



David Gonzalez Ballester

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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.

En **1998 me licencio en Bioquímica** (UCO). Durante 1998-2000 formo parte del Dpto. de Bioquímica y Biología Molecular (UCO) y en 2000 defiende una tesis. **En 2001 obtengo una beca pre-doctoral FPD de la Junta de Andalucía**, y **en 2005 defiende mi tesis doctoral** (dirigida por el catedrático Emilio Fernández Reyes). En **2006 inicio mi etapa postdoctoral en EEUU contratado por la Carnegie Institution of Science, (Stanford, California)**, bajo la dirección del Prof. Arthur Grossman. Ese año soy **acreedor de un contrato postdoctoral por parte del MEC** para continuar en este mismo centro, y **en 2007 de un contrato postdoctoral Marie Curie**. Desarrollé mi etapa postdoctoral en este centro hasta mayo de 2010. **En julio de 2010 me reincorporé a la UCO. En enero de 2012 soy acreedor de un contrato Ramón y Cajal y en 2018 consigo una plaza como Profesor Contratado Doctor por la UCO. Desde octubre de 2019 soy Profesor Titular de Universidad.** Desde 1998 hasta la actualidad (exceptuada mi etapa postdoctoral) he participado en la docencia impartida por el Dpto. de Bioquímica y Biología Molecular de la UCO: Biotecnología (Licenciatura de Bioquímica), Biología Molecular (Licenciatura de Medicina y Licenciatura de Química), Bioquímica Ambiental y Biotecnología (3º grado de Bioquímica), Bioquímica Experimental I (3º de grado de Bioquímica), Métodos Instrumentales Cuantitativos (2º grado de Bioquímica), Principios Instrumentales y Metodológicos (1º de grado de Biología), Bioquímica y Biología Molecular (3º de grado de Química), Teoría, Metodología y Evaluación de la Investigación Científica (máster de Biotecnología) y Procesos Bioquímicos Aplicados a la Bioeconomía (máster Bioeconomía). Además, he sido codirector/director de dos tesis doctorales (una en régimen de cotutela), un trabajo de Fin de Máster, y 7 trabajos Fin de Grado. **Mi actividad investigadora ha estado centrada desde el inicio en estudio de algas verdes, en especial con el alga *Chlamydomonas reinhardtii*.** Estos estudios incluyen una gran variedad de técnicas fisiológicas y moleculares, y han estado centrados en el metabolismo del nitrógeno, del azufre, del fósforo y del hidrógeno, este último como posible aplicación biotecnológica para la producción de biocombustibles. He participado/participo como Investigador Principal en 1 proyecto del MICIU y 2 contratos bajo art. 83. Aparte de mi etapa postdoctoral, he realizado dos estancias cortas (2013 y 2014) en el National Renewable Energy Laboratory (NREL) de Golden, Colorado, EEUU. He participado como revisor científico para la Agence Nationale de la Recherche Francesa (ANR), la Agencia Nacional de Promoción Científica y Tecnológica (Argentina) y para las revistas científicas "Plant Cell" y "Journal of Phycology" entre otras.



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.

Numero de sexenios: 3 (último 2018)

Número de Publicaciones: 31

Publicaciones en Revistas Científicas Indexadas: 25; De ellas: Primer autor: 10 ; Ultimo autor o corresponding: 4

Publicaciones en capítulos de libros: 15 ; De ellos: internacionales: 6

índice h: 17 ;

Numero de citas: 2856 (octubre 2021, Scopus)

Citas en los últimos 5 años: 993 (octubre 2021, Scopus)

Orcid: <http://orcid.org/0000-0003-0024-1886>

Scopus ID: 8336650200

Researcher ID: M-5551-2013

Número de tesis dirigidas: 2

David Gonzalez Ballester

Surname(s): **Gonzalez Ballester**
Name: **David**
ORCID: **0000-0003-0024-1886**
ScopusID: **8336650200**
ResearcherID: **M-5551-2013**
Gender: **Male**
Nationality: **Spain**
Country of birth: **Spain**
Contact country: **Spain**
Email: **dgballester@uco.es**

Current professional situation

Employing entity: Universidad de Córdoba **Type of entity:** University
Department: Bioquímica y Biología Molecular, Facultad de Ciencias
Professional category: Profesor Titular de Universidad **Educational Management (Yes/No):** Yes
City employing entity: Córdoba, Andalusia, Spain
Phone: 957218352 **Email:** dgballester@uco.es
Start date: 04/09/2019
Type of contract: Civil servant **Dedication regime:** Full time
Primary (UNESCO code): 240300 - Biochemistry; 241501 - Molecular biology of micro-organisms; 241502 - Molecular biology of plants

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Córdoba	Profesor Contratado Doctor	15/01/2018
2	MEC / Universidad de Córdoba	Contratado Ramón y Cajal	16/01/2012
3	Universidad de Córdoba	Contratado Postdoctoral	02/07/2011
4	Universidad de Córdoba	Contratado Marie Curie (reincorporación)	02/07/2010
5	Carnegie Institution of Science	Contratado Postdoctoral	01/07/2009
6	Universidad de Córdoba	Contratado Marie Curie (outgoing)	01/07/2007
7	MEC/Fullbright	Contratado Postdoctoral	01/06/2006
8	Carnegie Institution of Science	Contratado Postdoctoral	03/02/2006
9	Universidad de Córdoba	Contratado Postdoctoral	01/09/2005
10	Universidad de Córdoba	Becario FPDJ Junta Andalucía	01/07/2001

