

c v n CURRÍCULUM VITAE NORMALIZADO



Rubén Martínez Buey

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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.

Google Scholar:

h index= 30

i10 index = 47

Total citations = 3827

Scientific Articles: 49 (37 in Q1)

Book chapters: 3

Reviews: 2

Scientific-technical reports: 1

Rubén Martínez Buey

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Current professional situation

Employing entity: Universidad de Salamanca **Type of entity:** University
Department: Microbiology and Genetics, Faculty of Biology
Professional category: Associate Professor
Start date: 02/10/2020
Type of contract: Civil servant **Dedication regime:** Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Salamanca	Profesor Contratado Doctor permanente	28/05/2017
2	Universidad de Salamanca	Investigador post-doctoral programa "Ramón y Cajal"	01/06/2012
3	Consejo Superior de Investigaciones Científicas	Investigador post-doctoral programa "Juan de la Cierva"	01/05/2010
4	Instituto Paul Scherrer	Investigador post-doctoral	01/09/2007
5	Universidad Técnica de Munich	Investigador post-doctoral	01/05/2006
6	Consejo Superior de Investigaciones Científicas	Investigador pre-doctoral	01/10/2001

	Employing entity	Professional category	Start date
7	Universidad de Salamanca	Investigador post-graduado	16/07/2001
8	Consejo Superior de Investigaciones Científicas	Investigador pre-graduado	01/11/2000

- 1** **Employing entity:** Universidad de Salamanca **Type of entity:** University
Professional category: Profesor Contratado Doctor permanente
Start-End date: 28/05/2017 - 01/10/2020 **Duration:** 3 years - 5 months - 3 days
Type of contract: Temporary employment contract
Dedication regime: Full time
- 2** **Employing entity:** Universidad de Salamanca **Type of entity:** University
Professional category: Investigador post-doctoral programa "Ramón y Cajal"
Start-End date: 01/06/2012 - 27/05/2017 **Duration:** 4 years - 11 months - 28 days
Type of contract: Temporary employment contract
Dedication regime: Full time
- 3** **Employing entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Department: Unidad de Biología Estructural, Instituto de Biología Molecular y Celular del Cáncer de Salamanca
City employing entity: Salamanca, Castile and León, Spain
Professional category: Investigador post-doctoral programa "Juan de la Cierva"
Start-End date: 01/05/2010 - 31/05/2012 **Duration:** 2 years
Type of contract: Temporary employment contract
Primary (UNESCO code): 230227 - Proteins; 240300 - Biochemistry; 241500 - Molecular biology
- 4** **Employing entity:** Instituto Paul Scherrer
Department: Laboratory of Biomolecular Research, Paul Scherrer Institut
City employing entity: Villigen, Switzerland
Professional category: Investigador post-doctoral
Start-End date: 01/09/2007 - 30/04/2009 **Duration:** 2 years - 8 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Primary (UNESCO code): 240300 - Biochemistry; 241500 - Molecular biology
- 5** **Employing entity:** Universidad Técnica de Munich **Type of entity:** University Research Institute
Department: Dpto. Química Biológica
City employing entity: Freising-Weihenstephan, Oberbayern, Germany
Professional category: Investigador post-doctoral
Start-End date: 01/05/2006 - 31/07/2007 **Duration:** 1 year - 3 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Primary (UNESCO code): 240300 - Biochemistry; 241500 - Molecular biology
- 6** **Employing entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Department: Biología Físico-Química, Centro de Investigaciones Biológicas
City employing entity: Madrid, Community of Madrid, Spain
Professional category: Investigador pre-doctoral



Start-End date: 01/10/2001 - 30/03/2006 **Duration:** 4 years - 6 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Primary (UNESCO code): 240300 - Biochemistry; 241500 - Molecular biology

7 **Employing entity:** Universidad de Salamanca **Type of entity:** University
Department: Dpto. Microbiología y Genética
City employing entity: Salamanca, Castile and León, Spain
Professional category: Investigador post-graduado
Start-End date: 16/07/2001 - 30/09/2001 **Duration:** 2 months - 15 days
Type of contract: Temporary employment contract
Primary (UNESCO code): 240300 - Biochemistry; 241500 - Molecular biology

