Date of the CVA	13/12/2020

Section A. PERSONAL DATA

Name and Surname	Alicia Gomez Lopez		
DNI/NIE/Passport		Age	
Researcher's identification number	Researcher ID	B-8318-2013	
	Scopus Author ID		
	ORCID	0000-0003-2780-5039	

* Obligatorio

A.1. Current professional situation

Institution	CNM-ISCIII		
Dpt. / Centre	Laboratorio de Referencia e Investigacion en Micologia / Centro Nacional de Microbiologia		
Address			
Phone		Email	
Professional category	Científico Titular de O.P.I. (Jefe del Laboratorio de Referencia en Micología)	Start date	2012
Keywords	Natural sciences and health sciences		

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Programa Oficial de Doctorado en Microbiología y Parasitología	Universidad Complutense de Madrid	2005
Licenciado en Farmacia Orientación Industrial	Universidad Complutense de Madrid	1994

A.3. General quality indicators of scientific production

Total articles published: 83
Articles with citation: 76;
Number of citations 2825; average citation per article: 35.31;
INDEX H: 33; Year of first publication 1999
19 articles as first author; 51 articles in journals classified in the first quartile (Q1)
Doctoral Thesis Direction: 1
Research six-year periods: 3 with positive evaluation (1998-2003; 2004-2009; 2010-2015)
Five-year periods: 3 with a positive assessment (2001-2005; 2006-2010; 2011-2015)

Section B. SUMMARY OF THE CURRICULUM

Since my incorporation in the Laboratory of Reference and Research in Mycology as a predoctoral fellow to the current date, as a researcher , I have participated in different research projects. With my incorporation, the Mycology laboratory started a new line of research aimed to study the relationship between exposure and response to antifungal treatment. The cause of the lack of antifungal efficacy is not well known yet, but it has been suggested that it could be a consequence of its pharmacokinetic (PK) behaviour . T

Our group has actively worked in the development of valid methods for the determination of pharmacokinetic parameters of antifungals, easy to obtain, that could help to predict the clinical response. It is worth highlighting the use of an alternative live experimental model for the evaluation of exposure-response relationships and the study of the virulence of fungal pathogens, representing an important advance in the use of live models without ethical compromises. It is an invertebrate model (larvae of the lepidopteran Galleria mellonela) that allows the generation of relevant data and offers real advantages due to its speed, low cost and easy handling. In addition, different microbiological and chromatographic methods have been developed for the study of exposure to antifungals. Chromatography applied to the study of fungal infection has been implemented in our laboratory almost routinely. It is also

worth highlighting that some of the techniques developed are used very frequently, have been accredited by ENAC and are part of the portfolio of services of our laboratory. They constitute some of the most requested techniques in the lab.

This line of research has been maintained since 2006 endowed with funding through different competitive calls of the AES (Strategic Action in Health, AES FIS-ISCIII, call 2009, 2013 and 2016) as well as other collaborative private financing projects.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores

1 **Scientific paper**. Laura Alcazar Fuoli; M Jose Buitrago; Alicia Gomez Lopez; Emilia Mellado. (3/4). 2015. An alternative host model of a mixed fungal infection by azole susceptible and resistant Aspergillus spp strains Virulence. TAYLOR & FRANCIS INC. 6-4, pp.376-384. ISSN 2150-5594.

2 **Scientific paper**. (AC). (1/8). 2012. Voriconazole serum levels measured by high-performance liquid chromatography: a monocentric study in treated patients Medical Mycology. INFORMA HEALTHCARE. 50-4, pp.439-445.

3 **Scientific paper**. Alicia Gomez Lopez. 2020. Antifungal therapeutic drug monitoring: focus on drugs without a clear recommendation Clin Microbiol Infect.

4 **Scientific paper**. Francesca Gioia; Alicia Gomez Lopez. 2020. Pharmacokinetics of echinocandins in suspected candida peritonitis: A potential risk for resistance.International journal of infectious diseases. 101, pp.24-28.

5 **Scientific paper**. Bernal-Martinez; ; ; et al; (AC); Gomez-Lopez. (9/9). 2019. High-Resolution Melting Assay for Genotyping Variants of the CYP2C19 Enzyme and Predicting Voriconazole Effectiveness.Antimicrob Agents Chemother.ASM. 24-6. ISSN 1098-6596.

