

**CURRÍCULUM ABREVIADO (CVA) – Extensión máxima: 4 PÁGINAS**  
 Lea detenidamente las instrucciones disponibles en la web de la convocatoria.

Parte A. DATOS PERSONALES		Fecha del CVA
Nombre y apellidos	José Tudela Serrano	
DNI/NIE/pasaporte		
Open Researcher and Contributor ID (ORCID*)	<a href="http://www.orcid.org/0000-0002-5528-4296">www.orcid.org/0000-0002-5528-4296</a>	
SCOPUS Author ID(**)	<a href="http://www.scopus.com/authid/detail.uri?authorId=7005192025">www.scopus.com/authid/detail.uri?authorId=7005192025</a>	
WoS Researcher ID (**)	<a href="https://www.webofscience.com/wos/author/record/877991">https://www.webofscience.com/wos/author/record/877991</a>	

(\*) Obligatorio

(\*\*) Recomendable

### A.1. Situación profesional actual

Organismo	Universidad de Murcia		
Dpto./Centro	Depto. Bioquímica y Biología Molecular-A		
Dirección	Facultad de Veterinaria		
Teléfono	868884773	correo electrónico	<a href="mailto:tudelaj@um.es">tudelaj@um.es</a>
Categoría profesional	Catedrático Universidad	Fecha inicio	07/07/2004
Palabras clave	Enzimología, Biomoléculas Activas, Tecnología Bioquímica		
Palabras clave inglés	Enzymology, Active Biomolecules, Biochemical Technology		

### A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciado en Química	Universidad de Murcia	1981
Doctor en Química	Universidad de Murcia	1987

### A.3. Indicadores generales de calidad de la producción científica

- AEI Referee. Research Periods: 6, 1982-2017. PhD supervised (2012-2024): 6. Papers: 170. Citations (n°): Total 4534, Without self-citations: 3759. Peer reviews: 206. Papers Q1:41, D1:19. h-Index-WoS=38, h-Index-SCOPUS=41, h-Index-GoogleS=48, i10-index=113.

**Parte B. RESUMEN LIBRE DEL CURRÍCULUM** (máximo 5000 caracteres, incluyendo espacios en blanco. El contenido de este apartado se ha modificado para progresar en la adecuación del proceso de evaluación a los principios DORA)

**Scientific Activities.** The Group of research Enzymology of the University of Murcia, studies enzymes and biomolecules from algae and medicinal plants, for scientific knowledge about biodiversity, mainly from Murcia and Spain, as well as for characterize their potential biotechnological applications. Their techniques are available in the GENZ ([www.um.es/genz/e00605/serv03.htm](http://www.um.es/genz/e00605/serv03.htm)), and in the general research services of the Murcia University ([www.um.es/web/acti](http://www.um.es/web/acti)).

- **Enzymomics.** Preparative extraction and purification of proteins and enzymes. Use of centrifugation, tangential flow filtration (TFF), and chromatography FPLC-IEXC/HIC/GFC/AC. In vitro and advanced characterization of enzymes, with steady-state/transient phase studies of enzyme kinetics, on substrates and activators/ inactivators/inhibitors. Application mainly to polyphenoloxidases (tyrosinases, laccases and peroxidases) and hydrolases (glycosidases, lipases and proteases). Selection of target enzymes, useful as molecular markers of potential



biotechnological applications, in agriculture, aquaculture, feed, food, cosmetics and drugs. Use of spectrophotometry and spectrofluorometry, on cuvettes or multiwell plates.

- **Metabolomics.** Preparation with solvents of extracts from biomass, and purification of biomolecules, with potential reactivity on enzymes. Use of techniques such as impact milling, crown homogenization, ultrasonication and enzymes (macerases), recycled solvents by rotary evaporation under vacuum, and lyophilization. Identification and quantification of biomolecules with GC/MS, HPLC-MS-ESI-QTOF and/or  $1\text{H}/13\text{C}/15\text{N}/2\text{D}$ -NMR. In vitro evaluation of potential bioactivities of biomolecules. Sunscreens: Analysis of absorbance and fluorescence properties for protection against UVB, UVA and visible solar wavelengths. Antioxidants: Determination of the antioxidant capacities against nitrogen (ABTSR) and oxygen (ORAC, TBARS) free radicals. Stabilizers: Screening of assay conditions for minimization of oxidized/hydrolyzed derivatives, analyzed by GC/HPLC. Encapsulation: Preparation of biomolecules encapsulated with polysaccharides, mainly from algae/plants as natural matrices, using micro/nano-spray drying. Controlled release: Assays of release of biomolecules from matrix micro/nanocapsules, by GC/HPLC.