1 **Employing entity:** Universidad de Córdoba **Type of entity:** University
Professional category: Profesor Contratado Doctor
Start-End date: 15/01/2018 - 02/09/2019

- 2** **Employing entity:** MEC / Universidad de Córdoba
Professional category: Contratado Ramón y Cajal
Start-End date: 16/01/2012 - 15/01/2018 **Duration:** 7 years
- 3** **Employing entity:** Universidad de Córdoba **Type of entity:** University
Professional category: Contratado Postdoctoral
Start-End date: 02/07/2011 - 31/12/2011 **Duration:** 6 months
- 4** **Employing entity:** Universidad de Córdoba **Type of entity:** University
Professional category: Contratado Marie Curie (reincorporación)
Start-End date: 02/07/2010 - 01/07/2011 **Duration:** 1 year
- 5** **Employing entity:** Carnegie Institution of Science
Professional category: Contratado Postdoctoral
Start-End date: 01/07/2009 - 30/06/2010 **Duration:** 1 year
- 6** **Employing entity:** Universidad de Córdoba **Type of entity:** University
Professional category: Contratado Marie Curie (outgoing)
Start-End date: 01/07/2007 - 30/06/2009 **Duration:** 2 years
- 7** **Employing entity:** MEC/Fullbright
Professional category: Contratado Postdoctoral
Start-End date: 01/06/2006 - 30/06/2007 **Duration:** 1 year - 1 month
- 8** **Employing entity:** Carnegie Institution of Science
Professional category: Contratado Postdoctoral
Start-End date: 03/02/2006 - 31/05/2006 **Duration:** 4 months
- 9** **Employing entity:** Universidad de Córdoba **Type of entity:** University
Professional category: Contratado Postdoctoral
Start-End date: 01/09/2005 - 28/02/2006 **Duration:** 6 months
- 10** **Employing entity:** Universidad de Córdoba **Type of entity:** University
Professional category: Becario FPDJ Junta Andalucía
Start-End date: 01/07/2001 - 30/06/2005 **Duration:** 4 years



Education

University education

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

Name of qualification: Licenciado en Bioquímica

Degree awarding entity: Universidad de Córdoba

Date of qualification: 30/09/1998

Type of entity: University

Teaching experience

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Estudios Experimentales sobre el metabolismo de la producción de hidrógeno en consorcios de Algas-bacterias
Type of project: Doctoral thesis
Entity: Universidad de Córdoba y Universidad de Teheran
Student: Neda Fakhimi
Obtained qualification: Sobresaliente Cumlaude
Date of reading: 10/10/2019
Type of entity: University
- 2** **Project title:** Biorremediación de aguas residuales provenientes de industrias aceiteras usando consorcios algas-bacterias
Type of project: End of course project
Entity: Universidad de Córdoba
Student: Maria del Carmen Cordero de la Hera
Date of reading: 06/2019
Type of entity: University
- 3** **Project title:** Identificación de bacterias presentes en residuos de la industria olivarera para su potencial uso en biorremediación mediante consorcios algas-bacterias
Type of project: End of course project
Entity: Universidad de Córdoba
Student: Lucia Rodriguez Rejano
Date of reading: 06/2019
Type of entity: University
- 4** **Project title:** Estudios sobre la funcionalidad del gen MEX1 y su relación con la producción de hidrógeno en Chlamydomonas
Type of project: End of course project
Entity: Universidad de Córdoba
Student: Rafael Serrano Berzosa
Date of reading: 21/09/2018
Type of entity: University



- 5** **Project title:** Papel del ácido acético en la producción de H₂ del alga *Chlamydomonas reinhardtii* (BQ16-13-BBM)
Type of project: End of course project
Entity: Universidad de Córdoba **Type of entity:** University
Student: Belen Fernandez Melero
Obtained qualification: 9.3
Date of reading: 06/2017
- 6** **Project title:** Optimización de la producción de hidrógeno en el alga *Chlamydomonas* mediante el uso de mutantes y condiciones de cultivo no estresantes
Type of project: Doctoral thesis
Co-director of thesis: Aurora Galvan Cejudo
Entity: Universidad de Córdoba **Type of entity:** University
Student: Jose Luis Jurado Oller
Obtained qualification: Sobresaliente (cum laude)
Date of reading: 16/12/2016
Quality recognition: Yes
- 7** **Project title:** Escrutinio por genética inversa basada en PCR de una biblioteca de mutantes insercionales de *Chlamydomonas*
Type of project: End of course project
Co-director of thesis: Emilio Fernandez Reyes
Entity: Universidad de Córdoba **Type of entity:** University
Student: Maria Illescas Morente
Date of reading: 06/2016
- 8** **Project title:** Bioproducción de H₂ en algas
Type of project: End of course project
Co-director of thesis: Aurora Galvan Cejudo
Entity: Universidad de Córdoba **Type of entity:** University
Student: Francisco Javier Jimenez Pastor
Date of reading: 22/07/2014
- 9** **Project title:** Aislamiento de estirpes de *Chlamydomonas* que sobreacumulen almidón y sobreproduzca H₂
Type of project: Work leading to an ASD
Co-director of thesis: Aurora Galvan Cejudo
Entity: Universidad de Córdoba **Type of entity:** University
Student: Jose Luis Jurado Oller
Date of reading: 2011
- 10** **Project title:** Reverse genetics in *Chlamydomonas*; a platform for isolating insertional mutants
Type of project: Work leading to an ASD
Co-director of thesis: Arthur Grossman
Entity: Carnegie Institution of Science (Stanford University) **Type of entity:** University
City of entity: Stanford, United States of America
Student: Mathew Prior
Date of reading: 2010

