

Part A. PERSONAL INFORMATION		CV date	25/09/2018
First and Family name	Aitor D. Rementeria Ruiz		
Social Security, Passport, ID number	30553285Q	Age	57
Researcher numbers	Researcher ID	B-3936-2008	
	Orcid code	0000-0003-0478-1038	

A.1. Current position

Name of University/Institution	University of the Basque Country (UPV/EHU)		
Department	Immunology, Microbiology and Parasitology		
Address and Country	Barrio Sarriena s/n 48940-Leioa (Bizkaia)		
Phone number	946015964	E-mail	aitor.rementeria@ehu.eus
Current position		From	12/07/2000
Espec. cód. UNESCO	241406 - Fungi; 241409 - Molds; 241410 – Mycology (yeasts)		
Palabras clave	<i>Aspergillus, Lomentospora/Scedosporium, Candida</i> , qPCR, Proteómica, Transcriptómica		

A.2. Education

PhD	University	Year
Degree in Biological Sciences	University of the Basque Country (UPV/EHU)	1984
Bachelor's Degree	University of the Basque Country (UPV/EHU)	1986
PhD in Biological Sciences	University of the Basque Country (UPV/EHU)	1995

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

JCR articles: 22 papers (13 Q1) in the last 10 years, with 50 total papers in JCR (26 Q1).

H Index: 18; **total number of cites:** 1663. **Average number/year:** 166.3

Thesis supervised: 3 with defense in the last 10 years (5 in total), and 1 in develop.

Evaluations: Sexennia of research: 3 (last dated in 2013); **Quality Agency Unibasq:** Level A1 of excellence (97/100 points) dated 08/10/2016

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

I began my research on the influence of the *Candida albicans* wall on its pathogenesis in 1984, defending my Doctoral Thesis in this area in 1995. Subsequently, I joined a research group, which I now lead as a principal investigator, which began to use molecular techniques currently grouped the term biomechanics (metagenomics, genomics, transcriptomics, proteomics, immunomics, ...) for the study of bacteria and fungal pathogens. We study different bacterial and fungal pathogens (*Candida* spp, *Aspergillus* spp. and *Scedosporium/Lomentospora* spp.) trying to develop detection/diagnostic techniques and rapid typification, or studies of pathogenesis and microbial expression during infection (transcriptomics, proteomics, immunomics,...) We also apply these techniques to industrial processes such as the production of Txakoli from the D.O. Bizkaia, food analysis and the metagenomic study of lakes and aquatic systems in the Zone of Vitoria/Gasteiz. Among the achievements we can highlight the design of systems for rapid typing of bacteria, diagnosis of pathogenic fungi through multiple qPCR techniques, the study of the expression of the pathogenic fungus *A. fumigatus* through a complete genome microarray system also designed by us (AWAFUGE vers. 1 of Agilent). We have cloned different antigens of pathogenic fungi that can be interesting for their diagnosis and we have developed different monoclonal antibodies against them. The result of all this has been the four active patents of which I am the inventor, as well as numerous research articles, communications to Congresses, and directed Doctoral Thesis. The results have been disseminated to the Community and have been applied in some private companies such as Laboratorios Bromatológicos Araba S.A., Fundación Leia, etc. We have designed bioinformatics systems of free access ([http:// insilico.ehu.eus/](http://insilico.ehu.eus/)) that are being used by researchers from all over the world. The Group I lead tries to carry out basic research, but also applied research that can have an impact on Society, for example: to improve the diagnosis of

fungal diseases with high mortality, to understand their pathogenesis in order to be able to develop new antimicrobials,... All this to improve the prognosis of patients who suffer them. We are also trying to ensure that the results can have an industrial application, or for the benefit of society.

Part C. RELEVANT MERITS

C.1. Publications (including books): In the last 10 years: 24 papers and 1 book chapter

