



Gregorio Barba Espín

Generated from: Editor CVN de FECYT

Date of document: 06/03/2020

v 1.4.0

586043cb728328e1b96a00740544e0fc

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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.

I am an enthusiastic researcher in the fields of agronomy and biotechnology, with focus on the role of antioxidant metabolism on plant performance. Since 2008, I achieved a substantial scientific output of 30 peer-reviewed articles (SCI index), 30 communications to international conferences, 2 book chapters, having been cited 800 times in total (5% of self-citations), and reaching an h-index of 16 (ISI). Twenty-four of my 20 SCI publications are classified into the Q1 (and 4 into the Q2). Moreover, I am the main inventor of two European patent applications and I have participated in 8 research projects.

Between 2008-2011, I conducted and defended my PhD Thesis “Cum Laude” at the University of Murcia (Spain), working on the role of the antioxidant metabolism on germination and plant response to stress. My research provided new insights that link reactive oxygen species signaling with antioxidant metabolism, phytohormones and reserve mobilization, which contributed to the understanding of the germination process. During this time, I conducted research stays at the University of Leeds and at Bayer CropScience (Lyon), which helped me to fulfill the objectives of my Thesis proposal.

My international postdoctoral activity accounts for over 67 months in Universities of Denmark. Firstly, I obtained a postdoctoral fellowship from the Carlsberg Foundation (2012-2013, 20 months) to work at the Technical University of Denmark. The main aim of this period was the proteomic study of in vitro maintained barley aleurone layer, in order to advance in the understanding of the aleurone functions during germination.

In 2014, I began a two-year contract in the Department of Plant and Environmental Sciences, at the University of Copenhagen, as a part of innovation consortium with several leading Danish companies in the food and agricultural sector and Universities. As a result, in addition to acquiring large expertise in crop field management, I filled 2 patent applications in 2016 and 2017, in which I am the main inventor.

Subsequently, I promoted to Assistant Professor at the University of Copenhagen, as the principal investigator of a project funded by the Danish Council for Independent Research (309,000€, 2016–2018), in which *Agrobacterium rhizogenes*-mediated transformation of black carrot was conducted for the first time, obtaining high-yield hairy root cultures able to accumulate anthocyanin.

Currently (June 2018-present), I conduct my second project as PI at CEBAS-CSIC (Murcia), funded by the Spanish “Fundación Séneca”, which I obtained with the second highest score among the grantees. Under the title “Old germplasm for new needs: Generating inbred lines of anthocyanin rich black carrot adapted to warm and dry climates”, the project combines two distinct breeding approaches aiming to introduce black carrot as a healthy and resilient crop into warm climates.



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.

I achieved a substantial scientific output of 30 peer-reviewed articles (SCI index), 30 communications to international conferences, 3 book chapters, having been cited 800 times in total (5% of self-citations), and reaching an h-index of 16 (ISI). Twenty-four of my 30 SCI publications are classified into the Q1 (and 4 into the Q2). Moreover, I am the main inventor of two European patent applications and I have participated in 8 research projects



Gregorio Barba Espín

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 Gender: **Male**
 Nationality: **Spain**
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 Aut. region/reg. of birth: **Region of Murcia**
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Previous positions and activities

	Employing entity	Professional category	Start date
1	University of Copenhagen	Assistant professor	10/10/2016
2	University of Copenhagen	Postdoctoral researcher	01/08/2014
3	Technical University of Denmark (DTU)	Postdoctoral researcher	01/01/2012
4	Centro de Edafología y Biología Aplicada del Segura	PhD student	01/01/2008
5	University of Leeds	PhD visiting student	30/01/2011
6	UMR5240 CNRS-Bayer CropScience, Joint Laboratory	PhD visiting student	04/06/2009
7	Universidad de Murcia	Internship	26/09/2006

1 **Employing entity:** University of Copenhagen **Type of entity:** University
Professional category: Assistant professor
Start-End date: 10/10/2016 - 31/05/2018 **Duration:** 1 year - 7 months - 20 days

2 **Employing entity:** University of Copenhagen **Type of entity:** University
Professional category: Postdoctoral researcher
Start-End date: 01/08/2014 - 09/10/2016 **Duration:** 2 years - 2 months - 9 days

Type of contract: Temporary employment contract

Performed tasks: In close collaboration with several danish companies, I examined the effects of biotic and abiotic elicitors on carrot pigment productions.



- 3** **Employing entity:** Technical University of Denmark (DTU) **Type of entity:** University
Department: EPC Systems Biology. Enzyme and Protein Chemistry
City employing entity: Kgs. Lyngby, Denmark
Professional category: Postdoctoral researcher
Start-End date: 01/01/2012 - 08/09/2013 **Duration:** 1 year - 8 months - 8 days
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 240300 - Biochemistry; 241502 - Molecular biology of plants; 310110 - Plant growth regulators
Performed tasks: I acquired large experience in high throughput proteomics techniques. I worked on the protein secretory machinery of the barley aleurone layer, as an approach to understand its role in the germination process
- 4** **Employing entity:** Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency
Professional category: PhD student **Educational Management (Yes/No):** Yes
Start-End date: 01/01/2008 - 31/12/2011 **Duration:** 4 years
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Primary (UNESCO code): 230102 - Biochemical analysis; 230209 - Enzymology; 230227 - Proteins; 241714 - Plant genetics; 241719 - Plant physiology; 310110 - Plant growth regulators; 310311 - Seeds
Performed tasks: I worked on pea plant (*Pisum sativum*) physiology, in greenhouse and climate chamber experiments, with special focus on antioxidant metabolism during seed germination and plant growth, in response to abiotic stresses; I gained experience on quantitative genetics, proteomics, enzyme kinetics and antioxidant measurements, among others
Field of management activity: Public Research Body
- 5** **Employing entity:** University of Leeds **Type of entity:** University
Department: Institute of Integrative and Comparative Biology
City employing entity: Leeds, United Kingdom
Professional category: PhD visiting student
Start-End date: 30/01/2011 - 01/04/2011 **Duration:** 2 months - 3 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 240300 - Biochemistry; 241700 - Plant Biology (Botany)
Field of management activity: University
- 6** **Employing entity:** UMR5240 CNRS-Bayer CropScience, Joint Laboratory
City employing entity: Lion, France
Professional category: PhD visiting student
Start-End date: 04/06/2009 - 28/07/2009 **Duration:** 1 month - 25 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Primary (UNESCO code): 230227 - Proteins; 241715 - Plant growth; 310311 - Seeds
Secondary (UNESCO code): 310701 - Breeding
- 7** **Employing entity:** Universidad de Murcia **Type of entity:** University
Department: Departamento de Genética y Microbiología
City employing entity: Murcia, Region of Murcia, Spain
Professional category: Internship
Start-End date: 26/09/2006 - 12/12/2007 **Duration:** 1 year - 2 months - 16 days



Type of contract: Ayudante de Investigación

Primary (UNESCO code): 230418 - Polypeptides and proteins; 241410 - Mycology (yeasts); 241501 - Molecular biology of micro-organisms

Performed tasks: My research covered different basic and applied facets of molecular biology and biotechnology, such as: regulation of gene expression in prokaryotes and eukaryotes; cellular metabolism, signalling pathways, adaptation and apoptosis.