6 **Scientific paper**. Alicia Gomez Lopez; Almudena Burillo; ; et al;. (2/8). 2018. A new cause of false positive voriconazole levels: Watch your collection tubes! J Chromatogr B Analyt Technol Biomed Life Sci.Elsevier. pp.328-331. ISSN 1873-376X.

7 **Scientific paper**. Carolina Garcia Vidal; Alicia Gomez Lopez; ; et al; ;. (14/19). 2018. Executive summary of clinical practice guideline for the management of invasive diseases caused by Aspergillus: 2018 Update by the GEMICOMED-SEIMC/REIPI.Enfermedades Infecciosas y Microbiologia Clinica. Elsevier. ISSN 1578-1852.

8 **Scientific paper**. (AC); ; ; et al;. (1/3). 2018. Simultaneous quantification of systemic azoles and their major metabolites in human serum by HPLC/PDA: role of azole metabolic rate Diagnostic Microbioly and Infectious Disease. Elsevier. 92-1, pp.78-83. ISSN 1879-0070.

9 **Scientific paper**. Araceli Monzon de la Torre; Alicia Gomez Lopez. (2/2). 2017. Actualizacion en técnicas para el diagnóstico microbiológico de infecciones fúngicas Enfermedades Infecciosas y Microbiologia Clinica. Elsevier. 35-Sup 2, pp.44-50. ISSN 0213-005X.

10 **Scientific paper**. Cendejas-Bueno, E.; Forastiero, A.; Ruiz, I.; Mellado, E.; Gavalda, J.; Gomez-Lopez, A. (AC). (6/6). 2017. Blood and tissue distribution of posaconazole in a rat model of invasive pulmonary aspergillosis Diagnostic Microbiology and Infectious Disease. 87-2, pp.112-117. ISSN 1879-0070.

11 **Scientific paper**. Gago, Sara; Serrano, Carmen; Alastruey-Izquierdo, Ana; Cuesta, Isabel; Martin-Mazuelos, Estrella; Aller, Ana Isabel; Gomez-Lopez, Alicia; Mellado, Emilia. 2017. Molecular identification, antifungal resistance and virulence of Cryptococcus neoformans and Cryptococcus deneoformans isolated in Seville, Spain Mycoses. 60-1, pp.40-50. ISSN 1439-0507.

12 **Scientific paper**. Cendejas-Bueno, Emilio; Forastiero, Agustina; Ruiz, Isabel; Mellado, Emilia; Jose Buitrago, Maria; Gavalda, Joan; Gomez-Lopez, Alicia. 2016. Galactomannan enzyme immunoassay and quantitative Real Time PCR as tools to evaluate the exposure and response in a rat model of aspergillosis after posaconazole prophylaxis Enfermedades Infecciosas y Microbiologia Clinica. 34-9, pp.571-576. ISSN 1578-1852.

13 **Scientific paper**. Emilio Cendejas Bueno; Alicia Gomez Lopez. 2016. Invasive aspergillosis in a paediatric allogeneic stem cell transplantation recipient owing to a susceptible Aspergillus fumigatus: Treatment failure with high doses of voriconazole and influence of CYP2C19 polymorphisms.Int J Antimicrob Agents. ISSN 1872-7913.

14 **Scientific paper**. 2015. First detection of Aspergillus fumigatus azole resistant strain due to Cyp51A TR46/Y121F/T289A in an azole naïve patient in Spain New microbes and new infections. 6. ISSN 2052-2975.

15 **Scientific paper**. Forastiero; ; Alicia Gomez Lopez. 2015. In vivo efficacy of voriconazole and posaconazole therapy in a novel invertebrate model of Aspergillus fumigatus infection International Journal of Antimicrobial Agents. ISSN 1872-7913.

16 **Scientific paper**. Gomez-Lopez A; Forastiero A; Cendejas-Bueno E; et al; Cuenca-Estrella M.2014. An invertebrate model to evaluate virulence in Aspergillus fumigatus: the role of azole resistance.Med. Mycol.52, pp.311-9. ISSN 1369-3786.

17 **Scientific paper**. Cendejas-Bueno E; Cuenca-Estrella M; Gómez-López A.2014. Clinical indications for therapeutic drug monitoring of antifungal agents. In the way for optimizing the treatment of fungal infection Rev Esp Quimioter. 27, pp.1-16. ISSN 0214-3429.

18 **Scientific paper**. Howard SJ; Lass-Flörl C; Cuenca-Estrella M; Gomez-Lopez A; Arendrup MC.2013. Determination of isavuconazole susceptibility of Aspergillus and Candida species by the EUCAST method.Antimicrob Agents Chemother. 57, pp.5426-31. ISSN 0066-4804.

