

Part A. PERSONAL INFORMATION		CV date	08/04/2022
First and Family name	Antonio MAS LÓPEZ		
Passport, ID number		Age	
Researcher codes	WoS Researcher ID (*)	F-2505-2011	
	Open Researcher and Contributor ID (ORCID) **	0000-0003-2563-570X	
	Sexenios: 4		

(*) *At least one of these is mandatory*

(**) *Mandatory*

A.1. Current position

Name of University/Institution	Universidad Castilla-La Mancha/Centro Regional de Investigaciones Biomédicas (CRIB)		
Department	Ciencias Médicas		
Address and Country			
Phone number	+34 967 599 200	E-mail	Antonio.Mas@uclm.es
Current position	Associate Professor	From	03/05/2011
Keywords	flavivirus, RNA-polymerase, host factors, antivirals		

A.2. Education

PhD/BSc	University	Year
Bachelor in Biology	Universidad Complutense de Madrid	1991
PhD in Biology	Universidad Complutense de Madrid	1997

A.3. JCR articles, h Index, thesis supervised...

1) Indicators of scientific excellence (12th October 2019, Web of Science Thomson)

Total number of JCR papers: 78 (15 D1, 37 Q1 y 46 T1).

H-index: 20

Number of first, joint-first, and last (corresponding) author papers: 27.

Number of citations: 1213

Average number of **citations per year** in last 5 years (2014-2018): 48.5

2) Supervision of students and mentoring postdocs

- Three postdoc and professor (Stephen Ahern, Pilar Clemente-Casares, Rosario Sabariegos).
- Six PhD students.
- Thirteen Master Thesis.
- Two bachelor students with Ministerio Educación fellowship (final year research project).
- More than fifteen Trabajo Fin de Grado (Medicine and Pharmacy studies).
- Academic responsibilities in Microbiology for Pharmacy and Medicine schools (UCLM).

3) Awards and professional recognition

- 2020-present Vice-Chancellor of Political Science.
- 2017-2020 Director Centro Regional de Investigaciones Biomédicas (UCLM).
- 2019-2020 Member of the Research Commission (UCLM).
- 2019-present Member of the Direction Committee of the International Doctorate School (UCLM).
- 2014 Meeting organizer: RiboRED and Pharmacy Research-UCLM.
- 2013-2020 Member of the Commission of Assessment, Department of Medical Sciences UCLM.
- 2011-2018 President of the Hepatitis Study Group of the Spanish Society of Virology.
- 2011, 2013 Scientific Committee of the XI and XII Spanish Society of Virology Congresses.
- 2005 EMBO short term fellowship.
- 2002 Best oral presentation award (VI meeting of SEISIDA).
- 2000 Postdoctoral fellowship (Comunidad Autónoma de Madrid).
- 1998 Best PhD Thesis Award (Universidad Complutense de Madrid).

Part B. CV SUMMARY (max. 3500 characters, including spaces)



Academic background. Bachelor (1991), Faculty of Biological Sciences, U. Complutense. PhD (1997), U. Complutense. Director: Dr. V. Soriano. Best PhD Thesis award.

Scientific experience.