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:** Gestión sostenible de residuos lácteos y olivareros a través de la multivalorización integrada de la biomasa de microalgas (MULTIVALGA)
Entity where project took place: Universidad de Córdoba **Type of entity:** University
Name principal investigator (PI, Co-PI....): David Gonzalez-Ballester; Alexandra Dubini
Nº of researchers: 3
Type of participation: Principal investigator
Name of the programme: Proyectos de I+D+i - RTI Tipo Coord
Code according to the funding entity: PID2019-105936RB-C22
Start-End date: 01/06/2020 - 31/05/2024 **Duration:** 4 years
- 2** **Name of the project:** Producción de hidrógeno y otros biocombustibles en microalgas: metabolismo de foto-asimilación de acetato en hipoxia. 1381175-F
Entity where project took place: Universidad de Córdoba **Type of entity:** University
Name principal investigator (PI, Co-PI....): David Gonzalez-Ballester; Alexandra Dubini
Nº of researchers: 2
Funding entity or bodies: UCO-FEDER Andalucía
Start-End date: 2022 - 2022
Total amount: 34.650 €
- 3** **Name of the project:** Wastewater bioremediation using Algae-Bacteria consortia for rural Area (WABA)
Geographical area: European Union
Degree of contribution: Researcher
Entity where project took place: Universidad de Córdoba **Type of entity:** University
Name principal investigator (PI, Co-PI....): Alexandra Dubini; David Gonzalez Ballester; Aurora Galván Cejudo
Nº of researchers: 3
Funding entity or bodies: Unión Europea
Type of participation: Team member
Name of the programme: ERANETMED
Start-End date: 2017 - 2020 **Duration:** 3 years
- 4** **Name of the project:** ALGARED+ - RED transfronteriza para el desarrollo de productos innovadores con microALGAs
Entity where project took place: Universidad de Cordoba



Name principal investigator (PI, Co-PI....): Emilio Fernandez Reyes; Aurora Galvan Cejudo; Angel Llamas Azua; David Gonzalez Ballester

Nº of researchers: 4

Funding entity or bodies:

75% FONDOS FEDER // 25% UNIVERSIDAD DE CORDOBA

Type of participation: Team member

Code according to the funding entity: POCTEP-0055_ALGARED_PLUS_5_E

Start-End date: 01/10/2015 - 31/12/2019

Total amount: 143.476 €

5 Name of the project: Señalización y metabolismo de Nitrato en Chlamydomonas (NISEME).
BFU2015-70649-P

Degree of contribution: Researcher

Entity where project took place: Universidad de Córdoba **Type of entity:** University

Name principal investigator (PI, Co-PI....): Aurora Galván Cejudo; Emilio Fernandez Reyes

Nº of researchers: 4

Funding entity or bodies:

Ministerio de Economía y Competitividad

Type of entity: State agency

Type of participation: Team member

Start-End date: 01/01/2016 - 31/12/2018

Total amount: 176.400 €

6 Name of the project: Estudios del metabolismo del hidrógeno en algas y cianobacterias

Geographical area: UCO

Entity where project took place: Universidad de Córdoba **Type of entity:** University

Name principal investigator (PI, Co-PI....): Alexandra Dubini; David Gonzalez Ballester; Jose Manuel García Fernández

Nº of researchers: 3

Funding entity or bodies:

80% Fondos FEDER; 20% UCO

Type of entity: State agency

Type of participation: Principal investigator

Start-End date: 2016 - 2018

Total amount: 22.000 €

7 Name of the project: Fotoproducción de Hidrógeno en Algas

Entity where project took place: Universidad de Córdoba **Type of entity:** University

Name principal investigator (PI, Co-PI....): David Gonzalez Ballester

Nº of researchers: 1

Funding entity or bodies:

Ministerio de Ciencia e Innovación. Investigación **Type of entity:** Contrato Ramón y Cajal

City funding entity: Madrid, Community of Madrid, Spain

Start-End date: 2012 - 2016

8 Name of the project: Genómica funcional de la asimilación de nitrógeno y producción de energía en Chlamydomonas

Degree of contribution: Researcher

Type of entity: University



Entity where project took place: Universidad de Córdoba

Name principal investigator (PI, Co-PI....): Emilio Fernandez Reyes

Funding entity or bodies:

