

c v n CURRÍCULUM VITAE NORMALIZADO



David Talens Perales

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

My name is David Talens Perales, I am from Carcaixent, Valencia. I graduated in Biology from the University of Valencia in 2011. I studied the Master in Molecular Approximations for Health Sciences in 2012 by the same university and in 2016 I obtained the master's degree in training for teaching in secondary education at the Catholic University of Valencia. In 2016 I received my PhD in Biotechnology from the University of Valencia. I am currently working at the Institute of Agrochemistry and Food Technology (CSIC) and as a lecturer at the Catholic University of Valencia.

The work that I have developed over the years has been focused on enzymes at Laboratory of Enzyme Structure and Function. Specifically in aspects such as their identification, modification and immobilization.

Identification: The number of enzymes that meet the requirements of the industry is very scarce. That is why there is an interest in discovering new enzymes that are adapted to extreme conditions. There are different search methods. But recently, with the rise and cheapening of sequencing, there are databases full of uncharacterized genetic sequences. Advances in bioinformatics, use of algorithms and small programs, allow the screening of these databases to find candidate sequences to be cloned, produced and characterized. During the last few years I have focused my work on three families of glycosyl hydrolases GH2 (glycosidase and lactases), GH10 and GH11 (xylanases). As a result of this screening, an extremophilic lactase and producer of prebiotic galactooligosaccharides and two xylanases resistant to high temperatures and alkaline pH have been characterized. Specifically, one of them has been patented, has been produced on an industrial scale and is being tested in the paper industry (RAIZ-Navigator) for the bleaching of paper pulp.

Modification: Another approach to obtain new enzymes, or enzymes with better characteristics, is to modify their structure or composition through molecular engineering. In this field I have applied various techniques such as directed mutagenesis, random mutagenesis or the construction of hybrid enzymes. As a result, we have obtained versions of lactases, invertases (which has given rise to a patent) and glucose oxidases with improved properties. These enzymes are widely used in food industry and as a biosensor.

Reuse: Due to its cost it is very interesting to generate immobilization methods that allow the reuse of enzymes in bioprocesses. During these years I have tested different types of enzyme immobilization. Some of the types of immobilization I have worked with are covalent, hybrid enzymes (with CBM domains), encapsulation, nanoflowers, etc.

All these topics have received funding from the national plan of the Spanish Government, as well as from projects financed with European funds (H2020). During their development, several internship students have worked under my supervision, while others have developed their final degree and master's degree projects under my direction.

In addition to scientific publications and patents, I have participated in various activities of scientific dissemination, such as interviews, collaboration with radio programs, press releases or photo contests. This work has resulted in a total of 17 scientific publications in indexed



journals (12 of them Q1 and 5 D1), 3 book chapters, 2 patents and several popular science publications.



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

- Un total de 6 becas de carácter competitivo
- Organización de 9 eventos de divulgación y difusión científica
- Un total de 4 premios y reconocimientos, siendo el más destacado el Premio Extraordinario de Doctorado

- Trabajos de final de grado dirigidos: 10
- Trabajos de final de máster: 1
- Citas totales: 234

- Publicaciones totales: 17
- Publicaciones totales en el primer cuartil Q1: 10 (D1: 3)
- Sexenios de investigación: 1
- Índice h: 11
- Índice i10: 12



David Talens Perales

Surname(s): **Talens Perales**
Name: **David**
ORCID: **0000-0002-8693-4239**
Nationality: **Spain**
Country of birth: **Spain**
Aut. region/reg. of birth: **Valencian Community**
Contact aut. region/reg.: **Valencian Community**
Personal web page: **www.biogenmol.blogspot.com**

Current professional situation

Employing entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University

Professional category: Profesor contratado asociado

Start date: 05/09/2019

Type of contract: Temporary employment contract

Primary (UNESCO code): 240300 - Biochemistry

Performed tasks: Profesor y coordinador de la asignatura de Enzimología en 3r grado de Biotecnología.

Employing entity: Consejo Superior de Investigaciones Científicas

Department: Biotecnología, Instituto de Agroquímica y Tecnología de Alimentos

Professional category: TITULADO SUP. ACTIVIDADES TECN. Y PROF.

Start date: 2011

Type of contract: Temporary employment contract

Dedication regime: Full time



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 University degree: Máster

Name of qualification: Máster Universitario en Formación del Profesorado de Secundaria, Bachillerato, Formación Profesional y Enseñanzas de Idiomas

Degree awarding entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University

Date of qualification: 20/07/2017

2 University degree: Máster

Name of qualification: Master en Aproximaciones Moleculares a las Ciencias de la Salud