1. Student (1993-1994) at Dr. Calle laboratory, Biochemistry and Molecular Biology Department, Medicine School, U Complutense Madrid. Field: Control of expression at molecular level of the insulin receptor. Articles: 3, one of them as first autor.
2. PhD student (1994-1997) at Dr. Soriano laboratory, Hospital Carlos III, Instituto de Salud Carlos III, Madrid. Field: HIV infection. Genetic characterization of both divergent HIV-1 isolates (HIV1 group O), and HIV-1 viruses isolated from patients that did not progress to AIDS even in the absence of antiviral treatment. Articles: 43, and 17 of them in Q1. First author in 5 of them.
3. Postdoctoral (1998-2002) at Dr. Domingo laboratory, CBM-SO, CSIC-UAM. Publications: 12. Original articles 9, and 5 of them in journals in Q1. Reviews: 3. I participated in two different lines of research. Field: HIV-infection and virus genetic variability. Five original articles: one as last autor. Field: Biochemistry of the HIV-1 reverse transcriptase. One review and 4 original articles, all in Q1. First author in 2 of them: Mas A, Parera M, Briones C, Soriano V, Martinez MA, Domingo E, Menendez-Arias L. EMBO J 2000; 19:5752-5761. Mas A, Vázquez-Álvarez BM, Domingo E, Menéndez-Arias L. J Mol Biol 2002; 323:181-197.
4. Visiting and lecturer professor (2002-2005) at Dr. Díez laboratory, Universidad Pompeu Fabra. I am involved in two different lines of research. Field: Hepatitis C virus variability. Original articles as first author: Mas A, Ulloa E, Bruguera M, Furcic I, Garriga D, Fábregas S, Andreu D, Saiz JC, Díez J. J Gen Virol 2004, 85:3619-3626. Field: host factors involved in positive strand virus replication. 4 original articles one as first autor (Mas A, Alves I, Noueir A, Ahlquist P, Díez J. J Virol 2006; 80:246-51. One as last autor: Sole RV, Sardanyes J, Díez J, Mas A. J Theor Biol. 2006;24:353-9.
5. Ramon y Cajal researcher (2006-2010), and Associate professor (2011-present). I established my own line of research in CRIB-UCLM focused on HCV polymerase NS5B. I have been the Principal Investigator of 4 research grants (2 national and 2 regional) to develop two different lines of research, one focused on determining the NS5B polymerase structure-function relationship, and the other to discover host actors interacting with HCV NS5B. I have been also PI of 3 grants for equipment acquisition for the institute, and one for doing a international meeting. Publications: 6 original articles (as corresponding author, 4 in Q1) and 3 reviews. One original article submitted. 6 PhD students.

Teaching tasks.

Since 2011 I am the coordinator of the microbiology area (1 associate, 2 lecturers) that is involved in the subjects Parasitology, Microbiology-I and Microbiology-II from the Pharmacy School, and in Microbiology from the Medicine School, and in Master and Doctorate Programs.

Main achievements:

- Interactome of HCV NS5B (Llanos-Valero et al 2016; López-Jiménez et al 2014; Hillung et al 2012; Clemente-Casares et al 2011).
- (+)ssRNA replication host factors (Galao et al 2010; Alves-Rodrigues et al 2007; Mas et al 2006).
- AZT Resistance mechanism (Mas et al 2002; Quiñones-Mateu et al 2002; Mas et al 2000).

Part C. RELEVANT MERITS

C.1. Publications

(*): corresponding author

C.1.a. Publications in journals indexed in the Journal-Citation-Reports (JCR)

1. 80. Sabariegos R, Ortega-Prieto AM, Díaz-Martínez L, Grande-Pérez A, García-Crespo C, Gallego I, de Ávila AI, Albentosa-González L, Soria ME, Gastaminza P, Domingo E, Perales C, **Mas A***. Guanosine inhibits hepatitis C virus replication and increases indel frequencies, associated with altered intracellular nucleotide pools. Plos Pathogens. doi: 10.1371/journal.ppat.1010210. 2022.
2. Albentosa-González L, Sabariegos R, Arias A, Clemente-Casares P, **Mas A***. Akt Interacts with Usutu Virus Polymerase, and Its Activity Modulates Viral Replication. Pathogens. 2021 Feb 20;10(2):244.
3. Albentosa-González L., Jimenez de Oya N, Arias A, Clemente-Casares P, Martin-Acebes MA, Saiz JC, Sabariegos R and **Mas A***. Akt Kinase Intervenes in Flavivirus Replication by Interacting with Viral Protein NS5. Viruses 2021, 13(5), 896.
4. Sabariegos R, Albentosa-González L, Palmero B, Clemente-Casares P, Ramírez E, García-Crespo C, Gallego I, de Ávila AI, Perales C, Domingo E and **Mas A***. Akt phosphorylation of HCV