Field of management activity: University



Education

University education

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

- 1 **University degree:** Tesis de Licenciatura
Name of qualification: Tesis de Licenciatura
City degree awarding entity: Murcia, Region of Murcia, Spain
Degree awarding entity: Universidad de Murcia **Type of entity:** University
Date of qualification: 20/12/2007

- 2 **University degree:** Higher degree
Name of qualification: Licenciado en Biología
City degree awarding entity: Murcia, Region of Murcia, Spain
Degree awarding entity: Universidad de Murcia **Type of entity:** University
Date of qualification: 25/09/2006

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Biología Molecular y Biotecnología
Degree awarding entity: Universidad de Murcia **Type of entity:** University
City degree awarding entity: Murcia, Region of Murcia, Spain
Date of degree: 02/12/2011
DEA awarding entity: Universidad de Murcia
Date DEA was awarded: 06/10/2008
European doctorate: Yes **Date of certificate:** 02/12/2011
Thesis title: Funciones del Metabolismo Redox en la Germinación y la Respuesta a Estrés Salino en Plantas de Guisante (*Pisum sativum*)
Thesis director: José Antonio Hernández Cortés
Thesis co-director: Pedro Díaz Vivancos
Obtained qualification: Sobresaliente Cum Laudem

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

- 1 **Training title:** Introduction to University Pedagogy
Awarding entity: University of Copenhagen **Type of entity:** University
End date: 2016 **Duration in hours:** 30 hours

- 2 **Training title:** Introduction to external funding for postdocs
Awarding entity: University of Copenhagen **Type of entity:** University
End date: 29/09/2015 **Duration in hours:** 6 hours



- 3 Training title:** Prevención de Riesgos Laborales en la Utilización de Productos Químicos
City awarding entity: Valencia, Valencian Community, Spain
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
End date: 30/08/2010 **Duration in hours:** 4 hours

- 4 Training title:** Bioinformática para usuarios (IV Workshop BIOMUR)
Awarding entity: Universidad de Murcia **Type of entity:** University
End date: 10/10/2008 **Duration in hours:** 15 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Danish		B1	B1	B1	B1
French		B2	B1	B1	B1
English		C1	C1	C1	C1
Spanish		C1	C1	C1	C1

Teaching experience

General teaching experience

- 1 Type of teaching:** In person theory
University degree: Master oficial de Productividad y Sanidad Vegetal: Avances Fisiológicos y Biotecnológicos
Frequency of the activity: 1
Start date: 05/2011 **End date:** 05/2011
End date: 05/2011 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 2
Entity: Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency
- 2 Type of teaching:** Laboratory work
University degree: Master oficial de Productividad y Sanidad Vegetal: Avances Fisiológicos y Biotecnológicos
Frequency of the activity: 1
Start date: 05/2010 **End date:** 05/2010
End date: 05/2010 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 2
Entity: Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency
- 3 Name of the course:** Experimental Plant Science
University degree: Master Course
End date: 11/2015
Entity: University of Copenhagen **Type of entity:** University
Faculty, institute or centre: Department of Plant and Environmental Sciences



- 4** **Name of the course:** Experimental Plant Science
University degree: Master Course
End date: 11/2014
Entity: University of Copenhagen **Type of entity:** University
Faculty, institute or centre: Department of Plant and Environmental Sciences

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Evaluación de sistemas de cultivo in vitro de raíces pilosas
Type of project: End of course project
Entity: Universidad de Murcia **Type of entity:** University
City of entity: Murcia,
Student: Carlos Martínez Vasallo
Date of reading: 05/2019
- 2** **Project title:** Natural transformation and plant regeneration to enhance anthocyanin content of black carrot
Type of project: Minor thesis
Co-director of thesis: Lütken, Henrik; Barba Espín, Gregorio
Entity: University of Copenhagen
City of entity: Copenhagen, Denmark
Student: Mikkel Kok Jensen
Date of reading: 29/09/2017
- 3** **Project title:** Optimising secondary metabolite production in hairy root cultures of black carrot
Type of project: Minor thesis
Entity: University of Copenhagen
City of entity: Copenhagen, Denmark
Student: Shih-Ti Chen
Date of reading: 18/09/2017
- 4** **Project title:** The development of field and postharvest elicitation methods to increase the pigment content of Beta vulgaris var. vulgaris for the production of food additives
Type of project: Minor thesis
Co-director of thesis: Müller, Renate; Barba-Espin, Gregorio
Entity: University of Copenhagen **Type of entity:** University
Student: Stephan Glied
Date of reading: 30/01/2017
- 5** **Project title:** Screening of phytohormone combinations favouring nodule formation in hairy root cultures of carrot
Type of project: End of course project
Co-director of thesis: Lütken, Henrik; Barba Espin, Gregorio
Entity: University of Copenhagen
Student: Mikkel Kok Jensen
Date of reading: 23/01/2017
- 6** **Project title:** Abiotic elicitation methods for enhancing pigment contents in two carrot cultivars (Daucus carota cv. Deep Purple and Karotan)
Type of project: End of course project
Co-director of thesis: Barba-Espin, Gregorio; Müller, Renate
Entity: University of Copenhagen **Type of entity:** University



Student: Glied, Stephan

Date of reading: 06/07/2015

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:** Old germplasm for new needs: Generating inbred lines of anthocyanin-rich black carrot adapted to warm and dry climates

Entity where project took place: Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency

City of entity: Murcia, Region of Murcia, Spain

Name principal investigator (PI, Co-PI....): Gregorio Barba Espín

Nº of researchers: 4

Funding entity or bodies: Fundación Séneca **Type of entity:** Foundation

City funding entity: Murcia, Region of Murcia, Spain

Start-End date: 01/06/2018 - 31/05/2020

Total amount: 76.500 €
- 2 Name of the project:** Elicitation of anthocyanins in hairy root cultures of black carrots – interplay of genotype and environment

Entity where project took place: University of Copenhagen **Type of entity:** University

City of entity: Copenhagen, Denmark

Name principal investigator (PI, Co-PI....): Barba Espín, Gregorio (PI)

Nº of researchers: 5

Funding entity or bodies: Danish Ministry of Science, Innovation and Education

Start-End date: 10/2016 - 05/2018

Total amount: 309.000 €
- 3 Name of the project:** From 2D spots to 3D structures Proteomics- based spatio - temporal barley seed profiling and structure/function investigations of key proteins

