficient evasion of host immunity by a virus-encoded type I IFN decoy receptor.
Name of the conference: Microbiology Society Annual Conference 2019
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Berlfast, United Kingdom
Date of event: 08/04/2019
End date: 11/04/2019
Organising entity: Microbiology Society UK
Type of contribution: Scientific paper
Bruno Hernaez; Inmaculada Montanuy; Juan Manuel Alonso-Lobo; Antonio Alcami.
- Geographical area:** European Union
Reasons for participation: Upon invitation
- 5** **Title of the work:** CONTRIBUTION TO POXVIRUS PATHOGENESIS OF THE CELLULAR GLYCOSAMINOGLYCAN BINDING PROPERTIES OF THE VIRAL TYPE-I INTERFERON BINDING PROTEIN
Name of the conference: XXII International Poxvirus, Asfarvirus and Iridovirus Conference
Corresponding author: Yes
City of event: Taipei, Taiwan
Date of event: 26/05/2018
End date: 31/05/2018
Organising entity: Academia Sinica
City organizing entity: Taipei, Taiwan
Bruno Hernaez; Juan Manuel Alonso-Lobo; Inma Montanuy; Antonio Alcami.



- 6** **Title of the work:** CHARACTERIZATION OF THE ECTROMELIA VIRUS CHEMOKINE BINDING PROTEIN E163 IN ITS NATURAL HOST: A TRANSCRIPTOMIC APPROACH
Name of the conference: XIV Congreso Nacional de Virología 2017
Type of participation: 'Participatory - poster
City of event: Cadiz, Andalusia, Spain
Date of event: 11/06/2017
End date: 14/06/2017
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
Graciela Alonso; Haleh Heidarieh; Bruno Hernaez; Alberto Rastrojo; Antonio Alcamí.
- 7** **Title of the work:** CONTRIBUTION TO POXVIRUS PATHOGENESIS OF THE CELLULAR GLYCOSAMINOGLYCAN BINDING PROPERTIES OF THE VIRAL TYPE-I INTERFERON BINDING PROTEIN
Name of the conference: XIV Congreso Nacional de Virología 2017
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Cadiz, Andalusia, Spain
Date of event: 11/06/2017
End date: 14/06/2017
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
Bruno Hernaez; Inmaculada Montanuy; Jaun Alonso Lobo; Antonio Alcamí.
- 8** **Title of the work:** RNA-SEQ ANALYSIS OF THE HOST IMMUNE RESPONSE TO ECTROMELIA VIRUS INFECTION: ROLE OF THE VIRAL TNF RECEPTOR
Name of the conference: XXI International Poxvirus, Asfarvirus and Iridovirus Conference 2016
Type of event: Conference
City of event: Strassburg, France
Date of event: 01/07/2016
End date: 05/07/2016
Publication in conference proceedings: Yes
Bruno Hernaez de la Plaza; Graciela Alonso Castro; Alberto Rastrojo; Cornelius Fischer; Sascha Sauer; Begoña Aguado; Antonio Alcamí.
- 9** **Title of the work:** RNA-SEQ based transcriptome analysis of the Interferon host response upon Vaccinia and Ectromelia virus infection
Name of the conference: XX International Poxvirus, Asfarvirus & Iridovirus Conference 2014
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Victoria, Canada
Date of event: 2014
End date: 2014
Organising entity: University of Alberta
City organizing entity: Alberta, Canada
Publication in conference proceedings: Yes
Type of contribution: Scientific-technical report
Bruno Hernaez de la Plaza; Juan Manuel Alonso Lobo; Graciela Alonso; Daniel Aguirre-de Carcer; Alberto Rastrojo; Cornelius Fischer; Sascha Sauer; Begoña Aguado; Antonio Alcamí Pertejo. "Actas".
- Geographical area:** Non EU International
Reasons for participation: Review before acceptance
Type of entity: University
With external admission assessment committee: Yes