- NS5B regulates polymerase activity and HCV infection. *Frontiers in Microbiology* 2021.
5. Albentosa-González, Sabariego R, Clemente-Casares P, **Mas A***. Polymerase Activity, Protein-Protein Interaction, and Cellular Localization of the Usutu Virus NS5 Protein. *Antimicrob Agents Chemother* 2019. DOI:10.1128/AAC.01573-19.
 6. Llanos-Valero M, Sabariego R, Cimas F, Perales C, Domingo E, Sánchez-Prieto R, and **Mas A***. HCV RNA-dependent RNA polymerase interacts with Akt/PKB inducing its subcellular relocalization. *Antimicrob Agents Chemother*. 2016 Mar 28. pii: AAC.03019-15.
 7. Geller R, Estada U, Peris J, Andreu I, Bou J, Garijo R, Sabariego R, **Mas A**, Cuevas J, and Sanjuán R. Highly heterogeneous mutation rates in the hepatitis C virus genome. *Nat Microb*. 2016; Apr 18;1(7):16045. DOI: 10.1038/nmicrobiol.2016.45.
 8. López-Jiménez AJ, Clemente-Casares P, Sabariego R, Llanos-Valero M, Bellón-Echeverría I, Encinar JA, Kaushik-Basu N, Froeyen M, and **Mas A***. Hepatitis C virus polymerase-polymerase contact interface: Significance for virus replication and antiviral design. *Antiviral Res*. 2014 Aug;108:14-24.
 9. Hillung J, Ruiz-López E, Bellón-Echeverría I, Clemente-Casares P, **Mas A***. Characterization of the interaction between estrogen receptor alpha and the RNA-dependent RNA polymerase from HCV. *J Gen Virol*, 2012 Apr;93(Pt 4):780-5.
 10. Clemente-Casares P, López-Jiménez AJ, Martínez-Alfaro E, Pérez R, Bellón-Echeverría I, and **Mas A***. De novo polymerase activity and oligomerization of hepatitis c virus RNA-dependent RNA-polymerases from genotypes 1 to 5. *PLoS ONE* 2011, 6(4): e18515. doi:10.1371/journal.pone.0018515.
 11. Bellón-Echeverría I, López-Jiménez AJ, Pilar Clemente-Casares and **Mas A***. Analyzing factors driving Hepatitis C Virus (HCV) RNA-dependent RNA polymerase oligomerization by a FRET-based in vitro system. *Antivir Res*, 2010, Jul;87(1):57-66.
 12. Alves-Rodrigues I, **Mas A**, Diez J. Functional conservation of yeast Dhh1 and human RCK/p54 helicases in Brome Mosaic Virus RNA replication. *J Virol*. 2007 Apr;81(8):4378-80.
 13. Sole RV, Sardanyes J, Diez J, **Mas A**. Information catastrophe in RNA viruses through replication thresholds. *J Theor Biol*. 2006 Jun 7;240(3):353-9.
 14. **Mas A**, Ulloa E, Bruguera M, Furcic I, Garriga D, Fábregas S, Andreu D, Saiz JC, Díez J.
 15. Hepatitis C virus population analysis of a single source nosocomial outbreak reveals an inverse correlation between viral load and quasispecies complexity. *J Gen Virol* 2004, 85: 3619-3626.
 16. **Mas A**, Alves-Rodrigues I, Noueiry A, Ahlquist P, Diez J. Host deadenylation-dependent mRNA decapping factors are required for a key step in brome mosaic virus RNA replication. *J Virol*. 2006 Jan;80(1):246-51.
 17. **Mas A**, Vázquez-Álvarez BM, Domingo E, Menéndez-Arias L. Multidrug-resistant HIV-1 reverse transcriptase: involvement of ribonucleotide-dependent phosphorylation in cross-resistance to nucleoside analogue inhibitors. *J Mol Biol* 2002; 323: 181-197.
 18. **Mas A**, Parera M, Briones C, Soriano V, Martínez MA, Domingo E, Menéndez-Arias L. Role of a dipeptide insertion between codons 69 and 70 of HIV-1 reverse transcriptase in the mechanism of AZT resistance. *EMBO J* 2000; 19: 5752-5761.

