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Cargo: Catedrático de Microbiología

Departamento: Microbiología y Genética, Universidad de Salamanca

Centro: Centro Hispano-Luso de Investigaciones Agrarias

Sexenios de investigación: 4

Quinquenios de docencia: 5

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CURRICULUM ACADÉMICO

Ldo Farmacia, 1980

Grado en Farmacia, 1982

Dr Farmacia (Premio Extraordinario), 1986

Postdoc: Becario Fleming en CAB International Mycological Institute, Kew (UK), 1988 y 1989

Prof Titular de Microbiología, 1991-2007

Catedrático de Microbiología: 2007 – hoy

- 13 tesis doctorales y 11 tesinas de grado dirigidas
- 16 proyectos de investigación como IP y 16 contratos con empresas
- Director del Grupo de Investigación de Excelencia (Junta de Castilla y León) “Fitopatología y Control Biológico”.
- Autor de 5 libros, 21 capítulos de libro, 78 artículos científicos SCI, 32 trabajos e informes técnicos y 25 patentes

Premios:

- *Insignia de Honor de la Sociedad Española de Fitopatología* (SEF). Registrada con el nº 13 de la Sociedad. Octubre de 1998
- *Premio Severo Ochoa 1999* de la Fundación Príncipe de Asturias.
- *Premio Mecenas 2002* del Consejo Social de la Universidad de Salamanca.
- *Premio Fleming 2007* de la Sociedad Española de Microbiología, al trabajo de investigación más destacado publicado en 2006 [Vizcaíno et al. (2006). *BMC Genomics* 7:193].

Proyectos de investigación más destacados:

- The development of rapid diagnostic methods for the detection of *Colletotrichum* species pathogenic to strawberry plants in Europe. AIR3-CT94-1322 (3PM de la UE). Coordinador.
- Substitution of methyl bromide fumigation and disease management in strawberry crops. FAIR6-CT98-4140 (4PM de la UE). Coordinador.
- Functional genomics and proteomics of *Trichoderma* TRICHOEST. QLK3-CT-2002-02032 (5PM de la UE). Investigador Principal.
- “Development of ‘on site’ molecular diagnostics for quarantine pests and pathogens (PORTCHECK)”. SSPE-CT-2004-502348 (6PM de la UE). Investigador Principal.
- “Biofertilización basada en la selección de cepas de *Trichoderma* y sus mecanismos de acción”. GR67 Excelencia Junta de Castilla y León (2008-2011). Investigador Principal.

Publicaciones 2006-2009:

1. Vizcaíno, J.A., Sanz, L., Cardoza, R.E., Monte, E. and Gutiérrez, S. (2005). Detection of putative peptide synthetase genes in *Trichoderma* species. Application of this method to the cloning of a gene from *T. harzianum* CECT 2413. *FEMS Microbiology Letters* 244:139-148.
2. Sanz, L., Montero, M., Redondo, J., Llobell, A. and Monte, E. (2005). Purification, characterization and clonation of an alfa-1,3-glucanase from the biocontrol fungus *T. asperellum*. *FEBS Journal* 272: 493-499.

3. Rubio, MB, Hermosa, MR, Keck, E. and Monte, E (2005). Specific PCR assays for the detection and quantification of DNA from the biocontrol strain *Trichoderma harzianum* 2413 in soil. *Journal of Microbial Ecology* 49: 25-33.
4. Montero M., Sanz L., Rey M., Monte E. and Llobell A. (2005). BGN16.3, a novel acidic β -1,6-glucanase from mycoparasitic fungus *Trichoderma harzianum* CECT 2413. *FEBS Journal* 272: 3441-3448.
5. Rodríguez-Fernández E., Manzano JL., Benito JJ., Hermosa MR., Monte E. and Criado JJ. (2005). Review article: Thiourea, Triazole and Thiadiazine Compounds and their Organometallic Complexes as Antifungal Agents. *Journal of Inorganic Biochemistry* 99: 1558-1572.
6. Montero-Barrientos M., Rivas R., Velázquez E., Monte E. and García-Roig M. (2005). *Terrabacter terrae* sp. nov., a novel actinomycete isolated from soil in Spain. *International Journal of Systematic and Evolutionary Microbiology* 55: 2491-2495.
7. Gouveia, M.E., Coelho, V., Choupina, A., Abreu, C.G., Hermosa, R. and Monte, E. (2005). Diagnosis of ink disease of chestnut by molecular identification of associated *Phytophthora* species. *Acta Horticulturae* (ISHS) 693:585-590.
8. Suárez, M.B., Sanz, L., Chamorro, I., Rey, M., González F.J., Llobell, A. and Monte, E. (2005). Proteomic analysis of secreted proteins from *Trichoderma harzianum*. Identification of a fungal cell wall-induced aspartic protease. *Fungal Genetics and Biology* 42: 924-934.
9. Vizcaíno, J.A., Sanz, L., Basilio, A., Vicente, F., Gutiérrez, S., Hermosa, M.R. and Monte, E. (2005). Screening of antimicrobial activities in *Trichoderma* isolates representing three *Trichoderma* sections. *Mycological Research* 109: 1397-1406.
10. Cardoza R.E., Vizcaíno, J.A., Hermosa, M.R., Sousa, S., González F.J., Llobell, A., Monte, E. and Gutiérrez, S. (2006). Cloning and characterization of the *erg1* gene of *Trichoderma harzianum* CECT 2413: effect of the *erg1* silencing over the resistance to terbinafine and ergosterol biosynthesis of *Trichoderma*. *Fungal Genetics and Biology* 43: 164-178.
11. Vizcaíno, J. A., Cardoza, R.E., Hauser, M., Hermosa, R, Rey, M., Llobell, A., Becker, J.M., Gutiérrez, S. and Monte, E. (2006). *ThPTR2*, a di/tri-peptide transporter gene from *Trichoderma harzianum*. *Fungal Genetics and Biology* 43: 234-246.
12. Vizcaíno, J. A., Cardoza, R.E., Bodo B., Gutiérrez, S. and Monte, E. (2006). Detection of peptaibols and partial cloning of a putative peptaibol synthetase gene from *T. harzianum* CECT 2413. *Folia Microbiologica* 51: 114-120.
13. Vizcaíno, J.A., González, F.J., Suárez, B. Redondo,J., Heinrich, J., Hermosa, M.R., Gutiérrez, S., Monte, E., Llobell, A. and Rey, M. (2006). Generation, annotation and analysis of ESTs from *Trichoderma harzianum* CECT 2413. *BMC Genomics* 7:193.
14. Velazquez, E., del-Villar, M., Grondona, I., Monte, E., Gonzalez-Villa, T. (2006). Ultrastructural and chemotaxonomic analysis of a xylanolytic strain of *Cryptococcus adeliensis* isolated from sheep droppings in Spain. *Archives of Microbiology* 186: 195-202.
15. Cardoza, R.E., Vizcaíno, J.A., Hermosa, M.R., Monte, E. and Gutiérrez, S. (2006). Transformation of four *Trichoderma* strains mediated by *Agrobacterium* or based in the isolation of protoplast. A comparison of the phenotypic and genetic stability of the transformants isolated by these procedures. *Journal of Microbiology* 44: 383-395.