Degree awarding entity: Universitat de València **Type of entity:** University

Date of qualification: 30/07/2012

3 University degree: Licenciado

Name of qualification: Licenciado en Biología

Degree awarding entity: Universitat de València **Type of entity:** University

Date of qualification: 29/06/2011

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Biotecnología

Degree awarding entity: Universitat de València **Type of entity:** University

Date of degree: 27/10/2016

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

1 Training title: Introducción a la estadística aplicada con R software (CURSO ONLINE)

Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

End date: 27/05/2022

Duration in hours: 60 hours

2 Training title: Adobe Illustrator CS5 ONLINE

Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

End date: 05/11/2021

Duration in hours: 40 hours



- 3 Training title:** Adaptar la enseñanza-aprendizaje a los restos de la realidad: aportaciones de la docencia on-line y de las TIC
Awarding entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
End date: 10/02/2021
- 4 Training title:** Python Avanzado ONLINE
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
End date: 28/09/2020 **Duration in hours:** 40 hours
- 5 Training title:** Experto Universitario en Competencia Profesional para la Enseñanza en Valenciano
Awarding entity: FUNDACION RECI-UNIVERSIDAD POLITECNICA DE VALENCIA
End date: 31/05/2018 **Duration in hours:** 240 hours
- 6 Training title:** Certificación para la Enseñanza en Inglés
Awarding entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
End date: 21/07/2017 **Duration in hours:** 240 hours
- 7 Training title:** Bioinformatics: Introduction and Methods
Awarding entity: Peking University
End date: 27/01/2015
- 8 Training title:** Creación y retoque de imágenes con software libre
Awarding entity: Universidad de Málaga **Type of entity:** University
End date: 28/10/2014 **Duration in hours:** 27 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	B2	B2	B2	B2	B2
Catalan	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C2

Teaching experience

General teaching experience

- 1 Name of the course:** Integración Bioquímica y Bioquímica Clínica
University degree: Graduado o Graduada en Medicina
Start date: 2015 **End date:** 2016
Entity: Universitat de València **Type of entity:** University
Faculty, institute or centre: Facultad de Medicina y Odontología



- 2** **Name of the course:** Bioquímica II
University degree: Graduado o Graduada en Farmacia
Start date: 2014 **End date:** 2015
Entity: Universitat de València **Type of entity:** University
Faculty, institute or centre: Facultad de Farmacia
- 3** **Name of the course:** Integración Bioquímica y Bioquímica Clínica
University degree: Graduado o Graduada en Medicina
Start date: 2014 **End date:** 2015
Entity: Universitat de València **Type of entity:** University
Faculty, institute or centre: Facultad de Medicina y Odontología
- 4** **Name of the course:** ACTIVIDAD BIOLÓGICA DE MOLÉCULAS DE ORIGEN MARINO
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Obligatory
University degree: Máster Biotecnología Azul
Start date: 08/10/2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 4
Entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
Faculty, institute or centre: Facultad de Veterinaria y Ciencias Experimentales
- 5** **Type of teaching:** Official teaching
Name of the course: Enzimología/3º
University degree: Biotecnología
Start date: 05/09/2019
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 49
Entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
Subject language: Spanish

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Generación de endolisinas híbridas para su inmovilización en soportes sólidos
Entity: Universidad Católica de Valencia San Vicente Mártir
Student: Mireia Palanca Gisbert
Obtained qualification: 9,6
Date of reading: 2022
- 2** **Project title:** Estudio filogenético, síntesis y caracterización de lactasas termoestables
Entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
Student: Juan Carlos Torrat Novés
Date of reading: 2021
- 3** **Project title:** Nuevas estrategias de tratamientos en especies del género Candida
Entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University



Student: Ana Boix Romà
Date of reading: 2021

- 4** **Project title:** Influencia de las matrices biopoliméricas en la hidrólisis de la lactosa de hidrogeles y aerogeles enzimáticamente activos cargados con nanoflores de beta galactosidasa
Type of project: Minor thesis
Entity: Instituto de Agroquímica y Tecnología de Alimentos **Type of entity:** State agency
Student: Adrián Román Sarmiento
Obtained qualification: 10-Matricula de Honor
Date of reading: 18/10/2020
- 5** **Project title:** Ingeniería enzimática para el desarrollo de materiales funcionales en tecnología de alimentos
Type of project: End of course project
Entity: Instituto de Agroquímica y Tecnología de Alimentos **Type of entity:** State agency
Student: Marcos Tomás
Obtained qualification: 9.0
Date of reading: 25/07/2020
Quality recognition: No
- 6** **Project title:** Caracterización y mejora de dos variantes de la b-galactosidasa TmLac de Thermotoga maritima
Type of project: End of course project
Entity: Instituto de Agroquímica y Tecnología de Alimentos **Type of entity:** State agency
Student: Maria Desamparados Valera García
Obtained qualification: 9.1
Date of reading: 09/07/2020
- 7** **Project title:** Respuesta celular T CMV-específica como biomarcador no invasivo del estado de inmunocompetencia y riesgo de infecciones en el trasplante de órgano sólido
Type of project: End of course project
Entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
Student: Joaquí Roglá Aragón
Obtained qualification: 6,1
Date of reading: 07/2020
- 8** **Project title:** Inmovilización de la b-galactosidasa de Thermotoga maritima mediante el método de formación de nanoflores
Type of project: End of course project
Entity: Instituto de Agroquímica y Tecnología de Alimentos **Type of entity:** State agency
Student: Luís Martínez Argente
Obtained qualification: 10 - Matricula de Honor
Date of reading: 07/2019
Quality recognition: No
- 9** **Project title:** DESARROLLO DE BIOMATERIALES ENZIMÁTICAMENTE ACTIVOS: REVISIÓN Y TENDENCIAS FUTURAS
Type of project: End of course project
Type of entity: State agency