PLAN NACIONAL I+D, MINISTERIO DE CIENCIA Y TECNOLOGÍA

Type of participation: Team member

Code according to the funding entity: BFU2011-29338

Start-End date: 01/01/2012 - 30/06/2015

Duration: 36 months

Total amount: 263.780 €

- 9 Name of the project:** Señalización positiva y negativa para la asimilación de nitrato y la producción de hidrógeno

Degree of contribution: Researcher

Entity where project took place: Universidad de Córdoba **Type of entity:** University

Name principal investigator (PI, Co-PI....): Emilio Fernandez Reyes

Funding entity or bodies:

Consejería de Innovación, Ciencia y Empresa

Type of participation: Team member

Code according to the funding entity: P12-BIO-502

Start-End date: 30/01/2012 - 29/01/2015

Duration: 3 years

Total amount: 168.614 €

- 10 Name of the project:** The acclimation of photosynthetic organisms to sulphur deprivation

Geographical area: Non EU International

Degree of contribution: Researcher

Entity where project took place: Carnegie Institution of Science (Stanford)

City of entity: Stanford, United States of America

Name principal investigator (PI, Co-PI....): Fernández, E; GONZALEZ-BALLESTER, D; Grossman, A

Nº of researchers: 3

Funding entity or bodies:

ACCIONES MARIE CURIE, COMISIÓN EUROPEA

Type of participation: Principal investigator

Code according to the funding entity: MOIF-CT-2006-040208

Start-End date: 01/07/2007 - 30/06/2011

Duration: 3 years

Total amount: 244.368,97 €

- 11 Name of the project:** Genetic, Genomic and Biochemical Approaches to Elucidate Control of Sulfur Deprivation Responses'

Entity where project took place: Carnegie Institution of Science (Stanford)

City of entity: Stanford, United States of America

Name principal investigator (PI, Co-PI....): Grossman A

Funding entity or bodies:

National Science Foundation (USA)

Type of participation: Team member

Code according to the funding entity: MCB0235878

Start-End date: 2008 - 2010

Dedication regime: Full time



- 12** **Name of the project:** Genómica funcional de la asimilación de nitrato en Chlamydomonas
Geographical area: National
Degree of contribution: Researcher
Entity where project took place: Universidad de Córdoba **Type of entity:** University
Name principal investigator (PI, Co-PI....): AURORA GALVÁN CEJUDO
Nº of researchers: 4
Funding entity or bodies:
PLAN NACIONAL I+D, MINISTERIO DE CIENCIA Y TECNOLOGÍA
Type of participation: Team member
Code according to the funding entity: BFU2005-07521
Start-End date: 31/12/2005 - 14/10/2008 **Duration:** 36 months
Total amount: 190.400 €
- 13** **Name of the project:** Sensors and signals in plant productivity (PLUSN)
Geographical area: European Union
Degree of contribution: Researcher
Entity where project took place: Universidad de Córdoba **Type of entity:** University
Name principal investigator (PI, Co-PI....): EMILIO FERNÁNDEZ REYES
Nº of researchers: 5
Funding entity or bodies:
IV PROGRAMA MARCO DE LA UNIÓN EUROPEA, COMISIÓN EUROPEA
Type of participation: Team member
Code according to the funding entity: RTN2-2001-00387
Start-End date: 01/01/2002 - 31/12/2005 **Duration:** 60 months
Total amount: 201.600 €
- 14** **Name of the project:** Señalización y eficiencia en la asimilación de nitrato en Chlamydomonas: aproximaciones de genómica funcional
Geographical area: National
Degree of contribution: Researcher
Entity where project took place: Universidad de Córdoba **Type of entity:** University
City of entity: Universidad de Cordoba,
Name principal investigator (PI, Co-PI....): AURORA GALVÁN CEJUDO
Nº of researchers: 10
Funding entity or bodies:
PLAN NACIONAL I+D, MINISTERIO DE CIENCIA Y TECNOLOGÍA
Type of participation: Team member
Code according to the funding entity: BMC2002-03325
Start-End date: 01/12/2002 - 30/11/2005 **Duration:** 36 months
Total amount: 189.150 €
- 15** **Name of the project:** Metabolismo del nitrógeno inorgánico en algas
Geographical area: Regional
Degree of contribution: Researcher
Entity where project took place: Universidad de Córdoba **Type of entity:** University
Name principal investigator (PI, Co-PI....): EMILIO FERNÁNDEZ REYES



Nº of researchers: 10

Funding entity or bodies:

PLAN ANDALUZ DE INVESTIGACIÓN (PAI), JUNTA DE ANDALUCÍA

Type of participation: Team member

Code according to the funding entity: CVI128

Start-End date: 2001 - 2005

Duration: 60 months

16 Name of the project: Programa propio de ayuda a la investigación UCO

Geographical area: Regional

Degree of contribution: Researcher

Entity where project took place: Universidad de Córdoba **Type of entity:** University

Name principal investigator (PI, Co-PI....): EMILIO FERNÁNDEZ REYES

Nº of researchers: 10

Funding entity or bodies:

PLAN PROPIO, UNIVERSIDAD DE CÓRDOBA

Type of participation: Team member

Code according to the funding entity: PROGRAMA PROPIO UCO

Start-End date: 1999 - 2005

Duration: 72 months

17 Name of the project: Control of plant metabolism and development by nitrogen signalling

Geographical area: European Union

Degree of contribution: Researcher

Entity where project took place: Universidad de Córdoba **Type of entity:** University