8 **Employing entity:** Consejo Superior de **Type of entity:** State agency
Investigaciones Científicas
Department: Dpto. Estrés Abiótico, Instituto de Recursos Naturales y Agrobiología de Salamanca
City employing entity: Salamanca, Castile and León, Spain
Professional category: Investigador pre-graduado
Start-End date: 01/11/2000 - 28/02/2001 **Duration:** 4 months
Type of contract: Temporary employment contract
Primary (UNESCO code): 240300 - Biochemistry; 241502 - Molecular biology of plants



Education

University education

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

University degree: Higher degree

Name of qualification: Biochemistry Degree

Degree awarding entity: Universidad de Salamanca **Type of entity:** University

Date of qualification: 22/01/2001

Doctorates

Doctorate programme: Biochemistry and Molecular Biology. PhD

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of degree: 15/12/2005

Thesis director: José Fernando Díaz Pereira

Thesis co-director: José Manuel Andreu Morales

Special doctorate award: Yes

Other postgraduate university studies

Type of education: Postgraduate

Postgraduate qualification: MSc. University of Salamanca

City degree awarding entity: Salamanca, Castile and León, Spain

Degree awarding entity: Universidad de Salamanca **Type of entity:** University

Date of qualification: 20/02/2001

Obtained qualification: Sobresaliente cum laude

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German	A2	A2	A2	A2	A2
Spanish	C2	C2	C2	C2	C2
English	C2	C2	C2	C2	C2



Teaching experience

General teaching experience

- 1** **Type of teaching:** Official teaching
Name of the course: Genética
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Biología
Course given: 2
Start date: 10/12/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 6
Entity: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
Department: Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Subject language: Spanish

Type of teaching: In person theory

Frequency of the activity: 3
End date: 17/03/2022

Type of entity: University
- 2** **Type of teaching:** Official teaching
Name of the course: Genética
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Biotecnología
Course given: 2º
Start date: 17/12/2012
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 0,6
Entity: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
Department: Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Subject language: Spanish

Type of teaching: Laboratory work

Frequency of the activity: 9
End date: 22/12/2021

Type of entity: University
- 3** **Type of teaching:** Official teaching
Name of the course: Regulación de la expresión génica mediante mecanismos epigenéticos
Type of programme: Master's degree
Type of subject: Optional
University degree: Máster Universitario en Biología Celular y Molecular
Start date: 04/03/2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 1,5
Entity: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
Department: Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Subject language: Spanish

Type of teaching: In person theory

End date: 22/04/2019

Type of entity: University



- 4** **Type of teaching:** Official teaching
Name of the course: Genética
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Biología
Course given: 3
Start date: 10/12/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 6
Entity: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
Department: Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Subject language: Spanish
Type of teaching: In person theory
Frequency of the activity: 1
End date: 22/03/2018
Type of entity: University
- 5** **Type of teaching:** Official teaching
Name of the course: Genética
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Biología
Frequency of the activity: 2
Start date: 16/02/2016
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 2,4
Entity: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
Department: Microbiología y Genética
Subject language: Spanish
Type of teaching: In person theory
End date: 18/03/2017
Type of entity: University
- 6** **Type of teaching:** Official teaching
Name of the course: Regulación de la expresión génica mediante mecanismos epigenéticos
Type of programme: Master's degree
Type of subject: Optional
University degree: Máster Universitario en Biología Celular y Molecular
Start date: 23/03/2015
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 1
Entity: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
Department: Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Subject language: Spanish
Type of teaching: In person theory
End date: 17/04/2015
Type of entity: University
- 7** **Type of teaching:** Official teaching
Name of the course: Redacción y Ejecución de Proyectos en Biología
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Biología
Course given: 4º
Start date: 27/11/2014
Type of teaching: In person theory
Frequency of the activity: 2
End date: 11/12/2014



Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 1,2

Entity: Universidad de Salamanca

Faculty, institute or centre: Facultad de Biología

Department: Microbiología y Genética

City of entity: Salamanca, Castile and León, Spain

Subject language: Spanish

Type of entity: University

8 Type of teaching: Official teaching

Name of the course: Simulación y Dinámica Molecular

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master Universitario en Bioinformática y Biología Computacional