Entity: Instituto de Agroquímica y Tecnología de Alimentos

Student: María Inmaculada Esteve Ferrer

Obtained qualification: 7

Date of reading: 2019

10 Project title: Mejora de β -galactosidasas para la producción industrial

Type of project: End of course project

Entity: Instituto de Agroquímica y Tecnología de Alimentos

Type of entity: State agency

Student: Berta Polanco Esteve

Obtained qualification: 9,6

Date of reading: 2018

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 Name of the project: INVESTIGACIÓN Y DESARROLLO DE UN SISTEMA BIOTECNOLÓGICO INTEGRAL DE LIMPIEZA Y DESINFECCIÓN DE PATÓGENOS CON APLICACIÓN EN SEGURIDAD ALIMENTARIA Y ÁMBITO CLÍNICO (INNEST/2021/7)

Entity where project took place: Instituto de Agroquímica y Tecnología de Alimentos

Type of entity: State agency

City of entity: Valencian Community, Spain

Start-End date: 01/03/2021 - 31/08/2023

Total amount: 122.249,42 €

Applicant's contribution: Desarrollo de las herramientas bioinformáticas, identificación y clonación de los genes de endolisinas, así como la caracterización bioquímica mediante ensayos enzimáticos, además de participar en la escritura de los artículos y los informes.

2 Name of the project: Extremozymes for wood based building blocks: From pulp mill to board and insulation products (WoodZymes)

Entity where project took place: Instituto de Agroquímica y Tecnología de Alimentos

Type of entity: State agency

Funding entity or bodies:

BBI-RIA (Bio-based Industries Research and Innovation action)

Type of entity: Fondos Europeos

Start-End date: 01/06/2018 - 31/05/2021

Total amount: 162.510 €

Applicant's contribution: Desarrollo de la parte bioinformática para el cribado y selección de posibles xilanasas extremófilas que se ajustasen a las condiciones requeridas por la industria maderera/paperera. Diseño y clonación, de las secuencias seleccionadas, así como su expresión, purificación y caracterización en organismos recombinantes.

3 Name of the project: Production of new enzymes, enzyme conjugates and bioactive compounds by synthetic biology for food applications

Entity where project took place: Instituto de Agroquímica y Tecnología de los Alimentos



Name principal investigator (PI, Co-PI...): Maria José Fabra; Julio Polaina

Nº of researchers: 3

Funding entity or bodies:

MINECO

Type of entity: State agency

Start-End date: 20/12/2016 - 31/05/2019

Total amount: 151.250 €

Applicant's contribution: En este proyecto me encargué de la búsqueda, síntesis y diseño de enzimas para su inmovilización en diferentes soportes basados en biomateriales. Además he participado en la redacción de informes de proyecto, reuniones y artículos científicos.

4 Name of the project: INDUSTRIAL APPLICATIONS OF MARINE ENZYMES: INNOVATIVE SCREENING AND EXPRESSION PLATFORMS TO DISCOVER AND USE FUNCTIONAL PROTEIN DIVERSITY FROM THE SEA

Entity where project took place: Instituto de Agroquímica y Tecnología de Alimentos

Type of entity: State agency

Funding entity or bodies:

COMISION EUROPEA

Type of entity: Public Research Body

Start-End date: 01/04/2015 - 31/03/2019

Applicant's contribution: Durante este proyecto participé en la clonación y caracterización de una galactosidasa de origen marino, TmLac, de Thermotoga maritima. Realicé el estudio de caracterización, así como tipos de inmovilización. Además participé en el desarrollo de un sistema de pegado de compuestos bioactivos sobre cutícula de Artemia. También he participado en las reuniones de proyecto, redacción de informes y memorias, así como la escritura de los artículos científicos.

5 Name of the project: GENERATION OF STATE-OF-THE-ART ENZYMES FOR FOOD APPLICATIONS THROUGH PROTEIN ENGINEERING

Entity where project took place: Instituto de Agroquímica y Tecnología de Alimentos

Type of entity: State agency

Name principal investigator (PI, Co-PI...): Julio Polaina Molina

Funding entity or bodies:

MINISTERIO DE ECONOMIA Y COMPETITIVIDAD

Type of entity: State agency

City funding entity: Spain

Start-End date: 01/01/2014 - 31/12/2016

Applicant's contribution: En este proyecto participé en el equipo de trabajo desarrollando las técnicas de biología molecular y de clonación requeridas para la clonación de las enzimas, como por ejemplo la glucosa oxidasa. También participe en la escritura de informes y reports, así como artículos científicos.