- 10** **Title of the work:** The uncoating of African Swine Fever virus
Name of the conference: XX International Poxvirus, Asfarvirus & Iridovirus Conference 2014
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
City of event: Victoria, Canada
Date of event: 2014
Organising entity: University of Alberta
City organizing entity: Alberta, Canada
With external admission assessment committee: Yes
Bruno Hernaez de la Plaza; Milagros Guerra; German Andres Hernandez; Maria Luisa Salas. "Actas". En: Actas. pp. 22 - 22.
- 11** **Title of the work:** Modulacion de la respuesta a interferon por poxvirus: un análisis transcriptómico
Name of the conference: IV Jornada de Secuenciación masiva
Type of event: Workshop **Geographical area:** National
Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation
City of event: Madrid, Community of Madrid, Spain
Date of event: 2014
Organising entity: Centro de Biología Molecular **Type of entity:** State agency
Severo Ochoa
Bruno Hernaez.
- 12** **Title of the work:** RNA-SEQ BASED TRANSCRIPTOME ANALYSIS OF THE INTERFERON HOST RESPONSE UPON VACCINIA VIRUS INFECTION
Name of the conference: XIII Congreso Nacional de Virología 2015
Corresponding author: Yes
City of event: Madrid, Community of Madrid, Spain
Date of event: 2014
End date: 2014
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
Graciela Alonso; Bruno Hernaez; Juan Alonso Lobo; Daniel Aguirre de Carcer; Alberto Rastrojo; Cornelius Fischer; Sascha Sauer; Begoña Aguado; Antonio Alcamí.
- 13** **Title of the work:** African Swine Fever virus entry requirements for endosomal pathway maturation
Name of the conference: XII Congreso Nacional de Virologia
City of event: Burgos, Castile and León, Spain
Date of event: 2013
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
C. Alonso; M.A. Cuesta-Geijo; I. Galindo; B. Hernaez; R. Muñoz-Moreno.
- 14** **Title of the work:** African Swine Fever virus entry requirements for endosomal pathway maturation.
Name of the conference: International Poxvirus, Asfarvirus & Iridovirus Conference 2012
Type of participation: Participatory - oral communication
City of event: Salamanca, Castile and León, Spain
Date of event: 2012
M.A. Cuesta-Geijo; B. Hernaez; J.I. Quetglas; I. Dalmau; C. Alonso.



- 15** **Title of the work:** New insights on African Swine Fever virus entry
Name of the conference: International Poxvirus, Asfarvirus & Iridovirus Conference 2012
City of event: Salamanca, Castile and León, Spain
Date of event: 2012
B. Hernaez; M. Guerra; M.L. Salas; G. Andres.
- 16** **Title of the work:** The ATF6 branch of unfolded protein response and apoptosis are activated to promote African Swine Fever virus infection.
Name of the conference: International Poxvirus, Asfarvirus & Iridovirus Conference 2012
City of event: Salamanca, Castile and León, Spain
Date of event: 2012
I. Galindo; R. Muñoz-Moreno; B. Hernaez; M.A. Cuesta-Geijo; I. Dalmau; C. Alonso.
- 17** **Title of the work:** Dual role of a viral Bcl-2 on autophagy and apoptosis
Name of the conference: EMBO Meeting 2011
City of event: Viena, Austria
Date of event: 2011
Organising entity: EMBO
B. Hernaez; R. Muñoz-Moreno; M. Cabezas; I. Galindo; M.A. Cuesta-Geijo; C. Alonso.
- 18** **Title of the work:** Rab GTPases and phosphoinositides regulation for endosome fusion events in a doubled DNA stranded virus endocytosis.
Name of the conference: EMBO Meeting 2011
City of event: Viena, Austria
Date of event: 2011
Organising entity: EMBO
M.A. Cuesta-Geijo; B. Hernaez; J.I. Quetglas; I. Dalmau; C. Alonso.
- 19** **Title of the work:** A Large Double Stranded DNA Virus Life Cycle Is Strongly Dependent On Rab Proteins
City of event: Amsterdam, Holland
Date of event: 2010
M.A. Cuesta-Geijo; B. Hernaez; M. Cabezas; C. Alonso.
- 20** **Title of the work:** African Swine Fever virus entry by endocytosis
Name of the conference: Eurovirology 2010
City of event: Cernobbio, Italy
Date of event: 2010
Organising entity: European Society for Virology
B. Hernaez; M.A. Cuesta-Geijo; J.I. Quetglas; J.M. Escribano; C. Alonso.
- 21** **Title of the work:** Inhibition of African swine fever virus growth with antivirals.
Name of the conference: Epizone Intervention Strategies Theme 5 Meeting
Type of participation: Participatory - oral communication
City of event: Copenhagen, Denmark
Date of event: 2010
Organising entity: Epizone
B. Hernaez; I. Galindo; I. Dalmau; M. Cabezas; J.M. Escribano; C. Alonso.
- 22** **Title of the work:** Activacion de vias de señalización intracelulares durante la entrada del virus de la Peste porcina africana (VPPA) necesarias para etapas tardias de la infeccion.
Name of the conference: X Congreso Nacional de Virologia