19 **Scientific paper**. Forastiero A; Mesa-Arango AC; Alastruey-Izquierdo A; et al; Mellado E.2013. Candida tropicalis antifungal cross-resistance is related to different azole target (Erg11p) modifications.Antimicrob Agents Chemother. 57, pp.4769-81. ISSN 0066-4804.

20 **Scientific paper**. Cendejas-Bueno E; Cuenca-Estrella M; Gómez-López A.2013. Determination of voriconazole serum concentration by bioassay. A valid method for therapeutic drug monitoring for clinical laboratories.Antimicrob Agents Chemother. pp.-. ISSN 0066-4804.

21 **Scientific paper**. Cendejas-Bueno E; Cuenca-Estrella M; Gomez-Lopez A.2013. A simple, sensitive HPLC-PDA method for the quantification of itraconazole and hydroxy itraconazole in human serum: a reference laboratory experience.Diagn. Microbiol. Infect. Dis.76-3, pp.314-320. ISSN 0732-8893.

22 **Scientific paper**. Cuenca-Estrella M; Alastruey-Izquierdo A; Gómez-López A; Monzón A.2013. Antifungal susceptibility testing in yeasts. Update and novelties Enferm. Infecc. Microbiol. Clin.31 Suppl 1, pp.53-8. ISSN 0213-005X.

23 **Scientific paper**. Sara Gago; B Lorenzo; Alicia Gomez Lopez; Isabel Cuesta; Manuel Cuenca Estrella; Maria J Buitrago. 2013. Analysis of strain relatedness using high resolution melting in a case of recurrent candiduria.BMC Microbiol. 23-13, pp.13.

24 **Scientific paper**. Cendejas-Bueno E; Rodríguez-Tudela JL; Cuenca-Estrella M; Gómez-López A. (AC). (4/4). 2013. Development and validation of a fast HPLC/photodiode array detection method for the measurement of voriconazole in human serum samples. A reference laboratory experience.Enferm. Infecc. Microbiol. Clin.31, pp.23-28.

25 **Scientific paper**. Cendejas-Bueno E; Forastiero A; Rodriguez-Tudela JL; Cuenca-Estrella M; Gomez-Lopez A.2012. HPLC/UV or bioassay: two valid methods for posaconazole quantification in human serum samples.Clin. Microbiol. Infect.WILEY-BLACKWELL. 18-12, pp.1229-1235. ISSN 1198-743X.

26 **Scientific paper**. Cendejas-Bueno E; Kolecka A; Alastruey-Izquierdo A; et al; Boekhout T.2012. Reclassification of the Candida haemulonii complex as Candida haemulonii (C. haemulonii group I), C. duobushaemulonii sp. nov. (C. haemulonii group II), and C. haemulonii var. vulnera var. nov.: three multiresistant human pathogenic yeasts.J. Clin. Microbiol.50, pp.3641-51. ISSN 0095-1137.

27 **Scientific paper**. Alastruey-Izquierdo A; Gómez-López A; Arendrup MC; Lass-Florl C; Hope WW; Perlin DS; Rodriguez-Tudela JL; Cuenca-Estrella M.2012. Comparison of dimethyl sulfoxide and water as solvents for echinocandin susceptibility testing by the EUCAST methodology.J. Clin. Microbiol.50, pp.2509-12. ISSN 0095-1137.

28 **Scientific paper**. Ana Mesa Arango; Emilia Mellado; Alicia Gomez Lopez; Agustina Forastiero; Ana Alastruey Izquierdo. 2012. In vivo Amphotericin B and Voriconazole resistance of Aspergillus lentulus in the model host Galleria mellonella Mycoses. WILEY-BLACKWELL,. 55, pp.110--110. ISSN 0933-7407.

29 **Scientific paper**. Teresa Durán Valle; Sara Gago; Alicia Gomez Lopez. 2012. Recurrent Episodes of Candidemia Due to Candida glabrata with a Mutation in Hot Spot 1 of the FKS2 Gene Developed after Prolonged Therapy with Caspofungin Antimicrobial Agents and Chemotherapy. AMER SOC MICROBIOLOGY. 56-6, pp.3417-3419.

30 **Scientific paper**. Howard SJ; Felton TW; Gomez-Lopez A; Hope WW.2012. Posaconazole: the case for therapeutic drug monitoring.Ther Drug Monit. 34, pp.72-6. ISSN 0163-4356.