Name principal investigator (PI, Co-PI....): EMILIO FERNÁNDEZ REYES

Nº of researchers: 7

Funding entity or bodies:

IV PROGRAMA MARCO DE LA UNIÓN EUROPEA, COMISIÓN EUROPEA

Type of participation: Team member

Code according to the funding entity: BIO4 CT97-2231

Start-End date: 01/10/1997 - 30/09/2000

Duration: 48 months

Total amount: 200.000 €

Dedication regime: Full time

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

1 Name of the project: Papel del polifosfato en los procesos de fotoprotección en Chlamydomonas

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Sanz-Luque, E; Gonzalez-Ballester, D

Nº of researchers: 2

Funding entity or bodies:

Carnegie of Science

Type of entity: Foundation

City funding entity: Stanford, United States of America

Start date: 2020

Total amount: 11.500 €



2 **Name of the project:** Preliminary Characterization of FDX Knock-out Mutants and Generation of FDX1 Knock-down Mutants

Degree of contribution: Scientific coordinator

Name principal investigator (PI, Co-PI....): David Gonzalez Ballester; Alexandra Dubini

Nº of researchers: 2

Funding entity or bodies:

National Renewable Energy Laboratory

Type of entity: State agency

City funding entity: United States of America

Type of project: Cooperation

Start date: 01/2016

Duration: 10 months

Total amount: 86.000 €

Percentage as grant: 86.000

3 **Name of the project:** Captación de CO₂ y fotoproducción de hidrógeno en alga eucariota Chlamydomonas

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): EMILIO FERNÁNDEZ REYES

Nº of researchers: 8

Funding entity or bodies:

MICINN, Plan E, UG400396

Code according to the funding entity: CONV 188/09

Start date: 01/01/2010

Duration: 30 months

Total amount: 400.000 €

Scientific and technological activities

Scientific production

H index: 16

Date of application: 20/02/2022

Fuente de Índice H: SCOPUS

Publications, scientific and technical documents

1 Maria Jesus Torres; David Gonzalez-Ballester; Aitor Gómez-Osuna; Aurora Galván; Emilio Fernández; Alexandra Dubini. Chlamydomonas-Methylobacterium oryzae cooperation leads to increased biomass, nitrogen removal and hydrogen production. Bioresource Technology. 352, Elsevier, 2022. Available on-line at: <10.1016/j.biortech.2022.127088>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

2 Fakhimi, N; Gonzalez-Ballester, D; Fernandez, E; Galvan, A; Dubini, A. Algae-Bacteria Consortia as a Strategy to Enhance H₂ Production. Cells. 9 - 6, 2020.

Type of production: Scientific paper

Format: Journal

3 Subramanian V; Wecker MSA; Gerritsen A; Boehm M; Xiong W; Wachter B; Dubini A; Gonzalez-Ballester D; Antonio RV; Ghirardi M. FDX5 deletion affects metabolism of algae during the different phases of S-deprivation. Plant Physiology. 07/2019.

DOI: 10.1104/pp.19.00457

**Type of production:** Scientific paper**Format:** Journal

- 4** Neda Fakhimi; Alexandra Dubini; Tavakoli O; David Gonzalez-Ballester. Acetic acid is key for synergetic hydrogen production in Chlamydomonas-bacteria co-cultures. Bioresource Technology. Elsevier Ltd, 06/2019.

DOI: 10.1016/j.biortech.2019.121648**Type of production:** Scientific paper**Format:** Journal

- 5** Fakhimi, N.; Tavakoli, O.; Marashi, S.-A.; Moghimi, H.; Mehrnia, M.R.; Dubini, A; González-Ballester, D. Acetic acid uptake rate controls H₂ production in Chlamydomonas-bacteria co-cultures. Algal Research. 42 - 101605, Elsevier, 06/2019.

DOI: 10.1016/j.algal.2019.101605**Type of production:** Scientific paper**Format:** Journal

- 6** Ghiradi; Subramanian, V.; Wecker, M.S.A.; Smolinski, S.; Antonio RV; Xiong W; Gonzalez-Ballester D; Ghirardi M L; Dubini A. Survey of the anaerobic metabolism of various laboratory wild-type Chlamydomonas reinhardtii strains. Algal Research. 35, pp. 355 - 361. Elsevier, 01/11/2018. ISSN 2211-9264

DOI: <https://doi.org/10.1016/j.algal.2018.05.002>**Type of production:** Scientific paper**Format:** Journal**Impact source:** ISI**Category:** BIOTECHNOLOGY & APPLIED MICROBIOLOGY**Impact index in year of publication:** 3.745**Journal in the top 25%:** Yes**Position of publication:** 38**No. of journals in the cat.:** 161

- 7** David Gonzalez Ballester; Sanz-Luque E; Galvan A; Fernandez E; de Montaigne A. Arginine is a component of the ammonium-CYG56 signalling cascade that represses genes of the nitrogen assimilation pathway in Chlamydomonas reinhardtii. Plos One. 13 - 4, 04/04/2018. ISSN 1932-6203