City of event: Salamanca, Castile and León, Spain

Date of event: 2009

Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA

J.I. Quetglas; B. Hernaez; I. Galindo; E. Pablo; M.A. Cuesta-Geijo; J.M. Escribano; C. Alonso.

- 23** **Title of the work:** Cellular factors involved in entry by the endocytic pathway of African swine fever virus
Name of the conference: 1st International Symposium Infection of the endothelium.
Type of participation: Participatory - oral communication
City of event: Dresden, Germany
Date of event: 2009
Organising entity: Max-Planck-Institute for Cell Biology and Genetics
C. Alonso; B. Hernaez; M.A. Cuesta-Geijo.
- 24** **Title of the work:** Relevancia de la endocitosis en la infección por el virus de la Peste porcina.
Name of the conference: X Congreso Nacional de Virologia
City of event: Salamanca, Spain
Date of event: 2009
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
M.A. Cuesta-Geijo; B. Hernaez; M. Cabezas; J.M. Escribano; C. Alonso.
- 25** **Title of the work:** African swine fever virus requires clathrin-mediated endocytosis to enter Vero cells
Name of the conference: Cell Biology of Virus Entry, Replication and Pathogenesis. Keystone Symposia.
City of event: Victoria, Canada
Date of event: 2008
Organising entity: Keystone Symposia
B. Hernaez; J.M. Escribano; C. Alonso.
- 26** **Title of the work:** Signalling cascades triggered along African swine fever virus entry are crucial for subsequent infection steps.
Name of the conference: EMBO Conference: "At the joint edge of Cellular Microbiology and Cell Biology"
City of event: Villars sur Ollon, Switzerland
Date of event: 2008
Organising entity: EMBO org
J.I. Quetglas; B. Hernaez; E. Pablo; C. Alonso.
- 27** **Title of the work:** Virus- cell interaction analysis discloses targets for antivirals and vaccine design.
Name of the conference: Epizone Anual Meeting
Type of participation: Participatory - oral communication
City of event: El Escorial, Community of Madrid, Spain
Date of event: 2008
Organising entity: Epizone
B. Hernaez; J.M. Escribano; C. Alonso.
- 28** **Title of the work:** Papel de la familia de las GTPasas Rho en la infección por el virus de la Peste porcina africana.
Name of the conference: IX Congreso Nacional de Virologia
City of event: Zaragoza, Spain
Date of event: 2007
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
J.I. Quetglas; B. Hernaez; I. Galindo; J.M. Escribano; C. Alonso.