6 Name of the project: MEJORA FUNCIONAL Y PRODUCCION DE GLICOSIDASAS PERTENECIENTES A LAS FAMILIAS GH1, GH2, GH3 Y GH32 Y SU EMPLEO PARA LA PRODUCCION DE OLIGOSACARIDOS PREBIOTICOS Y BIOETANOL,

Entity where project took place: Instituto de Agroquímica y Tecnología de Alimentos

Type of entity: State agency

Name principal investigator (PI, Co-PI...): Julio Polaina Molina

Funding entity or bodies:

MINISTERIO DE ECONOMIA Y COMPETITIVIDAD

Type of entity: State agency

City funding entity: Spain

Start-End date: 01/01/2011 - 30/06/2014

Applicant's contribution: En este proyecto formé parte del equipo de trabajo realizando tareas más básicas de investigación y desarrollo de nuevos enzimas, así como contribuí a experimentos que ya estaban en marcha en el grupo de investigación. Invertí parte ese proyecto en formación. Acababa de recibir una beca JAEpredoc y una FPU para el desarrollo de mi doctorado. No obstante, poco a poco adquirí



experiencia y al final del proyecto ya fui capaz de llevar experimentalmente una línea de investigación que se convirtió en el germen de la tesis doctoral.

Results

Industrial and intellectual property

- 1 Title registered industrial property:** EP20382849.6
Inventors/authors/obtainers: Julio Polaina Molina; David Talens Perales; Paloma Sánchez Torres
Entity holder of rights: CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC)
N° of application: 300381562
Country of inscription: Spain
Date of register: 25/09/2020
- 2 Title registered industrial property:** PROCEDIMIENTO DE SÍNTESIS BIOENZIMÁTICA DE FRUCTOOLIGOSACÁRIDOS
Inventors/authors/obtainers: Julia Victoria Marín Navarro; David Talens Perales; Álvaro Lafraya Aguado; Julio Polaina Molina
Entity holder of rights: Consejo Superior de Investigaciones Científicas
N° of application: P201431747
Country of inscription: Spain
Date of register: 25/11/2014

Scientific and technological activities

Scientific production

- 1 H index:** 12
Date of application: 2022
Fuente de Índice H: GOOGLE SCHOLAR
- 2 H index:** 11
Date of application: 16/12/2022
Fuente de Índice H: SCOPUS

Publications, scientific and technical documents

- 1 Talens-Perales, David; Nicolau-Sanus, Maria; Polaina, Julio; Daros, Jose-Antonio.** Expression of an extremophilic xylanase in *Nicotiana benthamiana* and its use for the production of prebiotic xylooligosaccharides. SCIENTIFIC REPORTS. 12, 2022. ISSN 2045-2322
DOI: 10.1038/s41598-022-19774-5
PMID: 36131073
Type of production: Scientific paper
Relevant results: En este artículo científico se describe la expresión de una Xilanasas hipertermófila en plantas con actividad significativa a pH 10.5 y 90°C. Esta enzima permite la degradación de hemicelulosas y la síntesis de xilooligosacáridos con carácter prebiótico a partir de restos vegetales, xilano, etc. La principal ventaja de la producción en plantas es la obtención de una proteína pura mediante un proceso de extracción sencillo y barato.

La contribución en este artículo ha sido la caracterización de la enzima, los ensayos de actividad y obtención de los xilooligosacáridos, así como la redacción del manuscrito.