1. Guruceaga X.; Ezpeleta G., Mayayo E.; Sueiro-Olivares M.; Abad-Diaz-de-Cerio A.; Aguirre J.M.; Liu H.G.; Wiemann P.; Bok J.W.; Filler S.G.; Keller N.P.; Hernando F.L.; Ramirez-Garcia A.; Rementeria A. (2018) A possible role for fumagillin in cellular damage during host infection by *Aspergillus fumigatus*. **Virulence**, Aceptado 2018 (DOI: 10.1080/21505594.2018.1526528.). Impact factor: 3.947, **Q1** (Infectious Diseases)
2. Pellon A.; Ramirez-Garcia A.; Guruceaga X.; Zabala A.; Buldain I.; Antoran A.; Rementeria A.; Matute C.; Hernando F.L. (2018) Microglial immune response is impaired against the neurotropic fungus *Lomentospora prolificans*. **Cellular Microbiology** 20 (8):e12847. Ind. impacto: 4.410, **Q1** (Microbiology).
3. Ramirez-Garcia A.; Pellon A.; Rementeria A.; Buldain I.; Barreto-Bergter E.; Rollin-Pinheiro R.; Vieira de Meirelles J.; Xisto, M.I.D.S.; Ranque S.; Havlicek V.; Vandeputte P.; Le Govic Y.; Bouchara J.P.; Giraud S.; Chen S.; Rainer J.; Alastruey-Izquierdo A.; Martín-Gomez M.T.; López-Soria L.M.; Pemán J.; Schwarz C.; Bernhardt A.; Tintelnot K.; Capilla J.; Martin-Vicente A.; Cano-Lira J.; Nagl M.; Lackner M.; Irinyi L.; Meyer W.; de Hoog S.; Hernando F.L. (2018) *Scedosporium* and *Lomentospora*: an updated overview of underrated opportunists. : **Medical Mycology** 56: S102-S125. Ind. impacto: 2.799, **Q1** (Veterinary Science), 1 citation
4. Pellon A., Ramirez-Garcia A., Buldain I., Antoran A., Martin-Souto L., Rementeria A., Hernando F.L. (2018) Pathobiology of *Lomentospora prolificans*: could this species serve as a model of primary antifungal resistance?. **International Journal of Antimicrobial Agents** 51: 10-15. Ind. impacto: 4.253, **Q1** (Microbiology), 4 citations
5. Pellon A., Ramirez-Garcia A., Buldain I., Antoran A., Rementeria A., Hernando F.L. (2017). Molecular and Cellular Responses of the Pathogenic Fungus *Lomentospora prolificans* to the Antifungal Drug Voriconazole. **Plos ONE** 12 (2): e0174885. Ind. impacto: 2.766, **Q1** (Multidisciplinary Science), 4 citations
6. Buldain I., Ramirez-Garcia A., Pellon A., Antoran A., Sevilla M.J., Rementeria A., Hernando F.L. (2016). Cyclophilin and enolase are the most prevalent conidial antigens of *Lomentospora prolificans* recognized by healthy human salivary IgA and cross-react with *Aspergillus fumigatus*. *Proteomics Clinical Applications* 10: 1058-1067. Ind. impacto: 3.814, **Q1** (Biochemical Research Methods), 5 citations
7. Pellon A., Ramirez-Garcia A., Buldain I., Antoran A., Rementeria A., Hernando F.L. (2016). Immunoproteomics-based analysis of the immunocompetent serological response to *Lomentospora prolificans*. *Journal of Proteome Research* 15: 595-607. Ind. Impacto 4.268, **Q1** (Biochemical Research Methods), 9 citations.
8. Ramirez-Garcia A., Rementeria A., Pellon A. Antoran A., Aguirre JM., Moragues MD., Hernando F.L. (2016). *Candida albicans* and cancer: Can this yeast induce cancer. *Critical Reviews in Microbiology* 42: 181-193. Ind. Impacto 6.281, **Q1** (Microbiology), 7 citations.
9. Moragues MD., Rementeria A., Eraso E., Sevilla MJ. Quindós G. (2014). *Candida* antigens and immune responses: implications for a vaccine. *Expert Review of Vaccines* 13: 1001-1012. Ind. Impacto 4.210, **Q1** (Immunology), 10 citations
10. Ramirez-Garcia A., Arteta B., Abad-Diaz-de-Cerio A., Pellon A., Antoran A., Marquez J., Rementeria A., Hernando F.L. (2013). Pro-metastatic effect of *Candida albicans*:

intraspecific differences and importance of the mannose receptor. Plos ONE 8(1): e53584. Ind. Impacto 3.534, **Q1** (Multidisciplinary Sciences), 17 citations

C.2. Research projects and grants

PPG17/41- Ayudas a Grupos de Investigación Convocatoria 2017. Entidad Financiadora: UPV/EHU. IP: Aitor D. Rementeria Ruiz. Fecha de inicio: 01/01/2017, Fecha final: 31/12/2018. Subvención 46.000 €. Tipo de participación: **Investigador Principal**

GIU15/36- MICROBIOMICS- Biómica de hongos y bacterias. Entidad financiadora: Universidad del País Vasco (UPV/EHU). Convocatoria de Grupos de la UPV/EHU 2015. IP.: Aitor D. Rementeria Ruiz. Fecha de inicio: 01/01/2016, Fecha final.: 31/12/2016. Subvención 40.000 €. Tipo de participación: **Investigador principal.**

GIU12/44 - MIMOGEN-Microbiología Molecular y Genómica: Desarrollo de metodologías para el estudio genómico, proteómico, epidemiológico y de diagnóstico de bacterias y hongos basadas en técnicas moleculares y herramientas bioinformáticas. Entidad financiadora: Universidad del País Vasco (UPV/EHU). Convocatoria: Subvención General a Grupo de Investigación UPV/EHU 2012. IP.: Aitor D. Rementeria Ruiz. Fecha inicio: 22 de Noviembre 2012, Fecha final.: 21 de Noviembre 2015. Subvención: 45.640 €. Tipo de participación: **Investigador Principal.**

S-PC11UN007 - Nuevas aproximaciones genómicas y de microbiología molecular para la detección de patógenos. Entidad financiadora: Departamento de Industria, Gobierno Vasco. Convocatoria SAIOTEK 2011. IP.: Aitor D. Rementeria Ruiz. Fecha inicio: 01/01/2011, Fecha Final.: 31/12/2012. Subvención: 36.000 €. Tipo de participación: **Investigador principal.**