- 29** **Title of the work:** Live cell imaging of African swine fever virus infection.
Name of the conference: 7 th International Congress of Veterinary Virology (ESVV).
Type of participation: Participatory - oral communication
City of event: Lisboa, Portugal
Date of event: 2006
Organising entity: European Society for Veterinary Virology (ESVV)
B. Hernaez; I. Galindo; J.I. Quetglas; J.M. Escribano; C. Alonso.
- 30** **Title of the work:** African swine fever virus protein p30 interferes with host mRNA processing pathways through interaction with HnRNP-K.
Name of the conference: Eurovirology 2004
City of event: Madrid, Spain
Date of event: 2004
Organising entity: European Society for Virology
B. Hernaez; C. Alonso; J.M. Escribano.
- 31** **Title of the work:** Identification of new cellular proteins modified in response to African swine fever virus infection.
Name of the conference: Eurovirology 2004
City of event: Madrid, Spain
Date of event: 2004
Organising entity: European Society for Virology
M. Garcia-Gallo; B. Hernaez; P. Alfonso; J.M. Escribano; C. Alonso.
- 32** **Title of the work:** Induction of Heat shock proteins (HSP) by African swine fever virus infection
Name of the conference: Eurovirology 2004
City of event: Madrid, Spain
Date of event: 2004
Organising entity: European Society for Virology
B. Hernaez; N. Diez; J.M. Escribano; C. Alonso.
- 33** **Title of the work:** The African swine fever virus dynein-binding protein p54 induces infected cell apoptosis
Name of the conference: Eurovirology 2004
City of event: Madrid, Spain
Date of event: 2004
Organising entity: European Society for Virology
B. Hernaez; G. Diaz-Gil; M. Garcia-Gallo; J.I. Quetglas; J.M. Escribano; L. Dixon; C. Alonso.
- 34** **Title of the work:** The MyD116-African swine fever viral homologue interacts with the catalytic subunit of protein phosphatase-1: Implications in ASFV pathogenicity
Name of the conference: Eurovirology 2004
City of event: Madrid, Spain
Date of event: 2004
Organising entity: European Society for Virology
B. Hernaez; J. Rivera; A. Alcazar; J.M. Escribano; L. Dixon; C. Alonso.
- 35** **Title of the work:** A179L, homólogo viral de bcl-2 interacciona con Bid bloqueando la ruta apoptótica mediada por receptores de muerte celular en la célula infectada por el Virus de la Peste Porcina Africana
Name of the conference: VIII Congreso Nacional de Virología
City of event: Barcelona, Spain
Date of event: 2003



Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
B. Hernaez; P. Fernandez-Zapatero; J.M. Escribano; C. ALonso.

- 36 Title of the work:** African swine fever A179I, a homologue of Bcl-2, interacts with Bid molecule
Name of the conference: Apoptosis 2003
Date of event: 2003
Organising entity: European Cell Death Organization
City organizing entity: Luxemburgo, Luxembourg
P. Fernandez-Zapatero; B. Hernaez; L. Dixon; J.M. Escribano; C. Alonso.
- 37 Title of the work:** Interaction of African swine fever virus protein p54 with DLC8 results in Bim translocation and apoptosis
Name of the conference: Apoptosis 2003
City of event: Luxemburgo, Luxembourg
Date of event: 2003
Organising entity: European Cell Death Organization
B. Hernaez; P. Fernandez-Zapatero; M. Garcia-Gallo; I. Rodriguez-Crespo; L. Dixon; J.M. Escribano; C. ALonso.
- 38 Title of the work:** La proteína del Virus de la peste porcina africana codificada por el gen DP71L, homólogo al inhibidor de la apoptosis de Herpes Simplex ICP34.5, interacciona con la fosfatasa PP1
Name of the conference: VIII Congreso Nacional de Virología
City of event: Barcelona, Spain
Date of event: 2003
Organising entity: SOCIEDAD ESPAÑOLA DE VIROLOGIA
J. Rivera; B. Hernaez; J.M. Escribano; C. ALonso.
- 39 Title of the work:** La proteína p30 del Virus de la Peste Porcina Africana interacciona con la ribonucleoproteína HnRNP-K modificando la maquinaria de procesamiento de mRNAs celulares
Name of the conference: VIII Congreso Nacional de Virología
City of event: Barcelona, Spain
Date of event: 2003
Organising entity: Sociedad Española de Virología
B. Hernaez; J.M. Escribano; C. ALonso.
- 40 Title of the work:** Microtubular motor dynein mediated ASFV transport and apoptosis
Name of the conference: XII International Union of Microbiology Societies (IUMS) Congress
City of event: Paris, France
Date of event: 2002
C. Alonso; P. Fernandez-Zapatero; B. Hernaez; L. Dixon; J.M. Escribano.
- 41 Title of the work:** New targets for manipulation of cell apoptosis regulation by viruses
Name of the conference: Workshop on Mechanisms of Immune Modulation: Lessons from Viruses
City of event: Madrid, Spain
Date of event: 2002
Organising entity: Instituto Juan March de Estudios e investigaciones
City organizing entity: MAdrid, Spain
P. Fernandez-Zapatero; B. Hernaez; L. Dixon; J.M. Escribano; C. Alonso.