- 2** Almeida N; Meyer V; Burnet A; Boucher J; Talens-Perales D; Pereira S; Ihalainen P; Levée T; Polaina J; Petit-Conil M; Camarero S; Pinto P. Use of a Novel Extremophilic Xylanase for an Environmentally Friendly Industrial Bleaching of Kraft Pulps. *International journal of molecular sciences*. 23, 2022.
DOI: 10.3390/ijms232113423
PMID: 36362210
Type of production: Scientific paper
Relevant results: En este artículo se describe el uso de la xilanasa Xyn11, descrita por el grupo previamente (Talens-Perales et al., 2021), para disminuir el uso de dióxido de cloro en el proceso del blanqueamiento de la pulpa de papel. Logrando una disminución de un 25%. La enzima se ha producido a gran escala y se ha testado por empresas papeleras (RAIZ-NAVIGATOR). Mi contribución en este trabajo ha sido caracteriza la enzima producida a nivel industrial, asesorar a las empresas de la dosificación y condiciones de uso de la enzima, y revisión del manuscrito.
- 3** David Talens Perales; Elena Jiménez Ortega; Paloma Sánchez Torres; Julia Sanz Aparicio; Julio Polaina Molina. Phylogenetic, functional and structural characterization of a GH10 xylanase active at extreme conditions of temperature and alkalinity. *Computational and Structural Biotechnology Journa*. 19, pp. 2676 - 2686. ELSEVIER, 2021.
Type of production: Scientific paper
Format: Journal
Corresponding author: No
Impact source: ISI
Category: Science Edition - BIOCHEMISTRY & MOLECULAR BIOLOGY
Impact index in year of publication: 6,01
Journal in the top 25%: Yes
- 4** Maria Jose Fabra; David Talens Perales; Adrián Román Sarmiento; Amparo López Rubio; Julio Polaina Molina. Effect of biopolymer matrices on lactose hydrolysis by enzymatically active hydrogel and aerogels loaded with β -galactosidase nanoflowers. *Food Hydrocolloids*. 111, pp. 10622. ELSEVIER, 2021.
Type of production: Scientific paper
Format: Journal
Corresponding author: No
Impact source: ISI
Category: Science Edition - FOOD SCIENCE & TECHNOLOGY
Impact index in year of publication: 4.728
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 139
Relevant publication: No
- 5** Talens-Perales, David; Jose Fabra, Maria; Martinez-Argente, Luis; Marin-Navarro, Julia; Polaina, Julio. Recyclable thermophilic hybrid protein-inorganic nanoflowers for the hydrolysis of milk lactose. *INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES*. 151, 2020. ISSN 0141-8130
DOI: 10.1016/j.ijbiomac.2020.02.115
PMID: 32061698
Type of production: Scientific paper
Impact source: ISI
Category: Science Edition - BIOCHEMISTRY & MOLECULAR BIOLOGY
Impact index in year of publication: 5.162
- 6** Jose Fabra, Maria; Seba-Piera, Isabel; Talens-Perales, David; Lopez-Rubio, Amparo; Polaina, Julio; Marin-Navarro, Julia. Revalorization of cellulosic wastes from *Posidonia oceanica* and *Arundo donax* as catalytic materials based on affinity immobilization of an engineered beta-galactosidase. *FOOD HYDROCOLLOIDS*. 103, 2020. ISSN 0268-005X

DOI: 10.1016/j.foodhyd.2019.105633

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 7.053

Category: Science Edition - FOOD SCIENCE & TECHNOLOGY

Journal in the top 25%: Yes

- 7** Míguez Amil S.; Jiménez-Ortega E.; Ramírez-Escudero M.; Talens-Perales D.; Marín-Navarro J.; Polaina J.; Sanz-Aparicio J.; Fernandez-Leiro R.. The cryo-EM Structure of Thermotoga maritima β -Galactosidase: Quaternary Structure Guides Protein Engineering. ACS Chemical Biology. 15, pp. 179 - 188. 2020. ISSN 15548929

DOI: 10.1021/acscchembio.9b00752

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 4.43

Source of citations: SCOPUS

Format: Journal

Category: Science Edition - BIOCHEMISTRY & MOLECULAR BIOLOGY

Citations: 2

- 8** Fabra M.; Pérez-Bassart Z.; Talens-Perales D.; Martínez-Sanz M.; López-Rubio A.; Marín-Navarro J.; Polaina J.. Matryoshka enzyme encapsulation: Development of zymoactive hydrogel particles with efficient lactose hydrolysis capability. Food Hydrocolloids. 96, pp. 171 - 177. 2019. ISSN 0268005X

DOI: 10.1016/j.foodhyd.2019.05.026

Type of production: Scientific paper

Impact source: SCOPUS

Impact index in year of publication: 7.053

Source of citations: SCOPUS

Format: Journal

Category: Science Edition - FOOD SCIENCE & TECHNOLOGY

Journal in the top 25%: Yes

Citations: 5

- 9** Martínez-Bailén M.; Jiménez-Ortega E.; Carmona A.; Robina I.; Sanz-Aparicio J.; Talens-Perales D.; Polaina J.; Matassini C.; Cardona F.; Moreno-Vargas A.. Structural basis of the inhibition of GH1 β -glucosidases by multivalent pyrrolidine iminosugars. Bioorganic Chemistry. 89, 2019. ISSN 00452068

DOI: 10.1016/j.bioorg.2019.103026

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 4.84

Source of citations: SCOPUS

Format: Journal

Category: Science Edition - BIOCHEMISTRY & MOLECULAR BIOLOGY

Journal in the top 25%: Yes

Citations: 4

- 10** Estevinho B.; Samaniego N.; Talens-Perales D.; Fabra M.; López-Rubio A.; Polaina J.; Marín-Navarro J.. Development of enzymatically-active bacterial cellulose membranes through stable immobilization of an engineered β -galactosidase. International Journal of Biological Macromolecules. 115, pp. 476 - 482. 2018. ISSN 01418130