Entity where project took place: Technical University of Denmark **Type of entity:** University

City of entity: Lyngby, Denmark

Name principal investigator (PI, Co-PI....): Birte Svensson

Funding entity or bodies: Carlsberg Foundation **Type of entity:** Foundation

City funding entity: Copenhagen, Denmark

Start-End date: 2011 - 2013



- 4** **Name of the project:** Drought tolerance breeding by modulating the expression of superoxide dismutase and ascorbate peroxidase in apricot trees (BFU 2009-07443)
Entity where project took place: Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): José Antonio Hernández Cortés
Funding entity or bodies: Comisión Interministerial de Ciencia y Tecnología **Type of entity:** Gubernamental
City funding entity: Madrid, Community of Madrid, Spain
Start-End date: 2010 - 2012
- 5** **Name of the project:** Role of antioxidative metabolism in plant protection under stress conditions (11883/PI/09)
Entity where project took place: Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): José Antonio Hernández Cortés
Funding entity or bodies: FUNDACION SENECA AGENCIA DE CIENCIA Y TECNOLOGIA DE LA REGION DE MURCIA
City funding entity: Spain
Start-End date: 2010 - 2012
- 6** **Name of the project:** Role of the antioxidative metabolism in germination, growth and response to Plum pox virus (PPV) in pea plants and in different species of Prunus: Effect in protein expression (05571/PI/07)
Entity where project took place: Centro de Edafología y Biología Aplicada del Segura **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): José Antonio Hernández Cortés
Funding entity or bodies: FUNDACION SENECA AGENCIA DE CIENCIA Y TECNOLOGIA DE LA REGION DE MURCIA
City funding entity: Spain
Start-End date: 2008 - 2011

R&D non-competitive contracts, agreements or projects with public or private entities

Name of the project: Elicitation of plant pigments – Mechanism and regulation of physical, biological and chemical elicitors in natural colour production

Degree of contribution: Group coordinator and researcher

Name principal investigator (PI, Co-PI....): Renate Muller

N° of researchers: 23

Participating entity/entities: AgroTech A/S; Christian Hansen A/S; University of Copenhagen

Funding entity or bodies:

Innovation Fund Denmark. Ministry of Higher Education and Science

Type of entity: Public Research Body

City funding entity: Copenhagen, Denmark

Start date: 2014

Duration: 4 years

Results

Industrial and intellectual property

- 1 Title registered industrial property:** Improvement of red beet pigment composition
Type of industrial property: Patent of invention **Author's rights:** Yes
Inventors/authors/obtainers: Barba-Espín, G; Lütken, Henrik; Joernsgaard, Bjarne; Müller, Renate; Dzhanfezova, Tsaneta; Glied, Stephan; Madsen, Bjoern
Entity holder of rights: University of Copenhagen and Chr. Hansen A/S
N° of application: 17192720.5 - 1358
Country of inscription: Denmark
Date of register: 22/09/2017
Conferral date: 28/03/2019
EU patent: Yes
Operating aut.region/region: Eritrea
- 2 Title registered industrial property:** A method for increasing anthocyanin content in carrots
Type of industrial property: Patent of invention **Author's rights:** Yes
Inventors/authors/obtainers: Barba-Espín, G; Lütken, Henrik; Joernsgaard, Bjarne; Müller, Renate; Dzhanfezova, Tsaneta; Glied, Stephan; Madsen, Bjoern; Okkels, Finn
Entity holder of rights: University of Copenhagen and Chr. Hansen A/S
N° of application: 16190288.7 - 1358
Country of inscription: Denmark
Date of register: 23/09/2016
Conferral date: 29/03/2018
EU patent: Yes
Operating aut.region/region: Eritrea

Scientific and technological activities

Scientific production

H index: 15
Date of application: 29/01/2019

Publications, scientific and technical documents

- 1** Gregorio Barba-Espín; Stephan Glied-Olsen; Tsaneta Dzhanfezova; Bjarne Joernsgaard; Henrik Vik Lütken; Renate Müller. Preharvest application of ethephon and postharvest UV-B radiation improve quality traits of beetroot (*Beta vulgaris* L. ssp. *vulgaris*) as source of colourant. *BMC Plant Biology*. 18 - 1, pp. 316. 12/2018.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Science edition - Plant Science
Impact index in year of publication: 3.930 **Journal in the top 25%:** Yes



Relevant publication: Yes

- 2** Exploring hairy root culture of black carrot for mass production of anthocyanins. *In Vitro Cellular & Developmental Biology-Plant*. 01/08/2018.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: Science Edition - PLANT SCIENCES

Impact index in year of publication: 1,057

Journal in the top 25%: No

Relevant publication: Yes

- 3** Barba-Espín, Gregorio; Glied, Stephan; Crocoll, Cristoph; Dzhanfezova, Tsaneta; Joernsgaard, Bjarne; Okkels, Finn; Lütken, Henrik; Müller, Renate. Foliar-applied ethephon enhances the content of anthocyanin of black carrot roots (*Daucus carota* ssp. *sativus* var. *atrorubens* Alef.). *BMC Plant Biology*. 17, pp. 70. 04/2017.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: Science Edition - PLANT SCIENCES

Impact index in year of publication: 3.930

Journal in the top 25%: Yes

Relevant publication: Yes

- 4** Acosta-Motos, José R; Noguera, L; Barba Espín, G; Piqueras, A; Hernández, José A. Antioxidant Metabolism and Chlorophyll Fluorescence during the Acclimatisation to Ex Vitro Conditions of Micropropagated *Stevia rebaudiana* Bertoni Plants. *Antioxidants*. 12/2019.

Type of production: Scientific paper

Corresponding author: No

- 5** Muller, R; Acota-Motos, José R; Großkinsky, Dominik K; Hernández, José A.; Lutken, Henrik; Barba-Espin, Gregorio. UV-B Exposure of black carrot (*Daucus carota* ssp. *sativus* var. *atrorubens*) plants promotes growth, accumulation of anthocyanin, and phenolic compounds. *Agronomy*. 06/2019.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

- 6** Acosta Motos, José Ramón; Hernández, José Antonio; Álvarez, Sara; Barba-Espín, Gregorio; Sánchez, María José. The long-term resistance mechanisms, critical irrigation threshold and relief capacity shown by *Eugenia myrtifolia* plants in response to saline reclaimed water. *Plant Physiology and Biochemistry*. 111, pp. 244 - 256. ELSEVIER FRANCE-EDITIONS SCIENTIFIQUES MEDICALES ELSEVIER, 02/2017.