- 42** **Title of the work:** Microtubule mediated virus transport by direct binding of animal virus proteins to the dynein motor complex
Name of the conference: II HIV DRP Symposium Antiviral Drug Resistance
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Chantilly (Virginia), United States of America
Date of event: 2001
C. ALonso; P. Fernandez-Zapatero; B. Hernaez; L. Dixon; J.M. Escribano.
- 43** **Title of the work:** Cytoskeletal involvement and manipulation of death/survival cellular regulation pathways by viral genes
Name of the conference: 43rd International Meeting of the European Tissue Culture Society ETCS
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 2001
Organising entity: ETCS
P. Fernandez-Zapatero; I. Rodriguez-Crespo; B. Hernaez; J. M. Alvarez-Barrientos; J.M. Escribano; C. ALonso.

Works submitted to national or international seminars, workshops and/or courses

- 1** **Title of the work:** Role of DNA sensing and IFN in the protection against acute lethal viral infection
Name of the event: Transversal Inter-Program Seminars
Corresponding author: Yes
City of event: Madrid, Community of Madrid, Spain
Date of event: 25/11/2019
Organising entity: Centro de Biología Molecular **Type of entity:** State agency
Severo Ochoa
- 2** **Title of the work:** The poxvirus IFN-I decoy receptor: new insights into its contribution to pathogenesis
Name of the event: Ciclo de seminarios del Instituto Nacional de Investigaciones Agrarias y Alimentarias (INIA)
Corresponding author: Yes
City of event: Madrid, Community of Madrid, Spain
Date of event: 20/05/2019
End date: 20/05/2019
Organising entity: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
- 3** **Title of the work:** The poxvirus IFN-I decoy receptor: new insights into its contribution to pathogenesis
Name of the event: Ciclo de seminarios del Departamento de Virología y Microbiología del CBMSO
Corresponding author: Yes
City of event: Madrid, Community of Madrid, Spain
Date of event: 13/02/2019
End date: 13/02/2019
Organising entity: Centro de Biología Molecular **Type of entity:** State agency
Severo Ochoa
- 4** **Title of the work:** Modulación de la respuesta a interferón por poxvirus: un análisis transcriptómico
Name of the event: IV Jornadas de Secuenciación Masiva
City of event: Madrid, Community of Madrid, Spain



Date of event: 10/12/2014

Organising entity: Centro de Biología Molecular
Severo Ochoa

Type of entity: State agency

Other dissemination activities

- 1 **Title of the work:** COVID19, más allá de la vacuna
Name of the event: Comando Actualidad
Type of event: Media interviews
City of event: Madrid, Community of Madrid, Spain
Date of event: 08/12/2020
Organising entity: ENTE PUBLICO RADIO TELEVISION ESPAÑOLA, S.A.
- 2 **Title of the work:** Un nuevo mecanismo viral de modulación de la respuesta inmune
Name of the event: A hombros de Gigantes
Type of event: Media interviews
City of event: Madrid, Community of Madrid, Spain
Date of event: 27/09/2020
Organising entity: RADIO NACIONAL DE ESPAÑA, S.A.
- 3 **Title of the work:** Descubren una novedosa estrategia en poxvirus para evadir la respuesta inmune
Name of the event: ENTRE PROBETAS
Type of event: Media interviews
City of event: Madrid, Community of Madrid, Spain
Date of event: 07/01/2019
Organising entity: RADIO NACIONAL DE ESPAÑA, S.A.