DOI: 10.1016/j.ijbiomac.2018.04.081

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 5.162

Source of citations: SCOPUS

Format: Journal

Category: Science Edition - BIOCHEMISTRY & MOLECULAR BIOLOGY

Journal in the top 25%: Yes

Citations: 10



- 11** Talens-Perales D.; Marín-Navarro J.; Garrido D.; Almansa E.; Polaina J.. Fixation of bioactive compounds to the cuticle of *Artemia*. *Aquaculture*. 474, pp. 95 - 100. 2017. ISSN 00448486
DOI: 10.1016/j.aquaculture.2017.03.044
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 3.224
Source of citations: SCOPUS
Format: Journal
Category: Science Edition - MARINE & FRESHWATER BIOLOGY
Citations: 4
- 12** Talens-Perales D.; Górska A.; Huson D.; Polaina J.; Marín-Navarro J.. Analysis of domain architecture and phylogenetics of family 2 glycoside hydrolases (GH2). *PLoS ONE*. 11, 2016.
DOI: 10.1371/journal.pone.0168035
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 2.740
Source of citations: SCOPUS
Format: Journal
Category: Science Edition - MULTIDISCIPLINARY SCIENCES
Journal in the top 25%: Yes
Citations: 9
- 13** Talens-Perales D.; Polaina J.; Marín-Navarro J.. Structural Dissection of the Active Site of *Thermotoga maritima* β -Galactosidase Identifies Key Residues for Transglycosylating Activity. *Journal of Agricultural and Food Chemistry*. 64, pp. 2917 - 2924. 2016. ISSN 00218561
DOI: 10.1021/acs.jafc.6b00222
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 3.154
Source of citations: SCOPUS
Format: Journal
Category: Science Edition - FOOD SCIENCE & TECHNOLOGY
Journal in the top 25%: Yes
Citations: 15
- 14** Marín-Navarro J.; Roupain N.; Talens-Perales D.; Polaina J.. Identification and structural analysis of amino acid substitutions that increase the stability and activity of *Aspergillus niger* glucose oxidase. *PLoS ONE*. 10, 2015.
DOI: 10.1371/journal.pone.0144289
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 2.740
Source of citations: SCOPUS
Format: Journal
Category: Science Edition - MULTIDISCIPLINARY SCIENCES
Citations: 12
- 15** Marín-Navarro J.; Talens-Perales D.; Polaina J.. One-pot production of fructooligosaccharides by a *Saccharomyces cerevisiae* strain expressing an engineered invertase. *Applied Microbiology and Biotechnology*. 99, pp. 2549 - 2555. 2015. ISSN 01757598
DOI: 10.1007/s00253-014-6312-4
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 3.376
Source of citations: SCOPUS
Format: Journal
Category: Science Edition - BIOTECHNOLOGY & APPLIED MICROBIOLOGY
Journal in the top 25%: Yes
Citations: 8



- 16** Marín-Navarro J.; Talens-Perales D.; Oude-Vrielink A.; Cañada F.J.; Polaina J.. Immobilization of thermostable β -galactosidase on epoxy support and its use for lactose hydrolysis and galactooligosaccharides biosynthesis. *World Journal of Microbiology and Biotechnology*. 30, pp. 989 - 998. 2014. ISSN 09593993
DOI: 10.1007/s11274-013-1517-8
Type of production: Scientific paper
Source of citations: SCOPUS
Format: Journal
Citations: 31
- 17** Talens-Perales D.; Polaina J.; Marín-Navarro J.. Enzyme engineering for oligosaccharide biosynthesis. *Frontier Discoveries and Innovations in Interdisciplinary Microbiology*. pp. 9 - 31. 2015. ISBN 9788132226093
DOI: 10.1007/978-81-322-2610-9_2
Type of production: Book chapter
Source of citations: SCOPUS
Format: Book
Citations: 8
- 18** Talens-Perales D.; Marín-Navarro J.; Polaina J.. Enzymes: Functions and Characteristics. *Encyclopedia of Food and Health*. pp. 532 - 538. 2015. ISBN 9780123849472
DOI: 10.1016/B978-0-12-384947-2.00256-7
Type of production: Book chapter
Source of citations: SCOPUS
Format: Book
Citations: 2

Works submitted to national or international conferences

- 1** **Title of the work:** Expression of an extremophilic xylanase in *Nicotiana benthamiana* and its use for the production of prebiotic xylooligosaccharides
Name of the conference: 5th Conference of the International Society of Plant Molecular Farming (ISPMF 2022)
City of event: Roma, Italy
Date of event: 26/09/2022
Organising entity: International Society of Plant Molecular Farming
David Talens; Maria Nicolau Sanus; Julio Polaina; Jose Antonio Darós. "Expression of an extremophilic xylanase in *Nicotiana benthamiana* and its use for the production of prebiotic xylooligosaccharides."
- 2** **Title of the work:** Extremozymes for wood-based building blocks: from pulp mill to board and insulation products – WoodZymes European Project
Name of the conference: Bioeconomy Congress
Corresponding author: No
City of event: Stuttgart, Stuttgart, Germany
Date of event: 21/09/2020
Organising entity: University of Hohenheim
1; D. Rodriguez Escribano; A.T. Martínez; G. Marqués; J Recoret; D Talens; J Polaina; P Inhalainen; V Meyer; M Petit-Conil; D Da Silva Perez; G Deroubaix; M Lecourt; N Almeida; S Pereira; P Pinto; R Belaila; R Perrin; M Perez Boada. "Extremozymes for wood-based building blocks: from pulp mill to board and insulation products – WoodZymes European Project".
- 3** **Title of the work:** Enzymatically active (lactose hydrolyzing) biopolymers for food applications
Name of the conference: The 20th Gums & Stabilisers Conference for the Food Industry
Corresponding author: No
City of event: San Sebastian, Basque Country, Spain
Date of event: 11/06/2019
End date: 11/06/2019
Organising entity: Universidad del País Vasco
Type of entity: University