Type of production: Scientific paper

Format: Journal

Corresponding author: No

Impact source: ISI

Category: Science Edition - PLANT SCIENCES

Impact index in year of publication: 2.928

Journal in the top 25%: Yes

- 7** Acosta-Motos, José Ramón; Álvarez, Sara; Barba-Espín, Gregorio; Hernández, José Antonio; Sánchez-Blanco, María José. Salts and nutrients present in regenerated waters induce changes in water relations, antioxidative metabolism, ion accumulation and restricted ion uptake in *Myrtus communis* L. plants. *PLANT PHYSIOLOGY AND BIOCHEMISTRY*. 85, pp. 41 - 50. ELSEVIER FRANCE-EDITIONS SCIENTIFIQUES MEDICALES ELSEVIER, 12/2014. ISSN 0981-9428

Type of production: Scientific paper

Format: Journal

Impact source: ISI

Category: Science Edition - PLANT SCIENCES

Impact index in year of publication: 2.756

Journal in the top 25%: Yes



- 8** Fatima Ezzohra Ikbai; Jose Antonio Hernandez; Gregorio Barba-Espin; Tayeb Koussa; Aziz Aziz; Mohamed Faize; Pedro Diaz-Vivancos. Enhanced salt-induced antioxidative responses involve a contribution of polyamine biosynthesis in grapevine plants. JOURNAL OF PLANT PHYSIOLOGY. 171 - 10, pp. 779 - 788. ELSEVIER GMBH, URBAN & FISCHER VERLAG, 06/2014. ISSN 0176-1617
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 2,770 **Journal in the top 25%:** Yes
- 9** Gregorio Barba-Espin; Plaipol Dedvisitsakul; Per Hagglund; Birte Svensson; Christine Finnie. Gibberellic Acid-Induced Aleurone Layers Responding to Heat Shock or Tunicamycin Provide Insight into the N-Glycoproteome, Protein Secretion, and Endoplasmic Reticulum Stress. PLANT PHYSIOLOGY. 164 - 2, pp. 951 - 965. 02/2014. ISSN 0032-0889
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 6,841 **Journal in the top 25%:** Yes
Position of publication: 6 **No. of journals in the cat.:** 199
- 10** Pedro Diaz-Vivancos; Mohamed Faize; Gregorio Barba-Espin; Lydia Faize; Cesar Petri; Jose Antonio Hernandez; Lorenzo Burgos. Ectopic expression of cytosolic superoxide dismutase and ascorbate peroxidase leads to salt stress tolerance in transgenic plums. PLANT BIOTECHNOLOGY JOURNAL. 11 - 8, pp. 976 - 985. 10/2013. ISSN 1467-7644
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 5,677 **Journal in the top 25%:** Yes
Position of publication: 13 **No. of journals in the cat.:** 199
- 11** Pedro Diaz-Vivancos; Gregorio Barba-Espin; Jose Antonio Hernandez. Elucidating hormonal/ROS networks during seed germination: insights and perspectives. PLANT CELL REPORTS. 32 - 10, pp. 1491 - 1502. 10/2013. ISSN 0721-7714
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 2,936 **Journal in the top 25%:** Yes
- 12** Mohamed Faize; Lydia Faize; Cesar Petri; Gregorio Barba-Espin; Pedro Diaz-Vivancos; Maria Jose Clemente-Moreno; Tayeb Koussa; Lalla Aicha Rifai; Lorenzo Burgos; Jose Antonio Hernandez. Cu/Zn superoxide dismutase and ascorbate peroxidase enhance in vitro shoot multiplication in transgenic plum. JOURNAL OF PLANT PHYSIOLOGY. 170 - 7, pp. 625 - 632. 05/2013. ISSN 0176-1617
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 2,770 **Journal in the top 25%:** Yes
- 13** Rui-Ming Han; Isabelle Lefevre; Alfonso Albacete; Francisco Perez-Alfocea; Gregorio Barba-Espin; Pedro Diaz-Vivancos; Muriel Quinet; Cheng-Jiang Ruan; Jose Antonio Hernandez; Elena Cantero-Navarro; Stanley Lutts. Antioxidant enzyme activities and hormonal status in response to Cd stress in the wetland halophyte *Kosteletzkya virginica* under saline conditions. PHYSIOLOGIA PLANTARUM. 147 - 3, pp. 352 - 368. 03/2013. ISSN 0031-9317
Type of production: Scientific paper **Format:** Journal
Impact source: SCOPUS **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 3,262 **Journal in the top 25%:** Yes



- 14** M. Faize; L. Burgos; L. Faize; C. Petri; G. Barba-Espin; P. Diaz-Vivancos; M. J. Clemente-Moreno; N. Alburquerque; J. A. Hernandez. Modulation of tobacco bacterial disease resistance using cytosolic ascorbate peroxidase and Cu,Zn-superoxide dismutase. *PLANT PATHOLOGY*. 61 - 5, pp. 858 - 866. 10/2012. ISSN 0032-0862
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - AGRONOMY
Impact index in year of publication: 2,969 **Journal in the top 25%:** Yes
Position of publication: 7 **No. of journals in the cat.:** 7
- 15** Gregorio Barba-Espin; Eduardo Nicolas; Maria Soledad Almansa; Elena Cantero-Navarro; Alfonso Albacete; Jose Antonio Hernandez; Pedro Diaz-Vivancos. Role of thioproline on seed germination: Interaction ROS-ABA and effects on antioxidative metabolism. *PLANT PHYSIOLOGY AND BIOCHEMISTRY*. 59 - SI, pp. 30 - 36. 10/2012. ISSN 0981-9428
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 2,779 **Journal in the top 25%:** Yes
- 16** Gregorio Barba Espín; José Antonio Hernández Cortés; Pedro Díaz Vivancos. Role of H₂O₂ in pea seed germination. *PLANT SIGNALING & BEHAVIOR*. 7 - 2, pp. 193 - 195. Landes Bioscience, 02/2012.
Type of production: Scientific paper **Format:** Journal
- 17** G. Barba-Espin; M. J. Clemente-Moreno; S. Alvarez; M. F. Garcia-Legaz; J. A. Hernandez; P. Diaz-Vivancos. Salicylic acid negatively affects the response to salt stress in pea plants. *PLANT BIOLOGY*. 13 - 6, pp. 909 - 917. 11/2011. ISSN 1435-8603
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 2,77 **Journal in the top 25%:** Yes
- 18** Gregorio Barba-Espin; Pedro Diaz-Vivancos; Dominique Job; Maya Belghazi; Claudette Job; Jose Antonio Hernandez. Understanding the role of H₂O₂ during pea seed germination: a combined proteomic and hormone profiling approach. *PLANT CELL AND ENVIRONMENT*. 34 - 11, pp. 1907 - 1919. 11/2011. ISSN 0140-7791
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 5,906 **Journal in the top 25%:** Yes
Position of publication: 10 **No. of journals in the cat.:** 199
- 19** A. Piqueras; M. Palacios; M. J. Clemente; G. Barba; H. Cantero; F. Perez; J. A. Hernandez; J. A. Fernandez. Physiological Changes During the Initiation of In Vitro Cultures of Saffron Intercalary Meristems for Micropropagation, Changes in Some Components of the Antioxidant Enzymatic System and the Levels of Endogenous Growth Regulators. *IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY-ANIMAL*. 47 - 1, pp. S78 - S78. 06/2011. ISSN 1071-2690
Type of production: Scientific paper **Format:** Journal
- 20** M. Faize; L. Burgos; L. Faize; A. Piqueras; E. Nicolas; G. Barba-Espin; M. J. Clemente-Moreno; R. Alcobendas; T. Artlip; J. A. Hernandez. Involvement of cytosolic ascorbate peroxidase and Cu/Zn-superoxide dismutase for improved tolerance against drought stress. *JOURNAL OF EXPERIMENTAL BOTANY*. 62 - 8, pp. 2599 - 2613. 05/2011. ISSN 0022-0957
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 5,794 **Journal in the top 25%:** Yes