R&D management and participation in scientific committees

Organization of R&D activities

- 1 **Title of the activity:** Master Microbiología
Convening entity: Universidad Autónoma de Madrid (Dpto. Biología Molecular)
Start-End date: 2019 - 2019 **Duration:** 1 day
- 2 **Title of the activity:** Master Microbiología
Convening entity: Universidad Autónoma de Madrid (Dpto. Biología Molecular)
Start-End date: 2018 - 2018 **Duration:** 1 day
- 3 **Title of the activity:** Master de Biomoléculas
Convening entity: Universidad Autónoma de Madrid **Type of entity:** University
Start-End date: 2017 - 2018 **Duration:** 2 days
- 4 **Title of the activity:** Master de Biotecnología
Type of activity: Teaching in the Master of Biotechnology organized by Susana Guerra at UAM
Convening entity: Universidad Autónoma de Madrid (Medicine Faculty)
City convening entity: Madrid, Spain
Start-End date: 29/11/2018 - 2017 **Duration:** 2 days



- 5** **Title of the activity:** Master Microbiología
Convening entity: Universidad Autónoma de Madrid (Dpto. Biología Molecular)
Start-End date: 2017 - 2017 **Duration:** 1 day
- 6** **Title of the activity:** Master of Virus Biotechnology
Type of activity: Teaching in the Master of Virus Biotechnology organized by Susana Guerra at UAM
Convening entity: Universidad Autónoma de Madrid (Medicine Faculty)
City convening entity: Madrid, Spain
Start-End date: 29/11/2016 - 2017 **Duration:** 2 days

R&D management

Name of the activity: GUESS ASSOCIATE EDITOR FOR THE TOPIC Neuronal and Glial Alterations Caused by Viral Infections
Type of management: Editorial Role
Performed tasks: GUESS ASSOCIATE EDITOR
Entity: FRONTIERS in CELLULAR NEUROSCIENCE **Type of entity:** Research journal

Evaluation and revision of R&D projects and articles

- 1** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: VACCINES **Type of entity:** RESEARCH JOURNAL
Start date: 2021
- 2** **Name of the activity:** CoVid19 research proposals evaluation
Performed tasks: EVALUATION OF RESEARCH PROPOSALS
Entity where activity was carried out: Universidad Internacional de La Rloja (UNIR) **Type of entity:** University
Start date: 06/04/2020
- 3** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: PATHOGENS **Type of entity:** RESEARCH JOURNAL
Start date: 2020
- 4** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: MICROORGANISMS **Type of entity:** Research Journal
Start date: 2020
- 5** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: VIRUSES **Type of entity:** Research Journal
Start date: 2020



- 6** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: VIROLOGY **Type of entity:** RESEARCH JOURNAL JOURNAL
Start date: 2017
- 7** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: PEER J **Type of entity:** RESEARCH JOURNAL
Start date: 2016
- 8** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: CANCER **Type of entity:** RESEARCH JOURNAL CELL INTERNATIONAL JOURNAL
Start date: 2012
- 9** **Name of the activity:** PEER REVIEW OF RESEARCH ARTICLES
Performed tasks: REVIEWER OF RESEARCH ARTICLES
Entity where activity was carried out: EMERGING **Type of entity:** RESEARCH JOURNAL INFECTIOUS DISEASES
Start date: 2010

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Faculty, institute or centre: Centro de Biología Molecular Severo Ochoa
Primary (UNESCO code): 242007 - Pox viruses
Secondary (UNESCO code): 242091 - Virology animal
Start-End date: 01/01/2013 - 31/12/2015 **Duration:** 3 years
Name of programme: JAE-DOC
Goals of the stay: Post-doctoral
Acquired skills developed: Next generation sequencing techniques, poxviruses
- 2** **Entity:** INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
City of entity: Madrid,
Start-End date: 01/02/2008 - 31/12/2011 **Duration:** 3 years - 11 months
Name of programme: CONSOLIDER-INGENIO
Goals of the stay: Contracted
- 3** **Entity:** Universidad Autónoma de Madrid **Type of entity:** University
Faculty, institute or centre: Facultad de Medicina
City of entity: Madrid, Community of Madrid, Spain
Start-End date: 01/06/2005 - 31/01/2008 **Duration:** 2 years - 6 months
Goals of the stay: Post-doctoral