C.2. Research projects and grants

C.2.1. Projects granted (Leader)

- 2020-2023 **Ministerio de Ciencia e Innovación**; Descifrando el papel biológico de los factores celulares que interaccionan con polimerasas de flavivirus. (Grant number PID2019-106068GB-I00) 169.400 €,
- 2016-2019 **Ministerio de Ciencia e Innovación**; Interacción de las polimerasas de flavivirus con factores celulares. (Grant number SAF2016-80451-P) 108.900,00 euros.
- 2019 **Ministerio de Ciencia e Innovación**; Unidad de centrifugas. (Grant number: EQC2018-004420-P- MICIU/AEI/FEDER). 86.758 euros.
- 2018-2019 **Ministerio de Ciencia e Innovación**; Equipamiento para adquisición de imágenes de investigación biomédica (Grant number EQC2018-004631-P) 127.927,85 euros.
- 2013-2015 **Ministerio de Ciencia e Innovación**; Unidad centralizada de servicios a laboratorios. (Grant number: UNCM13-1E-1824). 51.011,39 euros.
- 2010-2013 **Junta de Comunidades de Castilla-La Mancha**; Análisis funcional de la interacción



- entre factores celulares y la polimerasa NS5B Del Virus de la Hepatitis C (Grant number: PPII10-0243-6857). 197.518 euros.
- 2011-2012 **Ministerio de Ciencia e Innovación**; Interacciones proteína-proteína como moduladoras de la transición iniciación elongación en el ciclo de síntesis de la ARN polimerasa del virus de la hepatitis c. (Grant number: BFU2010-18767). 36.300 euros.
 - 2008-2011 **Ministerio de Ciencia e Innovación**; Unidad de cromatografía líquida. (Grant number: UNCM08-1E-025). 98.348,28 euros.
 - 2007-2009 **Junta de Comunidades de Castilla-La Mancha**; Análisis estructural y funcional de las interacciones intra- e intermoleculares en el complejo replicativo del virus de la hepatitis C. Implicaciones para el desarrollo de compuestos antivirales. (Grant number: PAI07-0011-3655) 116.895,50 euros.
 - 2008-2009 **Ministerio de Ciencia e Innovación**; Acción integrada con Francia: Analyses of the domains involved in HCV NS5B interactions by in vivo imaging. (Grant number: HF2007-0015) 11.270 euros.
 - 2007-2009 **Junta de Comunidades de Castilla-La Mancha**; Análisis funcional de las posiciones de la polimerasa del virus de la hepatitis c implicadas en la unión catalítica y alostérica del nucleótido. implicaciones para el desarrollo de compuestos antivirales. (Grant number: PI060584). 192.995 euros.

C.2.2. Collaborator on research projects

- 2018-2019 **Ministerio de Ciencia e Innovación**; Equipamiento para adquisición de imágenes de investigación biomédica (Grant number EQC2018-004631-P) 127.927,85 euros.
- 2016-2017 **Ministerio de Ciencia e Innovación**; Renovación y mejora de una unidad central de imagen y microscopía. (Grant number UNCM15-CE-3651 AEI / FEDER, UE). 360.455,60 euros.
- 2012-2016 **European Commission**; Variability in the mutation rate of RNA viruses (Grant number: 281191). 1.432.021 euros.
- 2013-2015 **Ministerio de Ciencia e Innovación**; Ampliación y mejora de la unidad de instrumentación biomédica de la UCLM (Grant number: UNCM13-1E-2127). 20.441,52 euros.
- 2013-2015 **Ministerio de Ciencia e Innovación**; Dotación de infraestructuras comunes para acondicionamiento de espacios destinados al estudio del fármaco (Grant number: UNCM13-1E-2449). 1.739.058,70 euros.

C.3. Contracts

- Art. 83: DNV GL Business Assurance España, S.L.U.

C.4. Patents

1. Antiviral composition. Número de patente: 20382386.9-1112. Fecha de concesión: 29/07/2020.

C.5. Additional evidence of professional recognition

Referee for Sci Rep, Antimicrob Ag Chemother, Frontiers Microb, J Gen Virol, Antiviral Res, PLoS ONE, Vir Res, Adv Chem Biol Eng, Current Pharmaceutical Design, QJM, Int J Med.