**Position of publication:** 11**No. of journals in the cat.:** 199

- 21** Ana Garcia-Ibarra; Maria Jose Clemente-Moreno; Gregorio Barba-Espin; Pedro Diaz-Vivancos; Manuel Rubio; Federico Dicenta; Pedro Martinez-Gomez; Jose Antonio Hernandez. {Changes in the antioxidative metabolism induced by Apple chlorotic leaf spot virus infection in peach [{}Prunus persica (L.) Batsch]}. ENVIRONMENTAL AND EXPERIMENTAL BOTANY. 70 - 2-3, pp. 277 - 282. 02/2011. ISSN 0098-8472
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 3,003 **Journal in the top 25%:** Yes
- 22** A. Imani; M. Rasouli; R. Tavakoli; E. Zarifi; R. Fatahi; G. Barba-Espin; P. Martinez-Gomez. Optimization of seed germination in Prunus species combining hydrogen peroxide or gibberellic acid pre-treatment with stratification. SEED SCIENCE AND TECHNOLOGY. 39 - 1, pp. 204 - 207. 2011. ISSN 0251-0952
Type of production: Scientific paper **Format:** Journal
- 23** G. Barba-Espin; P. Diaz-Vivancos; M. J. Clemente-Moreno; A. Albacete; L. Faize; M. Faize; F. Perez-Alfocea; J. A. Hernandez. Interaction between hydrogen peroxide and plant hormones during germination and the early growth of pea seedlings. PLANT CELL AND ENVIRONMENT. 33 - 6, pp. 981 - 994. 06/2010. ISSN 0140-7791
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PLANT SCIENCES
Impact index in year of publication: 5,906 **Journal in the top 25%:** Yes
Position of publication: 10 **No. of journals in the cat.:** 199
- 24** P. Diaz-Vivancos; G. Barba-Espin; M. J. Clemente-Moreno; J. A. Hernandez. Characterization of the antioxidant system during the vegetative development of pea plants. BIOLOGIA PLANTARUM. 54 - 1, pp. 76 - 82. 03/2010. ISSN 0006-3134
Type of production: Scientific paper **Format:** Journal
- 25** M. J. Clemente-Moreno; P. Diaz-Vivancos; G. Barba-Espin; J. A. Hernandez. Benzothiadiazole and l-2-oxothiazolidine-4-carboxylic acid reduce the severity of Sharka symptoms in pea leaves: effect on antioxidative metabolism at the subcellular level. PLANT BIOLOGY. 12 - 1, pp. 88 - 97. 01/2010. ISSN 1435-8603
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - CELL BIOLOGY
Impact index in year of publication: 4,471
- 26** Gregorio Barba; Teresa Soto; Marisa Madrid; Andres Nunez; Jeronima Vicente; Mariano Gacto; Jose Cansado; Yeast Physiology Grp. Activation of the cell integrity pathway is channelled through diverse signalling elements in fission yeast. CELLULAR SIGNALLING. 20 - 4, pp. 748 - 757. 04/2008. ISSN 0898-6568
Type of production: Scientific paper **Format:** Journal
- 27** Black carrots and red beets to improve profitability. BIOPEOPLE: Denmark's Life Science Cluster. University of Copenhagen (info@biopeople.ku.dk), 11/2015.
Type of production: Popular science article **Format:** Journal
- 28** Díaz-Vivancos P; Barba-Espín G; Hernández JA. Glutathione-Mediated Biotic Stress Tolerance in Plants. Glutathione in Plant Growth, Development, and Stress Tolerance. pp. 300. Springer, 11/2017. ISBN 978-3-319-66681-5
Type of production: Book chapter **Format:** Book
Degree of contribution: Author or co-author of chapter in book
Total no. authors: 3



- 29** Hernández, JA; Díaz-Vivancos, P; Barba-Espín, G; Clemente-Moreno, MJ. On the role of salicylic acid in plant responses to environmental stresses. *Salicylic acid - a multifaceted hormone*. pp. 17 - 34. Springer, 11/2017. ISBN 978-981-10-6067-0
Type of production: Book chapter **Format:** Book
- 30** Hernández-Cortés, José A.; Barba-Espín, Gregorio; Clemente-Moreno, Maria José; Díaz-Vivancos, Pedro. Plant responses to salinity through an antioxidative metabolism and proteomic point of view. *Stress Signalling in Plants, Genomics and Proteomics Perspective*. 2, pp. 173 - 200. New Delhi(India): In press: Maryam Sarwat, Altaf Ahmad, M. Z. Abdin, and M. Ibrahim (Eds) Springer, 12/2016.
Type of production: Book chapter **Format:** Book
Position of signature: 2 **Degree of contribution:** Author or co-author of chapter in book
Total no. authors: 4
- 31** Acosta Motos, JR; Penella, C; Hernández, JA; Díaz-Vivancos, P; Sánchez-Blanco, MJ; Navarro, JM; Gómez-Bellot, MJ; Barba-Espín, G. Towards a Sustainable Agriculture: Strategies Involving Phytoprotectants against Salt Stress. *Agronomy*. 02/2020.
Type of production: Review **Format:** Journal
Corresponding author: No

Works submitted to national or international conferences

- 1** **Title of the work:** Exploring hairy culture of black carrot for mass production of anthocyanins
Name of the conference: Quadrennial Conference of the International Association for Plant Biologists
Type of event: Conference
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
Corresponding author: Yes
City of event: Dublin, Ireland
Date of event: 08/2018
 Barba-Espín, Gregorio; Chen, Shih-Ti; Agnolet, Sara; Hernández, José A.; Christensen, Jan H.; Lütken, Henrik; Müller, Renate. En: *IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY-PLANT*. pp. S55. Springer, 08/2018.
- 2** **Title of the work:** Elicitation of anthocyanins in hairy root cultures of black carrots
Name of the conference: 38th International Carrot Conference
Type of event: Conference
Reasons for participation: Review before acceptance
Date of event: 2017
City organizing entity: Bakersfield, California, United States of America
 Chen, Shih-Ti; Barba Espín, Gregorio; Andersen, Trine; Müller, Renate; Lütken, Henrik; Joernsgaard, Bjarne.
- 3** **Title of the work:** New insights into anthocyanin accumulation and composition during black carrot growth
Name of the conference: 38th International Carrot Conference
Type of event: Conference **Geographical area:** Non EU International
Type of participation: 'Participatory - poster **Reasons for participation:** Review before acceptance
City of event: Bakersfield, CA, United States of America
Date of event: 2017



Barba-Espín, Gregorio; Lütken, Henrik; Glied, Stephan; Crocoll, Christoph; Joernsgaard, Bjarne; Müller, Renate.

