

Abbreviated C.V.

NAME Concha Gil		POSITION TITLE, DEPARTMENT Professor of Microbiology Universidad Complutense Departamento de Microbiología Molecular	
INSTITUTE/FACULTY/SCHOOL Facultad de Farmacia, Universidad Complutense			
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Universidad Complutense, Madrid	MSc	1981	Microbiology
Universidad Complutense, Madrid	Ph.D.	1986	Microbiology

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Marital Status: Married (Angel Luis de Sousa Seibane)
Three sons: Luis (October, 1988); Javier (December, 1990) y Carlos (February, 1993) de Sousa Gil

A. Research and Professional Experience (brackets indicate incomplete years)

- 1980-1983** Predoctoral fellow, Universidad Complutense. Madrid.. Serologic and genetics aspects of *Candida albicans* dimorphism', Ph.D. Supervisor, Prof. César Nombela.
- 1983-1986:** Assistant Professor, Universidad Complutense Madrid.
- 1986-1987** Postdoctoral fellow, Dept. Microbiology, University of Glasgow, UK
- 1988-1989** Assistant Professor, Universidad Complutense, Madrid.
- 1989-2007:** Associate Professor. Universidad Complutense, Madrid.
- 2008** Full Professor. Universidad Complutense, Madrid
- 2005-2008** **Coordinator of the EuPA Education Committee (EuPA: European Association of Proteomics Societies www.eupa.org)**
- 2005-** **Coordinator of the Education Committee of PoteoRED (Spanish Network of Proteomics Facilities www.proteored.org)**
- 2009-** **Coordinator of the EuPA Congress and Communication Committee (EuPA: European Association of Proteomics Societies www.eupa.org)**

2007 **Member of the HUPO Education Committee HUPO: Human Proteome Organisation)**

B. Professional experience and Advisory Boards:

1999 Member of the Evaluation Commission of European Projects of the V Programme (Key Action 2 “Control of Infectious Diseases” 19-23 November 2001.

1988- 1993 Member of the Editorial Board of **Microbiology-SGM** (Society for General Microbiology. UK)

2006- : Member of the Editorial Board of **Proteomics** and **Practical Proteomics**.

2007-: Member of the Editorial Board of **Proteomics: Clinical Applications**

2008-: Executive Editor of **Journal of Proteomics** (Proteomics in Microbiology)

C. National and International Research Grants:

Principal Investigator of 6 National Projects funded by DGICYT (Dirección General de Investigación Ciencia y tecnología), CAM (Comunidad Autónoma de Madrid) and Fundación Ramón Areces.

Principal Investigator of 1 Project funded by NIH (National Institutes of Health). Fogarty International Research Collaboration Award for HIV-AIDS.

Investigator of 4 Projects funded by European Commission.

D. Selected Peer-Reviewed Publications Total Publications

D. 1. Selected papers on Large-scale identification of cell wall and membrane proteins in budding yeasts

Pardo, M., Ward M, Bains S, Molina M., Blackstock W, **Gil C.** and Nombela C. A proteomic approach for the study of *Saccharomyces cerevisiae* cell wall biogenesis. *Electrophoresis* 21, 3396-3410. 2000.

DeGroot P.W.J., Ruiz C, Vázquez C.R. de Aldana, Dueñas E, Cid V.J., del Rey F., Rodríguez-Peña J.M., Pérez P, Andel A., Caubin J, Arroyo J., García J.C., **Gil C.**, Molina M., Durán A., Nombela C and Klis F.M. A genomic approach for the identification and classification of genes involved in cell wall formation and its regulation in *Saccharomyces cerevisiae*. *Comparative and Functional Genomics* 2, 124-142. 2001.

Monteoliva, L., López Matas M., **Gil C.**, Nombela C. and Pla J. Large scale identification of putative exported proteins in *Candida albicans* by genetic selection. *Eukaryotic Cell* 1, 514-525. 2002.

Pitarch, A., Sánchez M., Nombela C. and **Gil C.** Sequential fractionation and two-dimensional gel analysis unravel the complexity of the dimorphic fungus *Candida albicans* cell wall proteome. **REVISTA: Molecular and Cellular Proteomics** 1, 967-982. 2002.

Hernández, R., Nombela C., Díez- Orejas R. and **Gil C.** Two dimensional reference map of *Candida albicans* hyphal forms. *Proteomics* 4, 374-382. 2004.

Insenser, M., Nombela C., Molero G. and **Gil C.** Proteomic analysis of detergent-resistant membranes from *Candida albicans*. *Proteomics* 6: S74-8. 2006.

D. 2. Selected papers on functional analysis of cell wall proteins

Martínez-López, R., Monteoliva L., Díez-Orejas R., Nombela C. and **Gil C.** The GPI-anchored protein Ecm33p is required for cell wall integrity, morphogenesis and virulence of *Candida albicans*. *Microbiology* 150, 3341-3354. 2004.

Pardo, M., Monteoliva L., Vazquez P., Martínez R, Molero G., Nombela C. and **Gil C.** Pst1 and Ecm33 encode two yeast cell surface GPI proteins important for cell wall integrity. *Microbiology* 150, 4157-4170. 2004.