- **Diffusion.** Experimental results published in JCR journals (Section C1). Data available in supplementary materials from journals. **Financial support.** Public grants for basic research projects from Governments of Spain ([www.aei.gob.es](http://www.aei.gob.es)) and that of the Murcia Country ([www.fseneca.es](http://www.fseneca.es)). Last years: about 380000 € (Section C2). **International partners.** Fruitful collaboration with Group of Microbial Enzymology of the Northumbria University, Dr. Jose-Luis Munoz-Munoz (<https://orcid.org/0000-0003-0010-948X>). **Scientific and Academic Responsibilities.** Member of six professional associations (Section C5), and development of three Academic Positions (Section C6). **Leadership.** Main researcher of research projects and contracts with industries, supervisor of laboratory work, training of researchers, writing of publications, statement of coworking, and review of scientific activities (Sections C1-C9).

**Technological Activities.** Development of applied research in collaboration with biotechnological industries of Spain. **Contracts with industries.** Joint development of industrial research projects ([www.cdti.es](http://www.cdti.es), [www.fseneca.es](http://www.fseneca.es)), with contracts by industries on applied research on enzymes and biomolecules. Last years: about 250000 € (Section C3).

**Patents.** One patent in exploitation about production of one enzyme from plant waste. (Section C4).

**Other Activities. Training of researchers.** Supervisor of 15 PhD students, which doctors attained further relevant positions in public institutions or private industries (Section C7).

**Reviewer of scientific activities.** Reviewer of 206 papers in scientific journals JCR (Section C8), and that of 17 projects for the ANEP-Spain (Section C9).

### **Parte C. MÉRITOS MÁS RELEVANTES** (*ordenados por tipología*)

Últimos méritos más relevantes.

#### **C.1. Publicaciones**

**10.** Adouane, S., Mehaoua, M. S., Bouatrous, Y., Tudela, J., Flamini, G., & Mechaala, S. (2022). Natural insecticides from native plants of the Mediterranean basin and their activity for the control of the date moth *Ectomyelois ceratoniae* (Zeller) (Lepidoptera: Pyralidae). *Journal of Plant Diseases and Protection*, 129(4), 775-782. <https://doi.org/10.1007/s41348-022-00593-9>

**9.** Sanchez-Martinez, J. D., Bueno, M., Alvarez-Rivera, G., Tudela, J., Ibanez, E., & Cifuentes, A. (2021). In vitro neuroprotective potential of terpenes from industrial orange juice by-products. *Food & Function*, 12(1), 302-314. <https://doi.org/10.1039/d0fo02809f>

**8.** Manzano-Nicolas, J., Taboada-Rodriguez, A., Teruel-Puche, J. A., Marin-Iniesta, F., Garcia-Molina, F., Garcia-Canovas, F., . . . Munoz-Munoz, J. (2021). Enzymatic oxidation of oleuropein and 3-hydroxytyrosol by laccase, peroxidase, and tyrosinase. *Journal of Food Biochemistry*, 45(8), 14. <https://doi.org/10.1111/jfbc.13803>

**7.** Fernandez-Julia, P. J., Tudela-Serrano, J., Garcia-Molina, F., Garcia-Canovas, F., Garcia-Jimenez, A., & Munoz-Munoz, J. L. (2021). Study of tyrosine and dopa enantiomers as tyrosinase substrates initiatingl- andd-melanogenesis pathways. *Biotechnology and Applied Biochemistry*, 68(4), 823-831. <https://doi.org/10.1002/bab.1998>

**6.** Aunon, A., Gomez-Leyva, Y., Torrente, P., Gomez, P. S., Tudela, J., & Aboal, M. (2021). Diatoms from eutrophic hypersaline lagoons in bioremediation and fatty acid production. *Phycologia*, 60, 118-118. Retrieved from <Go to ISI>://WOS:000682342700298



5. Manzano-Nicolas, J., Taboada-Rodriguez, A., Teruel-Puche, J. A., Marin-Iniesta, F., Garcia-Molina, F., Garcia-Canovas, F., . . . Munoz-Munoz, J. L. (2020). Kinetic characterization of the oxidation of catecholamines and related compounds by laccase. *International Journal of Biological Macromolecules*, 164, 1256-1266. <https://doi.org/10.1016/j.ijbiomac.2020.07.112>

4. Manzano-Nicolas, J., Marin-Iniesta, F., Taboada-Rodriguez, A., Garcia-Canovas, F., Tudela-Serrano, J., & Munoz-Munoz, J. L. (2020). Development of a method to measure laccase activity on methoxyphenolic food ingredients and isomers. *International Journal of Biological Macromolecules*, 151, 1099-1107. <https://doi.org/10.1016/j.ijbiomac.2019.10.152>

3. Cutillas, A. B., Carrasco, A., Martinez-Gutierrez, R., Tomas, V., & Tudela, J. (2018). Thymus mastichina L. essential oils from Murcia (Spain): Composition and antioxidant, antienzymatic and antimicrobial bioactivities. *Plos One*, 13(1), 19. <https://doi.org/10.1371/journal.pone.0190790>

2. Cutillas, A. B., Carrasco, A., Martinez-Gutierrez, R., Tomas, V., & Tudela, J. (2018). Thyme essential oils from Spain: Aromatic profile ascertained by GC-MS, and their antioxidant, anti-lipoxygenase and antimicrobial activities. *Journal of Food and Drug Analysis*, 26(2), 529-544. <https://doi.org/10.1016/j.jfda.2017.05.004>