- 4** **Title of the work:** Anthocyanin elicitation for bio-sustainable colourant production in carrot
Name of the conference: III International Symposium on Horticulture in Europe - SHE2016
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Chania (Crete), Greece
Date of event: 2016
Barba-Espín, Gregorio; Lütken, Henrik; Glied, Stephan; Crocoll, Christoph; Joernsgaard, Bjarne; Müller, Renate.
Geographical area: European Union
Reasons for participation: Review before acceptance
- 5** **Title of the work:** Carrot and red beet for natural colour production
Name of the conference: Food-In-2 Health Agora
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Copenhagen, Denmark
Date of event: 2015
City organizing entity: Copenhagen, Denmark
Barba-Espín, Gregorio; Glied, Stephan; Uldall, Cecilie; Lütken, Henrik; Müller, Renate.
Reasons for participation: Upon invitation
- 6** **Title of the work:** Proteome analysis of the barley aleurone layer for insight into plant protein secretion and programmed cell death
Name of the conference: Plant Biotech Denmark 2014
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Copenhagen, Denmark
Date of event: 2014
City organizing entity: Copenhagen, Denmark
Barba-Espín, G; Mark, C; Dedvisitsakul, P; Zor, K; Heiskanen, A; Emneus, J; Hägglund, P; Svensson, B; Dufva, V; Finnie, C.
Geographical area: European Union
Reasons for participation: Review before acceptance
- 7** **Title of the work:** Effect of agents disrupting protein secretion on the proteomes of the barley aleurone layer
Name of the conference: Plant Biotech Denmark 2013
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Copenhagen, Denmark
Date of event: 2013
Barba-Espín, G; Finnie, C; Svensson, B.
Geographical area: European Union
Reasons for participation: Review before acceptance
- 8** **Title of the work:** Inhibition of protein N-glycosylation alters protein patterns in in vitro maintained aleurone layers from barley seeds
Name of the conference: Plant Biology Congress
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Freiburg, Germany
Date of event: 2012
Geographical area: European Union
Reasons for participation: Review before acceptance



Barba-Espín, G; Finnie, C; Svensson, B.

- 9** **Title of the work:** Expression of cytosolic SOD and APX transgenes in plum improves vigour and shoot regeneration and confers salt stress tolerance
Name of the conference: 10th International Conference on Reactive Oxygen and Nitrogen Species in Plants
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: European Union
Reasons for participation: Review before acceptance
City of event: Budapest, Hungary
Date of event: 2011
Díaz-Vivancos, P; Faize, L; Barba-Espín, G; Clemente-Moreno, MJ; Petri, C; Hernández, JA; Burgos, L; Faize, M.
- 10** **Title of the work:** Physiological Changes During the Initiation of In Vitro Cultures of Saffron Intercalary Meristems for Micropropagation, Changes of Some Components of the Antioxidant Enzymatic System and the Levels of the Endogenous Growth Regulators
Name of the conference: In Vitro Biology Meeting Raleigh
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: Non EU International
City of event: North Carolina, United States of America
Date of event: 2011
Piqueras, A; Palacios, M; Clemente, M; Barba, G; Cantero, E; Pérez, F; Hernández, JA; Fernández, JA.
- 11** **Title of the work:** Reutilización de aguas regeneradas para el riego de plantas de *Myrtus communis*: respuesta morfológica y fisiológica a los distintos niveles de salinidad
Name of the conference: XIX Reunión de la Sociedad Española de Fisiología Vegetal
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: National
Reasons for participation: Review before acceptance
City of event: Castellón de la Plana, Valencian Community, Spain
Date of event: 2011
Acosta, JR; Barba-Espín, G; Broetto, F; Gómez-Bellot, MJ; Castillo, M; Álvarez, S; Bañón, S; Sánchez-Blanco, MJ.
- 12** **Title of the work:** Role of H₂O₂ during pea seed germination: a combined proteomic and hormone profiling approach
Name of the conference: 10th International Conference on Reactive Oxygen and Nitrogen Species in Plants
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Geographical area: European Union
Reasons for participation: Upon invitation
City of event: Budapest, Hungary
Date of event: 2011
Barba-Espín, G; Díaz-Vivancos, P; Job, D; Belghazi, M; Job, C; Hernández, JA.
- 13** **Title of the work:** Salicylic Acid Negatively Affects The Response To Salt Stress In Pea Plants: Effects On PR1b And MAPK Expression
Name of the conference: 10th International Conference on Reactive Oxygen and Nitrogen Species in Plants
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: European Union
Reasons for participation: Review before acceptance



City of event: Budapest, Hungary

Date of event: 2011

Barba-Espín, G; Clemente-Moreno, MJ; Álvarez, S; García-Legaz, MF; Hernández, JA; Díaz-Vivancos, P.

14 Title of the work: Effect of hydrogen peroxide on carbonylated protein levels during pea seed germination

Name of the conference: XVII Congress of the Federation of European Societies of Plant Biology

Type of event: Conference

Geographical area: European Union

Type of participation: 'Participatory - poster

Reasons for participation: Review before acceptance

City of event: Valencia, Valencian Community, Spain

Date of event: 2010

Barba-Espín, G; Díaz-Vivancos, P; Clemente-Moreno, MJ,; Job, D; Belghazi, M; Hernández, JA; Job, C.

15 Title of the work: L-2-oxothiazolidine-4-carboxylic acid (OTC) partially protects peach plants from sharka disease: effect in antioxidative metabolism and protein expression

Name of the conference: XVII Congress of the Federation of European Societies of Plant Biology

Type of event: Conference

Geographical area: European Union

Type of participation: 'Participatory - poster

Reasons for participation: Review before acceptance

City of event: Valencia, Region of Murcia, Spain

Date of event: 2010

Clemente-Moreno, MJ; Díaz-Vivancos, P; Barba-Espín, G; Martínez-Gómez, P; Hernández, JA.