DOI: <https://doi.org/10.1371/journal.pone.0196167>**Type of production:** Scientific paper**Format:** Journal**Impact source:** ISI**Category:** Multidisciplinary Sciences**Impact index in year of publication:** 2.776**Journal in the top 25%:** Yes**Position of publication:** 16**No. of journals in the cat.:** 64

- 8** David Gonzalez-Ballester; Jose Luis Jurado-Oller; Aurora Galvan; Emilio Fernandez; Alexandra Dubini. H₂ production pathways in nutrient-replete mixotrophic Chlamydomonas cultures under low light. Response to the commentary article "on the pathways feeding the H₂ production process in nutrient-replete, hypoxic conditions," by Alberto Scoma and Szilvia Z. Tóth. Biotechnology for Biofuels. 10 - 1, BioMed Central Ltd, 05/05/2017.

DOI: <https://doi.org/10.1186/s13068-017-0801-5>**Type of production:** Scientific paper**Format:** Journal**Corresponding author:** Yes**Impact source:** ISI**Category:** BIOTECHNOLOGY & APPLIED MICROBIOLOGY**Impact index in year of publication:** 5.497**Journal in the top 25%:** Yes**Position of publication:** 16**No. of journals in the cat.:** 161

- 9** Muñoz-Marin, MC; Gomez-Baena, G; Diez, J; Beynon, RJ; David Gonzalez-Ballester; Zubkov, MV; Garcia-Fernandez, JM. Glucose uptake in Prochlorococcus: Diversity of kinetics and effects on the metabolism. Frontiers in Microbiology. 8, Frontiers Research Foundation, 08/03/2017. ISSN 1664-302X

DOI: doi: 10.3389/fmicb.2017.00327**Type of production:** Scientific paper**Format:** Journal**Impact source:** ISI**Category:** MICROBIOLOGY



Impact index in year of publication: 4.019
Position of publication: 32

Journal in the top 25%: No
No. of journals in the cat.: 126

- 10** Jurado-Oller, JL; Dubini A; Galvan A; Fernandez, E; GONZALEZ-BALLESTER, D. Low oxygen levels contribute to improve photohydrogen production in mixotrophic nonstressed Chlamydomonas cultures. BIOTECHNOLOGY FOR BIOFUELS. 8 - 149, pp. 4 - 14. Biomed Central LTD, 2015. Available on-line at: <doi:10.1186/s13068-015-0341-9>. ISSN 1754-6834

DOI: <https://doi.org/10.1186/s13068-015-0341-9>

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: BIOTECHNOLOGY & APPLIED MICROBIOLOGY

Impact index in year of publication: 6.44

Journal in the top 25%: Yes

Position of publication: 12

No. of journals in the cat.: 161

- 11** GONZALEZ-BALLESTER, D; Jurado-Oller, JL; Fernandez, E. Relevance of nutrient media composition for hydrogen production in Chlamydomonas. PHOTOSYNTHESIS RESEARCH. 25 - 3, pp. 395 - 406. 2015. Available on-line at: <doi: 10.1007/s11120-015-0152-7. Epu>. ISSN 01668595

DOI: <https://doi.org/10.1007/s11120-015-0152-7>

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: Plant Science

Impact index in year of publication: 4.122

Journal in the top 25%: Yes

Position of publication: 19

No. of journals in the cat.: 209

- 12** Munevver, A; Pootakham,W; Pollock, S; Moseley, J; GONZALEZ-BALLESTER, David; Grossman, A. Tiered Regulation of Sulfur Deprivation Responses in Chlamydomonas reinhardtii and Identification of an Associated Regulatory Factor.PLANT PHYSIOLOGY. 162, pp. 195 - 211. American Soc Plant Biologist, 2013.

DOI: <https://doi.org/10.1104/pp.113.214593>

Type of production: Scientific paper

Format: Journal

Impact source: ISI

Category: Plant Science

Impact index in year of publication: 7.394

Journal in the top 25%: Yes

Position of publication: 6

No. of journals in the cat.: 199

- 13** DAVID GONZÁLEZ BALLESTER; Pootakham,W; Mus,F; Yang,W; Catalanotti,C; Magneschi,L; de Montaigu, A; Higuera-Sobrino, JJ; Prior,M; Galván, A; Fernández, E; Grossman,A. Reverse genetics in Chlamydomonas: a platform for isolating insertional mutants. PLANT METHODS. 7 - 24, Biomed Central LTD, 2011. Available on-line at: <doi: 10.1186/1746-4811-7-24>.

DOI: <https://doi.org/10.1186/1746-4811-7-24>

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: Plant Science

Impact index in year of publication: 2.833

Journal in the top 25%: Yes

Position of publication: 48

No. of journals in the cat.: 199

- 14** Pootakham,W; DAVID GONZÁLEZ BALLESTER; Grossman, A. Identification and regulation of plasma membrane sulfate transporters in Chlamydomonas. PLANT PHYSIOLGY. 153, pp. 1653 - 1668. Amer Soc Plant Biologist, 2010.