City organizing entity: San Sebastian, Basque Country, Spain

Maria Jose Fabra Rovira; Berta Estevinho; Isabel Seba; David Talens Perales; Julia Marín Navarro; Amparo López Rubio; Julio Polaina Molina.

4 Title of the work: Coupled hydrolysis-fermentation strategies for the production of ethanol from cellulosic substrates

City of event: Jaén, Spain

Date of event: 2013

Organising entity: Bióptima 2013 en colaboración con la Sociedad Iberoamericana para el Desarrollo de las Biorrefinerías (SIADDEB) y la Universidad de Jaén

City organizing entity: Spain

Polaina J.; Marín-Navarro J.; Gurgu L.; Talens-Perales D.II Congreso Iberoame, (Spain): DIPUTACIÓN PROVINCIAL DE JAÉN, 2013, Instituto de Estudios Giennenses,

5 Title of the work: Structural dissection of the catalytic site of *Thermotoga maritima* β -galactosidase to determine key residues in the synthesis of prebiotic galacto-oligosaccharides.

City of event: Kallithea,

Date of event: 2013

Organising entity: "LeanGreenFood" FP7-PEOPLE-ITN 2008 Marie Curie TÍTULO DEL CONGRESO: Enzymes in Sustainable Food Production, A Lean Green Approach ÁMBITO (Nacional/internacional): Internacional DATOS DE LA PUBLICACIÓN

City organizing entity: Greece

Talens-Perales D.; Marín-Navarro J.; Polaina J. Enzymes in Sustainable, (Greece):

6 Title of the work: Structural modification of enzymes for immobilization on solid supports

City of event: Kallithea,

Date of event: 2013

Organising entity: "LeanGreenFood" FP7-PEOPLE-ITN 2008 Marie Curie TÍTULO DEL CONGRESO: Enzymes in Sustainable Food Production, A Lean Green Approach ÁMBITO (Nacional/internacional): Internacional DATOS DE LA PUBLICACIÓN

City organizing entity: Greece

/ES: Tumolo R.; Talens-Perales D.; Marín-Navarro J.; Polaina J. Enzymes in Sustainable, (Greece):

7 Title of the work: Use of immobilized *Thermotoga maritima* β -galactosidase for the generation of lactose-free products and galacto-oligosaccharides.

City of event: Sevilla, Spain

Date of event: 2012

Organising entity: IUBMB-FEBS

Talens-Perales D.; Marín-Navarro J.; Polaina J. Wiley Online Library,

Other dissemination activities

1 Title of the work: VISITAS GUIADAS - Alumnos de la Escuela de Verano Nau Jove de la UV

Date of event: 12/07/2021

2 Title of the work: VISITAS GUIADAS - Alumnos del Grado de Bioquímica y Ciencia Biomédicas de la Universidad de Valencia

Date of event: 21/10/2019



- 3 Title of the work:** VISITAS GUIADAS - Alumnos del Colegio Patronato de la Juventud Obrera
Date of event: 17/12/2018
- 4 Title of the work:** VISITAS GUIADAS ConcienciaSé España
Date of event: 09/01/2018
- 5 Title of the work:** VISITAS GUIADAS - Alumnos de 2º Bachiller del Colegio La Purísima
Date of event: 15/12/2016
- 6 Title of the work:** CICLOS DE CONFERENCIAS Y JORNADAS INFORMATIVAS II Jornadas de Estudiantes Predoctorales
Date of event: 03/07/2015
"Ingeniería molecular de β -galactosidasa: inmovilización y mejora de su capacidad biosintética".
- 7 Title of the work:** CICLOS DE CONFERENCIAS Y JORNADAS INFORMATIVAS 1as Jornadas de Estudiantes Predoctorales IATA-CSIC
Date of event: 04/07/2014
"Ingeniería molecular de β -galactosidasa: inmovilización y mejora de su capacidad biosintética".
- 8 Title of the work:** Desarrollo de sistemas enzimáticos para la hidrólisis de lactosa y la síntesis de galactooligosacáridos prebióticos
Date of event: 24/05/2013

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

Committee title: Comisión de Divulgación del Instituto de Agroquímica y Tecnología de los Alimentos
Affiliation entity: Instituto de Agroquímica y Tecnología de Alimentos
Type of entity: State agency
Start date: 2019