16 Title of the work: Conservación de secciones nodales de neem (*Azadirachta indica* A Juss) mediante encapsulación-refrigeración: Efecto del ácido acetil-salicílico

Name of the conference: VIII Reunión de la Sociedad Española De Cultivo In Vitro de Tejidos Vegetales

Type of event: Conference

Geographical area: National

Type of participation: 'Participatory - poster

Reasons for participation: Open access

City of event: Murcia, Region of Murcia, Spain

Date of event: 2009

Padilla, IMG; Barba-Espín, G; Hernández, JA; Burgos, L; Piqueras, A.

17 Title of the work: Cytosolic superoxide dismutase and ascorbate peroxidase differentially improve drought tolerance and wildfire disease resistance in transgenic tobacco

Name of the conference: Plant ROS 2009 Meeting

Type of event: Conference

Geographical area: European Union

Type of participation: 'Participatory - poster

Reasons for participation: Review before acceptance

City of event: Helsinki, Finland

Date of event: 2009

Faize, M; Faize, L; Piqueras, A; Barba-Espín, G; Clemente Moreno, MJ; Burgos, L; Alarcón, JJ; Artlip, T; Hernández, JA.

18 Title of the work: H₂O₂ on germination, antioxidative metabolism and protein expression in pea plants

Name of the conference: Plant ROS 2009 Meeting

Type of event: Conference

Geographical area: European Union

Type of participation: 'Participatory - poster

Reasons for participation: Review before acceptance

City of event: Helsinki, Finland

Date of event: 2009

Barba-Espín, G; Díaz-Vivancos, P; Clemente-Moreno, MJ; Albacete, A; Faize, M; Faize, L; Hernández, JA.



- 19** **Title of the work:** Producción de especies reactivas de oxígeno y alteración de las enzimas antioxidantes durante la respuesta hipersensible a *Phytophthora capsici* en *Capsicum annuum*
Name of the conference: XVII Reunión española de Fisiología Vegetal X Congreso Hispano-Luso de Fisiología Vegetal
Type of event: Conference **Geographical area:** National
Type of participation: 'Participatory - poster **Reasons for participation:** Review before acceptance
City of event: Zaragoza, Aragon, Spain
Date of event: 2009
Requena, M; González, L; Ezziyyani, M; Egea-Gilabert, C; Requena, AM; Hernández, JA; Barba, G; Olmos, E; Candela, ME.
- 20** **Title of the work:** Effect of hydrogen peroxide on germination, protein expression and ABA contents in pea seedlings
Name of the conference: SEST2009 - International Symposium
Geographical area: Non EU International
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Murcia, Region of Murcia, Spain
Date of event: 2009
Barba-Espín, G; Díaz-Vivancos, P; Clemente-Moreno, MJ; Albacete, A; Faize, L; Faize, M; Hernández, JA.
- 21** **Title of the work:** Bases Fisiológicas y Bioquímicas de la Respuesta de los Prunus a la infección por Plum pox virus (PPV): Función de los mecanismos antioxidantes
Name of the conference: VI jornadas de Fisiología Vegetal de la Sociedad Catalana de Biología
Type of event: Conference **Geographical area:** National
Type of participation: 'Participatory - poster **Reasons for participation:** Review before acceptance
City of event: Barcelona, Catalonia, Spain
Date of event: 2008
Hernández, JA; Clemente-Moreno, MJ; Barba-Espín, G; Díaz-Vivancos, P.
- 22** **Title of the work:** La activación del módulo de MAP quinasas de integridad celular en *Schizosaccharomyces pombe* es regulada por múltiples rutas de señalización
Name of the conference: IX Congreso Nacional de Micología
Type of event: Conference **Geographical area:** National
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
City of event: Córdoba, Andalusia, Spain
Date of event: 2008
Soto, T; Barba, G; Núñez, A; Madrid, M; Franco, A; Vicente, J; Gacto, M; Cnasado, J.
- 23** **Title of the work:** Protección parcial frente a Plum pox virus (PPV) inducido por tratamientos con benztiodiazol y ácido L-2-oxotiazolidina-4-carboxílico en plantas de guisante
Name of the conference: XIV Congreso de la Sociedad Española de Fitopatología
Type of event: Conference **Geographical area:** National
Type of participation: 'Participatory - poster **Reasons for participation:** Review before acceptance
City of event: Lugo, Galicia, Spain
Date of event: 2008
Clemente-Moreno, MJ; Díaz-Vivancos, P; Barba-Espín, G; Rodríguez, JR; Hernández, JA.



- 24** **Title of the work:** Activation of mitogen activated protein kinase pathways by enhanced gravity forces in the fission yeast *Schizosaccharomyces pombe*
Name of the conference: Fourth International Fission Yeast Meeting
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: European Union
Reasons for participation: Review before acceptance
City of event: Copenhagen, Denmark
Date of event: 2007
Soto, T; Barba, G; Madrid, M; Vicente, J; Cansado, J; Gacto, M.
- 25** **Title of the work:** Cross-talk between the stress-activated protein kinase pathway and the cell integrity pathway in fission yeast
Name of the conference: Fourth International Fission Yeast Meeting
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: European Union
Reasons for participation: Review before acceptance
City of event: Copenhagen, Denmark
Date of event: 2007
Madrid, M; Soto, T; Núñez, A; Barba, G; Vicente, J; Gacto, M; Cansado J.
- 26** **Title of the work:** Nuclear localization signal mediates subcellular targeting of MAPK Pmk1p in fission yeast
Name of the conference: Fourth International Fission Yeast Meeting
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: European Union
Reasons for participation: Review before acceptance
City of event: Copenhagen, Denmark
Date of event: 2007
Madrid, M; Núñez, A; Barba, G; Soto, T; Vicente, J; Gacto, M; Cansado J.
- 27** **Title of the work:** Las enzimas citosólicas superóxido dismutasa y ascorbato peroxidasa mejoran sinérgicamente la tolerancia a la sequía y la resistencia a la enfermedad bacteriana del "mar del fuego" en plantas transgénicas de tabaco
Name of the conference: VIII Reunión de la Sociedad Española De Cultivo In Vitro de Tejidos Vegetales
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: National
Reasons for participation: Open access
City of event: Murcia, Region of Murcia, Spain
Faize, M; Faize, L; Piqueras, A; Nicolás, E; Barba-Espín, G; Clemente-Moreno, MJ; Hernández, JA; Alarcón, JJ; Artlip, T; Burgos, L.