Martínez-López, R., Park H., Myers C.L., **Gil C.** and Filler S.G. *Candida albicans* Ecm33p is important for normal cell wall architecture and interaction with host cells. *Eukaryotic Cell*. 5 (1), 140-147. 2006.

D.3 Selected papers on 'Non-classical' secretion pathway in budding yeast

Pardo M., Monteoliva L., J. Pla, Sánchez M, **Gil C.** and Nombela C. Two-dimensional analysis of proteins secreted by *Saccharomyces cerevisiae* regenerating protoplasts: A novel approach to study the cell wall. *Yeast* 15, 459-472. 1999.

Nombela C., **Gil C.**, Chaffin WL. Non-conventional protein secretion in yeast. *Trends Microbiol.* 14 (1), 15-21. 2006.

López-Villar, E., Monteoliva L, Larsen M. R., Sachon E, Shabaz M., Pardo M., Pla J., **Gil C.**, Roepstorff P. and Nombela C. Genetic and proteomic evidences support the localization of yeast enolase in the cell surface. *Proteomics* 6: S107-118. 2006.

D4. Selected papers on identifications of diagnostic and prognostic markers for systemic candidiasis. Identification of targets for immunoprevention

Pitarch, A., Pardo M., Jiménez A., Pla J., **Gil C.**, Sánchez M. and Nombela C. Two-dimensional gel electrophoresis as analytical tool for identifying *Candida albicans* immunogenic proteins. *Electrophoresis*. 20, 1001-1010. 1999.

Pardo, M., Ward M, Pitarch A, Sánchez M, Blackstock W, **Gil C** and Nombela C. Cross-species identification of novel *Candida albicans* immunogenic proteins by combination of 2D-PAGE and mass spectrometry. *Electrophoresis* 21, 2651-2659. 2000.

Pitarch, A., Díez-Orejas R, Molero G, Pardo M., Sánchez M, Gil C and Nombela C. Analysis of the serologic response to systemic *Candida albicans* infection in a murine model. *Proteomics* 1, 550-559 2001.

Fernández-Arenas, E., Molero G., Nombela C., Díez-Orejas R. and **Gil C.** Contribution of the antibodies generated by a low virulent *Candida albicans* strain in protection against systemic candidiasis. *Proteomics* 4, 1204-1215. 2004.

Fernández-Arenas, E., Molero G., Nombela C., Díez-Orejas R. and **Gil C.** Low virulent strains of *Candida albicans*: unravelling the antigens for a future vaccine. *Proteomics* 4, 3007-3020. 2004.

Pitarch, A., Abián J., Carrascal M., Sánchez M., Nombela C. and **Gil C.** Proteomics-based identification of novel *Candida albicans* antigens for diagnosis and monitoring of systemic candidiasis in patients with underlying haematological malignancies. *Proteomics* 4, 3084-3106. 2004.

Pitarch, A., Jimenez A., Nombela C., **Gil C.** Decoding serological response to *Candida* cell wall immunome into novel diagnostic, prognostic and therapeutic candidates for systemic candidiasis by proteomic and bioinformatic analyses. *Mol Cell Proteomics* 5 (1), 79-96. 2006.

Pitarch, A., Nombela C. and **Gil C.** Reliability of antibodies to Candida methionine synthase for diagnosis, prognosis and risk stratification in systemic candidiasis: a generic strategy for the prototype development phase of proteomic markers. *Proteomics Clinical Applications* 1, 1221-1242. 2007.

Pitarch, A., Nombela C. and **Gil C.** Serological proteome analysis to identify systemic candidiasis patients in the intensive care unit: Analytical, diagnostic and prognostic validation of anti-Candida enolase antibodies on quantitative clinical platforms *Proteomics Clinical Applications*. In press.

Martínez-Lopez, R.; Nombela, C.; Díez-Orejas, R.; Monteoliva, L.; **Gil, C.** Immunoproteomic analysis of the protective response obtained with Candida albicans ecm33 cell wall mutant in mice. Accepted in *Proteomics*.

D5. Selected papers on Proteomics of the C. albicans-macrophage interactions

Martínez-Solano, L., Nombela C., Molero G. and **Gil C.** Differential protein expresión of murine macrophages upon interaction with Candida albicans. *Proteomics* 6: S133-144. 2006.

Fernández-Arenas, E., Cabezón V., Bermejo C., Arroyo J., Nombela C., Díez-Orejas, R. and **Gil C.** Integrated genomic and proteomic strategies bring new insight into Candida albicans response upon macrophage interaction. *Molecular and Cellular Proteomics* 6(3), 460-478. 2007.

D6. Selected papers on C. albicans genetics

Pomés R., **Gil C.** and Nombela C. Genetic analysis of Candida albicans morphological mutants.. *Journal of General Microbiology* 131, 2107-2113. 1985.

Nombela C., Pomés R. and **Gil C.** Protoplast fusion hybrids from Candida albicans morphological mutants. *Critical Reviews of Microbiology* 15, 79-85. 1987.