PA16/01- INNUENDO: Una plataforma intersectorial para la integración de la Genómica en la Vigilancia epidemiológica de patógenos transmitidos por los Alimentos. IP.: Javier Garaizar Candina. Fecha inicio: 01/01/2016, Fecha Final.: 31/12/2016. Subvención: 25.000 €. Tipo de participación: **Investigador**

GP/EFSA/AFSCO/2015/01- New approaches in identifying and characterizing microbiological and chemical hazards. Entidad financiadora: European Food Safety Authority (EFSA). Convocatoria: Proyecto europeo EFSA 2015. IP. Mr. Sukura (University of Helsinki); Javier Garaizar (Coordinador de la UPV/EHU). Fecha de inicio: 01/01/2016, Fecha final.: 31/12/2017. Subvención 491.674 € (50.000 € al subproyecto de la UPV/EHU). Tipo de participación: **Investigador.**

CSD2009-00006 - MICROGEN. Genómica Comparada Microbiana. Subproyecto: desarrollo de métodos diagnósticos basados en la frecuencia de oligonucleótidos. Entidad financiadora: Ministerio de Ciencia e Innovación (MICINN). Convocatoria: Plan nacional I+D+I, Consolider Ingenio 2010. IP.: Francisco Rodríguez-Valera (Universidad Miguel Hernandez); Joseba Bikandi (coordinador en la UPV/EHU). Fecha inicio: 01/01/2010, Fecha Final: 31/12/2014. Subvención: 3.800.000 € al proyecto completo; 265.785,62 € al subproyecto en la UPV/EHU. Tipo de participación: **Investigador.**

C.3. Contracts

Contrato de I+D: Desarrollo de un sistema universal de extracción de ADN de origen microbiano y animal: estudio preliminar. Empresa financiadora: LABORATORIOS BROMATOLÓGICOS ARABA S.A. IP.: Javier Garaizar Candina (Afilación Universidad del País Vasco (UPV/EHU)). Fecha Inicio: 09/07/2013, Fecha Final.: 31/01/2014. Cuantía: 9.000 €. Tipo de participación: **Investigador.**

C.4. Patents

Fernandez J.V., Rementeria A., Garaizar J. P201131497 - Métodos y Reactivos para la detección de *Aspergillus* sp. País de prioridad: España (Fecha de prioridad: 15/11/2011). Entidad titular: UPV/EHU. Empresas:

Garaizar J, Rementeria A, Bikandi J, Lopitz-Otsoa F, Martinez-Ballesteros I, Perez F, Santaolalla I. P200801267 - Métodos y Reactivos para la detección de Salmonella sp. País de prioridad: España (Fecha de prioridad: 30/04/2008) extendida a Estados Unidos en 2013. Entidad titular: UPV/EHU y Laboratorios Bromatológicos Araba S.A. Empresas:

C.5 Editorial Committees

- Associate Director of the Revista Iberoamericana de Micología from 01/01/2015 to the present.
- Member of the Editorial Board of the Revista Iberoamericana de Micología from 01/01/2009 to 01/01/2014..

C.6. Awards

2009 - 1st Award. First Call for the INIZIA University Entrepreneur Prize. MICROARABA DIAGNOSTICS - Design of a Biotechnology company

2017 - Award for the best oral presentation: Gonzalez-Pujana A. et al. "Safer and more predictable therapies in cell encapsulation" 1st SPLC-CRS (The Spanish Portuguese Local Chapter of The Controlled Release Society) Young Scientist Meeting (Santiago de Compostela, Spain, 23-24/04/2017)

C.8. Presentations and Communications to Congresses:

In the last 10 years: 1 Lecture, 55 Communications to International Congresses and 59 Communications to National Congresses

C.9. Directed work (Doctoral thesis and Master's final works).

Doctoral thesis: 5 Defended and 1 in progress. (In the last 10 years 3 and 1 respectively).

Doctoral Thesis:

1. Development of molecular techniques based on PCR for the specific detection of *Aspergillus fumigatus*. Doctoral student: Ana Abad. UPV/EHU University: Department: Immunology, Microbiology and Parasitology Rating: Outstanding Cum Laude. Year of defence: 17 November 2009

2. DEVELOPMENT OF REAL-TIME PCR TECHNIQUES FOR THE DETECTION AND DIFFERENTIATION OF *Aspergillus* GENDER SECTIONS AND SPECIES OF ENVIRONMENTAL, MEDICAL AND FOOD INTEREST. Doctoral student: Jimena V. Fernandez Molina. UPV/EHU University: Department: Immunology, Microbiology and Parasitology. Rating: Outstanding Cum Laude. Year of defence: 26 September 2014

3. Study of *Aspergillus fumigatus* pathogenicity and identification of putative virulence genes Doctoral student: Monica Sueiro Olivares. University: UPV/EHU. Department: Immunology, Microbiology and Parasitology. Rating: Outstanding cum laude. Year of defence: 2 December 2016. **International Thesis.**

Master's final works: 7 Defended between 2011 and 2018.