31 **Scientific paper**. Quiles-Melero I; García-Rodríguez J; Gómez-López A; Mingorance J.2012. Evaluation of matrix-assisted laser desorption/ionisation time-of-flight (MALDI-TOF) mass spectrometry for identification of Candida parapsilosis, C. orthopsilosis and C. metapsilosis.Eur. J. Clin. Microbiol. Infect. Dis.31, pp.67-71. ISSN 0934-9723.

C.2. Participation in R&D and Innovation projects

1 PI16CIII/00014, Nuevas estrategias para la caracterización de la progresión y respuesta a la infección fúngica: aplicación de la versatilidad de técnicas cromatográficas Instituto de Salud Carlos III. AESintarmural. Alicia Gomez Lopez. (Instituto de Salud Carlos III). 2017-2019. 58.000 €. Principal investigator.

2 Gestión y mantenimiento de la colección de cepas de levaduras y hongos filamentosos del Laboratorio de Referencia de Micología (CNM-ISCIII) MINECO. Alicia Gomez Lopez. (Instituto de Salud Carlos III). 2016-2018. 2 €.

3 Variantes génicas de enzimas metabolizadoras (CYP450) y monitorización de voriconazol en pacientes tratados. Implicación en la toma de decisiones. FIS (PI13/01817). Alicia Gomez Lopez. (Instituto de Salud Carlos III). 2013-2016.

4 Red de Investigación en Patología Infecciosa (REIPI) Instituto de Salud Carlos III. 1. (Instituto de Salud Carlos III). 2013-2015.

5 Estudio de la relevancia clínica de la resistencia a azoles en un modelo animal de aspergilosis invasora: Caracterización de parámetros PK/PD. ISCIII PROGRAMA GRUPOS EMERGENTES MPY1354/10. Alicia Gomez Lopez. (Instituto de Salud Carlos III). 2011-2012.

6 Estudio de la relevancia clínica de la resistencia a azoles en un modelo animal de aspergilosis invasora: Caracterización de parámetros PK/PD. MPY 1003/10); FIS (PI09/0624). Alicia Gomez Lopez. (Instituto de Salud Carlos III). 2010-2012. 54.500 €.

C.3. Participation in R&D and Innovation contracts

1 Ensayo clínico, fase IV, unicéntrico, dosis múltiple, con un único brazo de tratamiento para analizar la penetrancia broncopulmonar de isavuconazol en pacientes receptores de trasplante pulmonar (2019-004240-30) Pfizer, S.A.. Alicia Gomez Lopez. 2020-01/01/2022.

2 Estudio piloto, prospectivo y aleatorizado sobre la factibilidad de anfotericina B liposomal nebulizada(ALN) como Fondo de Investigacion Sanitaria (AES). Jesús Fortún Abete. 2019-01/01/2022.

3 Estudio secuencial de farmacocinética a nivel plasmático con dos formulaciones orales de posaconazol (Suspensión oral y comprimidos gastrorresistentes) en pacientes hematologicos con riesgo elevado de contraer micosis invasiva. PROTOCOLO CÓDIGO POPK-1501 Merck Sharp & Dohme España, S.A.. Rafael Duarte Palomino. 2017-01/01/2020. 58.270 €.

4 Validación de PCR en tiempo Real en sangre y liquido peritoneal en el diagnóstico de peritonitis candidiasica. Farmacocinética peritoneal y análisis de resistencia a equinocandinas Fondo de Investigacion Sanitaria (AES). Jesús Fortún Abete. 2016-01/01/2019. 70.523 €.

5 Actividad in vitro de extractos de cianobacterias frente a una colección de hongos levaduriformes y filamentosos Valoralia. Alicia Gómez López. From 2013.
6 Arasertaconazole nitrate. Susceptility study in vitro of arasertaconazole nitrate against clinical isolates of Candida. Ferrer Group. Manuel Cuenca-Estrella. 2010-01/01/2011.
7 Arasertaconazole nitrate.In vitro activity against Candida spp by Time-Kill studies. Ferrer Group. Manuel Cuenca-Estrella. 2010-01/01/2011.

C.4. Patents

María José Buitrago Serna; Manuel Cuenca Estrella; Alicia Gómez López; Juan Luis Rodriguez Tudela. P200802665. Desarrollo de un método rápido para el diagnóstico de histoplasmosis y/o paracoccidioidomicosis mediante PCR multiplex en Tiempo Real con iniciadores y sondas de tipo Molecular Beacon Spain. 2011.