Other dissemination activities

- 1** **Title of the work:** Participation at the "Jornadas de Puertas Abiertas del CEBAS-CSIC"
Type of event: Fairs and exhibitions
City of event: Murcia,
Date of event: 17/01/2019
Organising entity: CEBAS-CSIC
- 2** **Title of the work:** Invited talk: Carrot and barley - What do they have in common?
Name of the event: Jornadas de Jóvenes Investigadores de la Región de Murcia
Date of event: 21/12/2017
Organising entity: CEBAS-CSIC



- 3** **Title of the work:** Participation at the "Jornadas de Puertas Abiertas del CEBAS-CSIC"
Type of event: Fairs and exhibitions
City of event: Murcia,
Date of event: 30/11/2011
Organising entity: CEBAS-CSIC

R&D management and participation in scientific committees

Organization of R&D activities

Title of the activity: Chairman of the session 4C at the International Association of Plant Biologist Conference (IAPB2018)
City convening entity: Dublin, Ireland
Type of participation: Chairman

R&D management

Name of the activity: Coordinator of research activities on carrot and red beet. Associated to BioFactory Consortium Project
Type of management: Group management
Performed tasks: Group management, meeting arrangements, task assignment, evaluation, scientific communication
Entity: University of Copenhagen, Chr. Hansen A/S
Start date: 02/11/2015 **Duration:** 1 year - 1 month

Evaluation and revision of R&D projects and articles

- 1** **Name of the activity:** Editorial tasks, assurance of quality of accepted research articles
Performed tasks: Associate editor
Entity where activity was carried out: Horticulture International Journal (HIJ)
Type of activity: Participation in editorial committees
Access system: With express recognition of the credits concerned **Geographical area:** Non EU International
Start-End date: 05/2017 - 11/2017
- 2** **Performed tasks:** Reviewer
Entity where activity was carried out: African Journal of Biotechnology
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International
- 3** **Performed tasks:** Reviewer
Entity where activity was carried out: BMC Plant Biology
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International



- 4 Performed tasks:** Reviewer
Entity where activity was carried out: PLOS ONE
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International
- 5 Performed tasks:** Reviewer
Entity where activity was carried out: Plant Growth Regulation
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International
- 6 Performed tasks:** Reviewer
Entity where activity was carried out: Plant Science
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International
- 7 Performed tasks:** Reviewer
Entity where activity was carried out: Plant Signaling & Behavior
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International

Other achievements

Stays in public or private R&D centres

- 1 Entity:** University of Copenhagen
Faculty, institute or centre: Department of Plant and Environmental Sciences
City of entity: Taastrup, Denmark
Start-End date: 10/10/2016 - 31/05/2018
Funding entity: Ministry of Higher Education and Science
Goals of the stay: Post-doctoral
Provable tasks: Natural transformation of black carrot (*Daucus carota* ssp. *sativus* var. *atrorubens*) for the in vitro production of anthocyanins
- 2 Entity:** University of Copenhagen
Faculty, institute or centre: Department of Plant and Environmental Sciences
City of entity: Taastrup, Denmark
Start-End date: 01/08/2014 - 09/10/2016
Goals of the stay: Post-doctoral
Provable tasks: Pigments elicitation in carrot and red beet during field experiments and in the postharvest environment
- 3 Entity:** Technical University of Denmark **Type of entity:** University
Faculty, institute or centre: Department of Systems Biology
City of entity: Lyngby, Denmark
Start-End date: 01/01/2012 - 08/09/2013 **Duration:** 1 year - 8 months - 8 days
Goals of the stay: Post-doctoral



Provable tasks: To study the protein secretory machinery and unfolded protein response (UPR) on the barley aleurone layer, as an approach to increase the yield of recombinant proteins

- 4** **Entity:** University of Leeds **Type of entity:** University
Faculty, institute or centre: Institute of Integrative and Comparative Biology
City of entity: Leeds, United Kingdom
Start-End date: 30/01/2011 - 01/04/2011 **Duration:** 2 months - 5 days
Goals of the stay: Doctorate
Provable tasks: Exploring the role of glutathione on the plant stress responses
- 5** **Entity:** UMR5240 CNRS-Bayer CropScience, Joint Laboratory
City of entity: Lion, France
Start-End date: 04/06/2009 - 28/07/2009 **Duration:** 1 month - 25 days
Goals of the stay: Doctorate
Provable tasks: Analysis of protein carbonylation patterns in pea seeds using proteomic approaches
- 6** **Entity:** Universidad de Murcia **Type of entity:** University
Faculty, institute or centre: Departamento de Genética y Microbiología
Start-End date: 26/09/2006 - 12/12/2007 **Duration:** 1 year - 2 months - 15 days
Goals of the stay: Guest
Provable tasks: To investigate the cell integrity pathway in the fission yeast *Schizosaccharomyces pombe*
- 7** **Entity:** CEBAS-CSIC **Type of entity:** Public Research Body
City of entity: Murcia, Spain
Start date: 01/06/2018
Funding entity: Fundación Séneca
City funding entity: Murcia, Spain
Goals of the stay: Post-doctoral
Provable tasks: Evaluation of germplasm of black carrot for the developing of new inbred lines

Obtained grants and scholarships

- 1** **Name of the grant:** Henrik Tofte Jacobsen's Grant
City awarding entity: Copenhagen,
Aims: Mobility grant
Awarding entity: Tofte Jacobsen Foundation
Amount of the grant: 1.560 €
Conferral date: 09/02/2017
End date: 23/03/2017
Entity where activity was carried out: Bakersfield, California, 38th International Carrot Conference
- 2** **Name of the grant:** JAE-predocctoral
City awarding entity: Murcia, Region of Murcia, Spain
Aims: Pre-doctoral
Awarding entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Conferral date: 01/01/2008 **Duration:** 4 years
End date: 31/12/2011
Entity where activity was carried out: Centro de Edafología y Biología Aplicada del Segura
Faculty, institute or centre: Department of Plant Breeding

**3 Name of the grant:** Beca Estancia breve -Programa JAE-PRE**Aims:** Pre-doctoral**Awarding entity:** Consejo Superior de Investigaciones Científicas**Type of entity:** State agency**Conferral date:** 30/01/2011**Duration:** 2 months - 3 days**End date:** 01/04/2011**Entity where activity was carried out:** University of Leeds**Faculty, institute or centre:** Faculty of Biological Sciences**4 Name of the grant:** Estancia breve Programa I3P - Becas El Ventorrillo**Aims:** Pre-doctoral**Awarding entity:** Consejo Superior de Investigaciones Científicas**Type of entity:** State agency**Conferral date:** 04/06/2009**Duration:** 1 month - 25 days**End date:** 28/07/2009**Entity where activity was carried out:** UMR5240 CNRS-Bayer CropScience, Joint Laboratory**5 Name of the grant:** Henrik Tofte Jacobsen´s Grant**City awarding entity:** Copenhagen, Denmark**Aims:** Mobility grant**Awarding entity:** Tofte Jacobsen Foundation**Amount of the grant:** 2.467 €**Conferral date:** 21/02/2018**Entity where activity was carried out:** Dublin, Ireland, International Association for Plant Biotechnology Congress