Gil C., Pomés R. and Nombela, C. A complementation analysis by parasexual recombination of Candida albicans morphological mutants. *Journal of General Microbiology* **134**, 1587-1595. 1988

Gil C., R. Pomés and Nombela C. Isolation and characterization of Candida albicans morphological mutants repressed for the formation of filamentous hyphal-type structures. *Journal of Bacteriology* 172, 2384-2391. 1990.

Pla J., **Gil C.**, Monteoliva L., Navarro-García F., Sánchez M. and Nombela C. Understanding Candida albicans at the molecular level. *Yeast* **12**, 1677-1702. 1996.

Negredo, A., Monteoliva L., **Gil C.**, Pla J. and Nombela C. Cloning, analysis and one-step disruption of the ARG5,6 gene of Candida albicans. *Microbiology* 143, 297-302. 1997

E. Book Chapters

Pitarch, A., Pardo M., Monteoliva L., Molero G., Díez-Orejas R., Nombela C. and **Gil C.** Diagnóstico, tratamiento y prevención en infecciones producidas por hongos. Estudio proteómico Proteómica, herramientas de la era post-genómica en la vida cotidiana". Residencia de Investigadores, CSIC, Barcelona. Joaquín Abián y Susana Baqué (Eds). 2003.

Pitarch, A., Nombela C. and **Gil C.** Candida albicans biology and pathogenicity: insights from proteomics. "Microbial proteomics: Functional biology of whole organisms". Humphery-Smith, I and Hecker, M. (Eds). Wiley CH, 2006. **PubMed: Methods Biochem Anal. 2006; 49: 285-330.**

Pitarch, A., Nombela C. and **Gil C.** Contribution of proteomics to diagnosis, treatment, and prevention of candidiasis. "Microbial proteomics: Functional biology of whole organisms". Humphery-Smith, I and Hecker, M. (Eds). Wiley CH. 2006. **PubMed: Methods Biochem Anal. 2006; 49: 331-61. Review.**

López-Ribot, J.L., Díez-Orejas R., and **Gil C.** *Antibodies Immunity against Fungal Pathogens.* Brown and Netea (Eds.) Springer Verlag. 2006.

Pitarch, A., Molero G., Monteoliva L., Thomas D. P., López-Ribot J. L., Nombela C. and **Gil C.** *Proteomics in Candida species. "Candida: comparative and functional genomics".* d' Enfert, C. and Hube, B (Eds). Horizon Scientific Press. 2007.

Pitarch, A., Nombela C. and **Gil C.**: *Cell Wall Fractionation for Yeast and Fungal Proteomics Methods in Molecular Biology.* A. Posh (Ed), pp235-256. Humana Press Inc. In press, 2008.

Pitarch, A., Nombela C. and **Gil C.** *Collection of Proteins Secreted from Yeast Protoplasts in Active Cell Wall Regeneration.* Methods in Molecular Biology. A. Posh (Ed). Humana Press Inc. In press, 2008.

Pitarch, A., Nombela C. and **Gil C.** *Proteomic Profiling of Serological Response to Candida albicans during Host-Commensal and Host-Pathogen Interactions.* Humana Press Inc Host-Pathogen Interactions. S. Rupp (Ed). The Humana Press Inc. New Jersey, USA. In press.

Pitarch, A., Nombela C. and **Gil C.** *Identification of the Candida albicans Immunome Expressed during Systemic Infection by Mass Spectrometry.* Humana Press Inc. Host-Pathogen Interactions. S. Rupp (Ed). The Humana Press Inc. New Jersey, USA. In press.

Pitarch, A., Nombela C. and **Gil C.** *The Candida Immunome as a Mine for Clinical Biomarker Development for Systemic Candidiasis: From Biomarker Discovery to Assay Validation.* Pathogenic Fungi: Insights in Molecular Biology. Gioconda San-Blas and Richard Calderone (Eds), Caister Academic Press, UK. In press.

H. Education Reports

James P., Corthals G., **Gil C.** Report. *Proteomics Education, an Important Challenge for the Scientific Community: Report on the Activities of the EuPA Education Committee.* Proteomics. 9; 6(S2):77-81. 2006.

Albar, J.P., Corthals, G.L., **Gil C.**, James, P., Jensesn, O.N., Palagi, P.M. and Penque, D. *Promoting Proteomics Knowledge in Europe. Report on the activities of the EuPA Education Committee 2006-2007.* Proteomics 24;7 (S1):90-94. 2007.

Dunn, M.J., **C. Gil**, C. Kleinhammer, F. Lottspeich et al., 2008. *EuPA achieves visibility- An activity report on the first three years.* Journal of Proteomics 71, 11-18.

F. Training of Graduate and Ph D students

Supervisor of 4 Master of Sciences degrees.

Supervisor of 9 Ph D Thesis.

Coordinator of the Doctorate Programme "Microbiology and Parasitology" from 2002.

2005 and 2007 Director of the Proteomics Summer School ("Curso de Proteómica", Escuela de Salud y Biomedicina de La Escuela Complutense de verano).