Organization of R&D activities

- 1 Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2019
- 2 Title of the activity:** Ingeniería molecular de enzimas en 3D y aplicaciones industriales
Type of activity: Seminario
Geographical area: Regional
Convening entity: Universidad Católica de Valencia San Vicente Mártir
Type of entity: University
City convening entity: Spain
Start date: 2019



- 3** **Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2018
- 4** **Title of the activity:** Ingeniería molecular de enzimas en 3D y aplicaciones industriales
Type of activity: Seminario **Geographical area:** Regional
Convening entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
City convening entity: Spain
Start date: 2018
- 5** **Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2017
- 6** **Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2016
- 7** **Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2015
- 8** **Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2014
- 9** **Title of the activity:** Expociencia
Convening entity: FUNDACION PARQUE CIENTIFICO UNIVERSITAT DE VALENCIA DE LA COMUNITAT VALENCIANA
Start date: 2013

R&D management

Name of the activity: EXPOCIENCIA

Type of management: Management of R&D&I actions and projects

Performed tasks: Organización y actividades de coordinación en el IATA-CSIC

Entity: PARC CIENTÍFIC DE LA UNIVERSITAT DE VALÈNCIA **Type of entity:** University Centres and Structures and Associated Bodies



Other achievements

Stays in public or private R&D centres

Entity: Universidad de Tübingen
City of entity: Tübingen, Tübingen, Germany
Start date: 04/09/2015 **Duration:** 3 months
Goals of the stay: Doctorate

Obtained grants and scholarships

- 1 Name of the grant:** Beca de Formación de Profesorado Universitario (FPU)
Aims: Pre-doctoral
Awarding entity: Ministerio de Educacion, Cultura y Deporte **Type of entity:** State agency
Conferral date: 29/04/2013
End date: 31/08/2016
Entity where activity was carried out: Instituto de Agroquímica y Tecnología de Alimentos
Faculty, institute or centre: Laboratorio de Estructura y Función de Enzimas
- 2 Name of the grant:** Ayuda Estancias Breves
Aims: Pre-doctoral
Awarding entity: Ministerio de Educación, Cultura y Deporte **Type of entity:** State agency
Conferral date: 09/12/2014 **Duration:** 3 months
End date: 04/12/2015
Entity where activity was carried out: Universidad de Tübinga, Alemania
Faculty, institute or centre: Algorithms in Bioinformatics Laboratory
- 3 Name of the grant:** JAEPre
Aims: Pre-doctoral
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Conferral date: 01/09/2011
End date: 29/04/2013
Entity where activity was carried out: Instituto de Agroquímica y Tecnología de Alimentos
Faculty, institute or centre: Laboratorio de Estructura y Función de Enzimas
- 4 Name of the grant:** Beca de colaboración
Aims: Pre-doctoral
Awarding entity: Ministerio de Educación y Cultura **Type of entity:** State agency
Conferral date: 2010
End date: 2011
Entity where activity was carried out: FUNDACIÓN GENERAL DE LA UNIVERSITAT DE VALÈNCIA
Faculty, institute or centre: Facultad de Farmacia



- 5** **Name of the grant:** Beca JAEintro
Aims: Introducción a la investigación
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Conferral date: 01/07/2010
End date: 30/09/2010
Entity where activity was carried out: Centro de Investigación Príncipe Felipe
- 6** **Name of the grant:** Beca JAEintro
Aims: Introducción a la investigación
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Conferral date: 01/07/2009
End date: 30/09/2009
Entity where activity was carried out: Instituto de Agroquímica y Tecnología de Alimentos
Faculty, institute or centre: Laboratorio de Estructura y Función de Enzimas

Prizes, mentions and distinctions

- 1** **Description:** Premio Nacional de fotografía FOTCIENCIA18
Awarding entity: Fundación Española para la Ciencia y la Tecnología **Type of entity:** Fundación
Conferral date: 2022
- 2** **Description:** Premio Extraordinario de Docotorado
Awarding entity: Universitat de València **Type of entity:** University
Conferral date: 25/01/2019
- 3** **Description:** Premio al Mejor Trabajo de Fin de Máster
Awarding entity: Universidad Católica de Valencia San Vicente Mártir **Type of entity:** University
Conferral date: 27/04/2018
- 4** **Description:** Premio nacional de fotografía FOTCIENCIA17
Awarding entity: Fundación Española para la Ciencia y la Tecnología **Type of entity:** Fundación

Periods of research activity

- Nº of recognized periods:** 1
Certifying entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional
City certifying entity: Spain
Date of recognition: 23/05/2022



Obtained accreditations/recognitions

- 1** **Description:** Acreditación Profesor Contratado Doctor
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional de la Calidad y Acreditación
Date of recognition: 22/03/2021

- 2** **Description:** Acreditación Profesor de Universidad Privada
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional de la Calidad y Acreditación
Date of recognition: 22/03/2021

- 3** **Description:** Acreditación Profesor Ayudante Doctor
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional de la Calidad y Acreditación
Date of recognition: 19/07/2017