DOI: [doi: 10.1104/pp.110.157875](https://doi.org/10.1104/pp.110.157875)



Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 6.451
Position of publication: 8

Format: Journal
Category: Plant Science
Journal in the top 25%: Yes
No. of journals in the cat.: 188

- 15** GONZALEZ-BALLESTER, D; Casero,D; Cokus,S; Pellegrini,M; Merchant,S; Grossman, A. RNA-seq analysis of sulfur-deprived Chlamydomonas cells reveals aspects of acclimation critical for cell survival. PLANT CELL. 22, pp. 2058 - 2084. Amer Soc Plant Biologist, 2010.

DOI: doi: 10.1105/tpc.109.071167

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 8.987

Position of publication: 5

Format: Journal

Corresponding author: Yes

Category: Plant Science

Journal in the top 25%: Yes

No. of journals in the cat.: 190

Relevant results: Recomendada por el F1000 Prime

- 16** Moseley,JI; GONZALEZ-BALLESTER, D; Pootakham,W; Bailey,S; Grossman,A. Genetic interactions between regulators of Chlamydomonas phosphorus and sulfur deprivation responses. GENETICS. 181, pp. 889 - 905. Genetics Soc Amer, 2009.

DOI: doi: 10.1534/genetics.108.099382

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 3.889

Position of publication: 38

Source of citations: SCOPUS

Format: Journal

Category: Science Edition - GENETICS & HEREDITY

Journal in the top 25%: No

No. of journals in the cat.: 146

Citations: 31

- 17** GONZALEZ-BALLESTER, D; Pollock,S; Pootakham,W; Grossman,A. The central role of a SNRK2 kinase in sulfur deprivation responses. PLANT PHYSIOLOGY. 147, pp. 216 - 227. Amer Soc of Plant Biologist, 2008.

DOI: https://doi.org/10.1104/pp.108.116137

Type of production: Scientific paper

Corresponding author: Yes

Impact source: ISI

Impact index in year of publication: 6.110

Position of publication: 8

Format: Journal

Category: Plant Science

Journal in the top 25%: Yes

No. of journals in the cat.: 156

- 18** Llamas, A; Tejada-Jiménez, M; GONZALEZ-BALLESTER, D; Higuera-Sobrino, JJ; Schwarz, G; Galván, A; Fernández, E. Chlamydomonas reinhardtii CNX1e reconstitutes molybdenum cofactor biosynthesis in Escherichia coli mutants. EUKARYOTIC CELL. 6 - 6, pp. 1063 - 1067. Amer Soc Microbiology, 2007.

DOI: doi: 10.1128/EC.00072-07

Type of production: Scientific paper

Position of signature: 3

Impact source: ISI

Impact index in year of publication: 3.399

Position of publication: 20

Source of citations: SCOPUS

Format: Journal

Category: Microbiology

Journal in the top 25%: Yes

No. of journals in the cat.: 93

Citations: 12

- 19** Galván, A; GONZALEZ-BALLESTER, D; Fernández, E. Insertional mutagenesis as a tool to study genes/functions in *Chlamydomonas*. ADV EXP MED BIOL. 617, pp. 77 - 88. Springer, 2007.
DOI: DOI: 10.1007/978-0-387-75532-8_7
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of chapter in book
Impact source: ISI **Category:** Medicine, Research and Experimental
Impact index in year of publication: 0.663 **Journal in the top 25%:** No
Position of publication: 72 **No. of journals in the cat.:** 81
- 20** Camargo, A; Llamas, A; Schnell, A; Higuera-Sobrino, JJ; GONZALEZ-BALLESTER, D; Lefebvre, P; Fernández, E; Galván, A. Nitrate signaling by the regulatory gene NIT2 in *Chlamydomonas*. PLANT CELL. 19 - 11, pp. 3491 - 3503. Amer Soc Plant Biologist, 2007.
DOI: <https://doi.org/10.1105/tpc.106.045922>
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Plant Science
Impact index in year of publication: 9.653 **Journal in the top 25%:** Yes
Position of publication: 3 **No. of journals in the cat.:** 152
- 21** Merchan,S; Prochnik,S; Vallon,O; Harris,Eh; Karpowicz,S; Witman,G; Terry,A; Salamov,A; Fritz-Laylin,L; Marechal-Drouard,L; Marshall,W; Qu,L; Nelson,D; Sanderfoot,A; Spalding,M; Kapitonov,W; Ren,Q; Ferris,P; Lindquist,E; Shapiro,H; Fernández, E; Fukuzawa,H; GONZALEZ-BALLESTER, D; et al.. The *Chlamydomonas* genome reveals the evolution of key animal and plant functions. SCIENCE. 318 - 5848, pp. 245 - 251. Amer Associ Adv Science, 2007.
DOI: doi: 10.1126/science.1143609
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Multidisciplinary
Impact index in year of publication: 26.372 **Journal in the top 25%:** Yes
Position of publication: 2 **No. of journals in the cat.:** 56
Relevant results: 5 veces recomendada por el F1000 Prime
- 22** GONZALEZ-BALLESTER, D; Montaigu, A; Higuera-Sobrino, J J; Galván, A; Fernández,. Functional genomics of the regulation of the nitrate assimilation pathway in *Chlamydomonas*. PLANT PHYSIOLOGY. 137 - 2, pp. 522 - 533. Amer Soc Plant Biologist, 2005.
DOI: DOI: <https://doi.org/10.1104/pp.104.050914>
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Plant Science
Impact index in year of publication: 6.114 **Journal in the top 25%:** Yes
Position of publication: 7 **No. of journals in the cat.:** 144
Relevant results: Recomendada por el F1000 Prime
- 23** GONZALEZ-BALLESTER, D; Montaigu, A; Galván, A; Fernández, E. Restriction enzyme site-directed amplification PCR: a tool to identify regions flanking a marker DNA. ANALYTICAL BIOCHEMISTRY. 340 - 2, pp. 330 - 335. Elsevier, 2005.
DOI: DOI: 10.1016/j.ab.2005.01.031
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Chemistry, Analytical
Impact index in year of publication: 2.948 **Journal in the top 25%:** Yes
Position of publication: 9 **No. of journals in the cat.:** 68