Provable tasks: Desarrollo de diversas estrategias vacunales frente al virus de la Peste Porcina Africana

- 4** **Entity:** INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
City of entity: Madrid,
Start-End date: 01/11/1999 - 31/12/2004 **Duration:** 5 years
Goals of the stay: Doctorate
- 5** **Entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Faculty, institute or centre: Centro de Biología Molecular Severo Ochoa
City of entity: Madrid, Community of Madrid, Spain
Start date: 01/02/2012 **Duration:** 11 months
Funding entity: MINEC
Goals of the stay: Post-doctoral
Acquired skills developed: Electron microscopy
- 6** **Entity:** Biotechnology and Biological Sciences Research Council (BBSRC) **Type of entity:** State agency
Faculty, institute or centre: The Pirbright Institute
City of entity: Pirbright, Surrey, East and West Sussex, United Kingdom
Start date: 01/06/2006 **Duration:** 3 months
Goals of the stay: Guest
Provable tasks: Generacion de virus recombinantes basados en aislados altamente virulentos del virus de la Peste Porcina Africana.

Obtained grants and scholarships

- 1** **Name of the grant:** JUANTA PARA LA AMPLIACION DE ESTUDIOS (JAE) DOCTORES
Aims: Post-doctoral
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Conferral date: 01/01/2013 **Duration:** 3 years
End date: 31/12/2015
Entity where activity was carried out: Centro de Biología Molecular Severo Ochoa
- 2** **Name of the grant:** BECA DE FORMACION DE PERSONAL INVESTIGADOR DEL INIA
Aims: Pre-doctoral
Awarding entity: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
Conferral date: 27/02/2003
End date: 31/12/2004
Entity where activity was carried out: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)
- 3** **Name of the grant:** POXVIRUS MEETING 2014 TRAVEL AWARD
Aims: TRAVEL AWARD
Awarding entity: UNIVERSITY OF ALBERTA **Type of entity:** University
Conferral date: 10/04/2014



- 4** **Name of the grant:** BECA DE INCORPORACION DE TECNOLOGOS A EQUIPOS DE INVESTIGACION
Aims: TECNOLOGO
Awarding entity: Comunidad de Madrid **Type of entity:** COMUNIDAD AUTONOMA
Conferral date: 05/11/1999 **Duration:** 3 years
Entity where activity was carried out: INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)

Scientific societies and professional associations

Name of the society: SOCIEDAD ESPAÑOLA DE VIROLOGIA (SEV)
Affiliation entity: j
Start date: 2018

Prizes, mentions and distinctions

- 1** **Description:** Best original research work by non permanent staff member (PINP)
Awarding entity: Centro de Biología Molecular Severo Ochoa **Type of entity:** State agency
Conferral date: 02/12/2020
- 2** **Description:** Poxviruses 2014 Meeting Oral Communication Mention and Travel Award
Awarding entity: University of Alberta **Type of entity:** University
City awarding entity: Vancouver, Canada
Conferral date: 26/10/2014

Obtained accreditations/recognitions

- 1** **Description:** ACREDITACION FAVORABLE DEL PROGRAMA I3
Accrediting entity: Ministerio de Ciencia e Innovación **Type of entity:** FAVORABLE
Date of recognition: 26/08/2020
- 2** **Description:** PROFESOR AYUDANTE DOCTOR
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** A
Date of recognition: 09/06/2017
- 3** **Description:** PROFESOR CONTRATADO DOCTOR
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** A
Date of recognition: 09/06/2017
- 4** **Description:** PROFESOR DE UNIVERSIDAD PRIVADA
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** A
Date of recognition: 09/06/2017



5 **Description:** CAPACITACIÓN PARA EL MANEJO DE ANIMALES DE EXPERIMENTACIÓN ANIMAL PARA REALIZACIÓN DE PROCEDIMIENTOS Y EUTANASIA

Accrediting entity: Comunidad de Madrid

Type of entity: COMUNIDAD AUTIONOMA

Date of recognition: 04/05/2017

6 **Description:** Capacitación para trabajar con Animales de Experimentación clase B

Accrediting entity: MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACION

Date of recognition: 26/11/2006