1. Cutillas, A. B., Carrasco, A., Martinez-Gutierrez, R., Tomas, V., & Tudela, J. (2018). *Rosmarinus officinalis* L. essential oils from Spain: composition, antioxidant capacity, lipoxygenase and acetylcholinesterase inhibitory capacities, and antimicrobial activities. *Plant Biosystems*, 152(6), 1282-1292. <https://doi.org/10.1080/11263504.2018.1445129>

## C.2. Proyectos

4 Grants for basic research projects, from the Government of Spain ([www.aei.gob.es](http://www.aei.gob.es)), or from the Government of the Murcia Region ([www.fseneca.es](http://www.fseneca.es)), with an overall budget about 380000 euros, with Main Researcher: Dr. José Tudela Serrano.

## C.3. Contratos, méritos tecnológicos o de transferencia

4 Grants for industrial research projects, from the Government of Spain ([www.cdti.es](http://www.cdti.es)), or from the Government of the Murcia Region ([www.fseneca.es](http://www.fseneca.es)), which contracts with industries amount an overall budget about 250000 euros, with Main Researcher: Dr. José Tudela Serrano.

## C.4. Patentes

1. Inventors (sign order): Rodríguez López J.N., López Molina D., Tudela J. & García Cánovas F. Title: Enzima con actividad peroxidasa aislada de la alcachofa (*Cynara scolymus* L.), procedimiento para su aislamiento, purificación y aplicaciones. Number: P200002553/6. Priority Country: Spain. Priority Date: 24-10-2000. Entity: Universidad de Murcia. Extension Countries: Spain. Exploitation: BIOPRODIN S.L. (01/12/2008-24/10/2020).

## C.5. Miembro ordinario de Sociedades Científicas y Profesionales

- Colegio Oficial de Químicos ([www.cgquimicos.org](http://www.cgquimicos.org)), Sociedad Española de Bioquímica ([www.sebbm.es](http://www.sebbm.es)), Sociedad Española de Biotecnología ([www.sebiot.org](http://www.sebiot.org)), Sociedad Española de Químicos Cosméticos ([www.e-seqc.org](http://www.e-seqc.org)), International Society of Mushroom Sciences ([www.isms.biz](http://www.isms.biz)), and Groupe Polyphenols ([www.groupepolyphenols.com](http://www.groupepolyphenols.com)).

## C.6. Responsabilidades Institucionales

-Director of Department (07/07/2011-09/07/2013). Coordinator of MSc and Coordinator of PhD on Molecular Biology and Biotechnology (01/10/2013-30/09/2015), Biology Faculty, Murcia University ([www.linkedin.com/in/josé-tudela-serrano-79362b43](http://www.linkedin.com/in/josé-tudela-serrano-79362b43)).

## C.7. Supervisión de investigadores

- Supervision of 15 PhD Theses (1993-2020), with 6 PhD Tesis (2012-2024), in the Murcia University. Between the early Doctors, there are full professors in the University of Murcia (<https://orcid.org/0000-0001-6863-1173>), and in the CEBAS-CSIC Murcia (<https://orcid.org/0000-0002-1068-8692>). The last Doctors have been obtained jobs in a High School, Health Office of the Murcia Contry/Consejería de Sanidad de la Región de Murcia, Hospital Reina Sofía de Murcia (<https://orcid.org/0000-0003-4481-7568>), Northumbria University (<https://orcid.org/0000-0003-0010-948X>), and biotechnological companies such as Alissi Brontë ([www.alissibronte.com](http://www.alissibronte.com)), Industrias Químicas Megar ([www.megar.es](http://www.megar.es)), MundoEcológico ([www.mundeco.es](http://www.mundeco.es)) and Symborg ([www.symborg.com](http://www.symborg.com)).

## C.8. Revisor de revistas científicas JCR

- Reviewer of 192 papers in scientific journals JCR-ISI ([www.orcid.org/0000-0002-5528-4296](http://www.orcid.org/0000-0002-5528-4296), [www.webofscience.com/wos/author/record/877991](http://www.webofscience.com/wos/author/record/877991)). *Biores. Technol.* (Biotechnol., Q1, D1), *Int. J. Biol. Macrom.* (Chem. Applied, Q1), *Biomolecules* (Biochem., Q1), *Ind. Crops Prods.*



(Agronomy, Q1, D1), J. Enz. Inhibit. Med. Chem. (Chem. Medicinal, Q1), Dyes Pigments (Eng. Chem., Q1), Marine Drugs (Chem. Medicinal, Q1), J. Agric. Food Chem. (Agric. Multid., Q1, D1), Others.

**C.9. Evaluador de Proyectos científicos**

- Referee of the AEI ([www.aei.gob.es](http://www.aei.gob.es)), Madrid, Spain. 17 Grants (2010-2022), 14 Grants (2015-2024).