- 24** GONZALEZ-BALLESTER, D; Camargo, A; Fernández, E. Ammonium transporter genes in Chlamydomonas: the nitrate-specific regulatory gene NIT2 is involved in AMT1;1 expression. PLANT MOLECULAR BIOLOGY. 56 - 6, pp. 863 - 878. Springer, 2004.
DOI: DOI: 10.1007/s11103-004-5292-7
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Plant Science
Impact index in year of publication: 3.328 **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 144
Relevant results: Recomendada por el F1000 Prime
- 25** Leon-Bañares, R; GONZALEZ-BALLESTER, D; Galván, A; Fernández, E. Transgenic microalgae as green cell-factories. TRENDS IN BIOTECHNOLOGY. 22 - 1, pp. 45 - 52. Elsevier, 2004.
DOI: DOI: 10.1016/j.tibtech.2003.11.003
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Applied Microbiology and Biotechnology
Impact index in year of publication: 8.606 **Journal in the top 25%:** Yes
Position of publication: 4 **No. of journals in the cat.:** 133
- 26** Dubini A; GONZALEZ-BALLESTER, D. Biohydrogen from microalgae. ALGAE BIOTECHNOLOGY: PRODUCTS AND PROCESSES. pp. 165 - 193. Springer, 2016. ISBN 978-3-319-12333-2
DOI: 10.1007/978-3-319-12334-9
Type of production: Book chapter **Format:** Book
- 27** Grossman, A; GONZALEZ-BALLESTER, D; Bailey,S; Karpowicz, S; Merchant, SM. Understanding Photosynthetic Electron Transport Using Chlamydomonas: The Path from Classical Genetics to High Throughput Genomics. FUNCTIONAL GENOMICS AND EVOLUTION OF PHOTOSYNTHETIC SYSTEMS. 33, pp. 139 - 176. Springer, 2012. ISBN 978-94-007-1533-2
DOI: DOI: 10.1007/978-94-007-1533-2_6
Type of production: Book chapter **Format:** Book
- 28** Grossman,Ar; GONZALEZ-BALLESTER, D; SHIBAGAKI,N; Pootakham,W; Moseley,Jl. Responses to macronutrient deprivation. ABIOTICS STRESS ADAPTATION IN PLANTS. pp. 307 - 348. Springer, 2010. ISBN 978-90-481-3112-9
DOI: https://doi.org/10.1007/978-90-481-3112-9_15
Type of production: Book chapter **Format:** Book
Degree of contribution: Author or co-author of chapter in book
- 29** GONZALEZ-BALLESTER, D; Grossman,A. Sufur: from acquisition to assimilation. THE CHLAMYDOMONAS SOURCEBOOK. 2, pp. 159 - 187. Elsevier, 2009. ISBN 978-0-12-370873-1
DOI: https://doi.org/10.1016/B978-0-12-370873-1.00013-7
Type of production: Book chapter **Format:** Book
Degree of contribution: Author or co-author of chapter in book
- 30** Galván, A; Mariscal-Romero, V; GONZALEZ-BALLESTER, D; Fernández, E. The green alga Chlamydomonas as a tool to study the nitrate assimilation pathway in plants. MODEL PLANTS, CROP IMPROVEMENT. pp. 125 - 158. CRC, 2006. ISBN 978-0849330636
DOI: DOI: 10.1201/9780849330636.ch7
Type of production: Book chapter **Format:** Book
Degree of contribution: Author or co-author of chapter in book



- 31** Leon-Bañares, R; Vila, M; Quijano,E; GONZALEZ-BALLESTER, D; Galván, A; Fernández, E. Manipulación genética de microalgas para su utilización en la alimentación de especies de interés acuícola. Proceedings del II congreso iberoamericano de acuicultura. pp. 504 - 511. 2003. ISBN 84-609-0184-X

Type of production: Book chapter

Format: Book

Degree of contribution: Author or co-author of chapter in book

- 32** J. L. J. Oller; GONZALEZ-BALLESTER, D; A. Galvan; E. Fernandez. Hydrogen photoproduction in Chlamydomonas. FEBS J. 279, pp. 331 - 331. Wiley-Blackwell, 2012.

Type of production: Conference paper

Format: Journal

Impact source: ISI

Impact index in year of publication: 4.250