16. Márquez, M., Iturriaga, E.A., Quesada-Moraga, E., Santiago-Alvarez, C., Monte, E. and Hermosa, R. (2006). Detection of potentially valuable polymorphisms in four group I intron insertion sites at the 3'-end of the LSU rDNA genes in biocontrol isolates of *Metarhizium anisopliae*. *BMC Microbiology* 6:77.
17. Hermosa, M.R., Turrá, D., Fogliano, V., Monte, E. and Lorito, M. (2006). Identification and characterization of potato protease inhibitors able to inhibit *B. cinerea* growth and pathogenic effect. *Physiological and Molecular Plant Pathology* 68: 138-148.
18. Cardoza R.E., Hermosa, M.R., Vizcaíno, J.A., González F.J., Llobell, A., Monte, E. and Gutiérrez, S. (2007). Partial silencing of a hydroxy-methylglutaryl-CoA reductase encoding gene in *Trichoderma harzianum* CECT 2413 results in a lower level of resistance to lovastatin and a lower antifungal activity. *Fungal Genetics and Biology* 44: 269-283.
19. Suárez, M.B., Vizcaíno, J.A., Llobell, A. and Monte, E. (2007). Characterization of genes encoding novel peptidases in the biocontrol fungus *Trichoderma harzianum* CECT 2413 using the TrichoEST functional genomics approach. *Current Genetics* 51: 331-342.
20. Montero M., Sanz L., Rey M., Llobell A. and Monte E. (2007). Cloning and characterization of *bgn16-3*, coding for a β -1,6-glucanase expressed during *Trichoderma harzianum* mycoparasitism. *Journal of Applied Microbiology* 103: 1291-1300.
21. Vizcaíno, J.A., Redondo, J., Suárez M.B., Cardoza, R.E., Hermosa, M.R., González, F.J., Rey, M. and Monte, E. (2007). Generation, annotation and analysis of ESTs from four different *Trichoderma* species in conditions related to biocontrol. *Applied Microbiology and Biotechnology* 75: 853-862.
22. Montero-Barrientos, M., Cardoza, R.E., Gutiérrez, S., Monte, E. and Hermosa, R. (2007). The heterologous overexpression of *hsp23*, a small heat-shock protein gene from *Trichoderma virens*, confers thermotolerance to *T. harzianum*. *Current Genetics* 52: 45-53.
23. López, M., López-Herrera, C., Monte, E., Hermosa, M.R. (2008). Intraspecific diversity within avocado field isolates of *Rosellinia necatrix* from south-east Spain. *European Journal of Plant Pathology* 121: 201-205.
24. Montero-Barrientos, M., Hermosa, R., Nicolás, C., Cardoza R.E., Gutiérrez, S. and Monte, E. (2008). Overexpression of a *Trichoderma* HSP70 gene increases fungal resistance to heat and other abiotic stresses. *Fungal Genetics and Biology* 45: 1506-1513.
25. Rubio, M.B., Cardoza R.E., Hermosa, M.R., Gutiérrez, S. and Monte, E. (2008). Cloning and characterization of the *Thcut1* gene encoding a cutinase of *Trichoderma harzianum* T34. *Current Genetics* 54: 301-312.
26. Rubio, M.B., Hermosa, R., Reino, J.L., Collado, I.G. and Monte, E. (2009). The *Thctf1* transcription factor of *Trichoderma harzianum* is involved in 6-pentyl-2H-pyran-2-one production and antifungal activity. *Fungal Genetics and Biology* 46: 17-27.
27. Sadfi-Zouaoui, N., Hannachi, I., Rouaïssi, M., Hajlaoui, M.R., Rubio, M.B., Monte, E., Boudabous, A. and Hermosa, R. (2009). Biodiversity of *Trichoderma* isolates in Tunisia. *Canadian Journal of Microbiology* (en prensa).

28. Morán, E., Hermosa, M.R., Ambrosio, P., Cardoza, R.E., Gutiérrez, S., Lorito, M. and Monte, E. (2009). The ThPG1 endopolygalacturonase is required for the *Trichoderma harzianum*-plant beneficial interaction. *Molecular Plant-Microbe Interactions* (aceptado con cambios).