Frequency of the activity: 2

Start date: 2004

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 6

Entity: Universidad Complutense de Madrid

Faculty, institute or centre: Facultad de Ciencias Químicas

Department: Bioquímica y Biología Molecular I

City of entity: Madrid, Community of Madrid, Spain

Subject language: Spanish

Type of teaching: Practical work (classroom-problems)

End date: 2004

Type of entity: University

9 Type of teaching: Unofficial teaching

Name of the course: Dinámica Molecular

Type of programme: Curso de la Red Temática de Bionformática del CSIC

Type of subject: Obligatory

University degree: Curso de la Red Temática de Bionformática del CSIC

Frequency of the activity: 1

Start date: 09/12/2002

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 3

Entity: Consejo Superior de Investigaciones Científicas

Faculty, institute or centre: Centro de Investigaciones Biológicas

City of entity: Madrid, Castile and León, Spain

Subject language: Spanish

Type of teaching: In person theory

End date: 09/12/2002

Type of entity: State agency

10 Type of teaching: Official teaching

Name of the course: Biología Molecular

Type of programme: Bachelor's degree

Type of subject: Optional

University degree: Licenciado en Ciencias Químicas

Course given: 3

Start date: 2001

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 2

Entity: Universidad de Salamanca

Faculty, institute or centre: Facultad de Ciencias

Department: Bioquímica y Biología Molecular

City of entity: Salamanca, Castile and León, Spain

Type of teaching: In person theory

Frequency of the activity: 1

End date: 2001

Type of entity: University



Subject language: Spanish

11 Type of teaching: Official teaching

Name of the course: Bioquímica

Type of programme: Bachelor's degree

Type of subject: Obligatory

University degree: Licenciatura en Química

Course given: 1

Start date: 2001

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 10

Entity: Universidad de Salamanca

Faculty, institute or centre: Facultad de Ciencias

Department: Bioquímica y Biología Molecular

City of entity: Salamanca, Castile and León, Spain

Subject language: Spanish

Type of teaching: Practical work (classroom-problems)

Frequency of the activity: 1

End date: 2001

Type of entity: University

Experience supervising doctoral thesis and/or final year projects

1 Project title: El citoesqueleto de microtúbulos como diana de moléculas con actividad antitumoral

Entity: Universidad de Salamanca

Type of entity: University

Student: Laura Hernández Bohórquez

Date of reading: 28/06/2019

2 Project title: Expresión y purificación de proteínas recombinantes en bacterias y su posterior caracterización bioquímica y estructural.

Type of project: Trabajo de Fin de Grado

Entity: Universidad de Salamanca

Type of entity: University

Student: Jorge Herrero Vicente

Date of reading: 30/06/2018

3 Project title: Expresión y purificación de proteínas recombinantes en bacterias y su posterior caracterización bioquímica y estructural. Modificación de la regulación alostérica de IMPDH y GMPR

Type of project: Trabajo de Fin de Grado

Entity: Universidad de Salamanca

Type of entity: University

Student: Álvaro Mielgo Gomez

Obtained qualification: 9.60

Date of reading: 30/06/2017

4 Project title: El citoesqueleto de microtúbulos como diana de moléculas con actividad antitumoral

Entity: Universidad de Salamanca

Type of entity: University

Student: Cesar Corral Manzano

Obtained qualification: 8.20

Date of reading: 30/06/2017

5 Project title: Regulación de la actividad de enzimas de la biosíntesis de purinas

Type of project: Trabajo de Fin de Grado

Entity: Universidad de Salamanca

Type of entity: University

Student: David Fernández Justel

Obtained qualification: Sobresaliente



Date of reading: 05/07/2016

- 6** **Project title:** Caracterización funcional de mutantes patogénicos de la IMP deshidrogenasa
Type of project: Trabajo Fin de Grado
Co-director of thesis: Jesús María Sanz
Entity: Universidad Miguel Hernández de Elche **Type of entity:** University
Student: Eva María Soriano Jerez
Obtained qualification: Sobresaliente
Date of reading: 01/02/2016
- 7** **Project title:** Modificación del hongo *Ashbya gossypii* para incrementar la producción de metabolitos de interés biotecnológico
Type of project: Trabajo Fin de Grado
Entity: Universidad de Salamanca **Type of entity:** University
City of entity: Salamanca, Castile and León, Spain
Student: Sheila Barrios Esteban
Obtained qualification: Sobresaliente
Date of reading: 03/07/2015
- 8** **Project title:** Caracterización funcional de la proteína AgXpt1p implicada en la síntesis de nucleótidos de purina en el hongo filamentoso *Ashbya gossypii*
Type of project: Trabajo Fin de Grado
Co-director of thesis: María Angeles Santos García
Entity: Universidad de Salamanca **Type of entity:** University
City of entity: Salamanca, Castile and León, Spain
Student: Jorge García Lema
Obtained qualification: Sobresaliente
Date of reading: 30/06/2014
- 9** **Project title:** Explorando la diversidad funcional de la familia de las Tiorredoxinas reductasas
Type of project: Trabajo de Fin de Máster
Entity: Universidad de Salamanca **Type of entity:** University
Student: David Fernández Justel
Obtained qualification: 9.30



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:** IMP deshidrogenasa: estructura, función e identificación de compuestos moduladores
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Degree of contribution: Scientific coordinator
Entity where project took place: Universidad de Salamanca **Type of entity:** University
City of entity: Salamanca, Castile and León, Spain
Name principal investigator (PI, Co-PI...): Rubén Martínez Buey
Nº of researchers: 2
Type of participation: Principal investigator
Name of the programme: Proyectos I+D del Subprograma de Generación de Conocimiento
Code according to the funding entity: PID2019-109671GB-I00
Start-End date: 01/06/2020 - 31/05/2024 **Duration:** 4 years
Total amount: 145.000 €
Dedication regime: Full time
- 2** **Name of the project:** Caracterización Estructural y Funcional de la IMP deshidrogenasa más allá de su función catalítica
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Degree of contribution: Scientific coordinator
Entity where project took place: Universidad de Salamanca **Type of entity:** University
City of entity: Salamanca, Castile and León, Spain
Name principal investigator (PI, Co-PI...): Rubén Martínez Buey
Nº of researchers: 1
Type of participation: Principal investigator
Name of the programme: Proyectos I+D del Subprograma de Generación de Conocimiento
Code according to the funding entity: BFU2016-79237-P
Start-End date: 01/01/2017 - 31/12/2020 **Duration:** 4 years
Total amount: 145.000 €
Dedication regime: Full time
- 3** **Name of the project:** Desarrollo de bioprocesos para la valorización de residuos agro-industriales.
Entity where project took place: Universidad de Salamanca **Type of entity:** University
City of entity: Salamanca, Castile and León, Spain
Funding entity or bodies:
Junta de Castilla y León **Type of entity:** 0
City funding entity: Valladolid, Castile and León, Spain
Start-End date: 2017 - 2019



Total amount: 199.650 €

- 4** **Name of the project:** Structural biology of bacterial conjugation, riboflavin biosynthesis, redox regulation and cell adhesion
Type of project: Basic research (including archaeological digs, etc)
Degree of contribution: Researcher
Entity where project took place: Sincrotrón ALBA
City of entity: Sarriena del Vallés, Catalonia, Spain
Name principal investigator (PI, Co-PI...): José María de Pereda; Elena Cabezón; Mónica Balseira; Gabriel Moncalián; Rubén Martínez Buey
Nº of researchers: 5
Type of participation: Principal investigator
Code according to the funding entity: 2014060903
Start-End date: 04/2015 - 12/2015 **Duration:** 3 days
Total amount: 0 €
- 5** **Name of the project:** Conformational dynamics and oligomerization of proteins in solution studied by SAXS
Type of project: Basic research (including archaeological digs, etc)
Degree of contribution: Researcher
Entity where project took place: Sincrotrón ALBA
City of entity: Sarriena del Vallés, Catalonia, Spain
Name principal investigator (PI, Co-PI...): Rubén Martínez Buey; Noemí Bustamante Spuch; Manuel Iglesias Bexiga; Margarita Menéndez Fernández
Nº of researchers: 4
Type of participation: Principal investigator
Code according to the funding entity: 2014071005
Start-End date: 10/02/2015 - 11/02/2015 **Duration:** 1 day
Total amount: 0 €
- 6** **Name of the project:** Plakinas en complejos de adhesión. Bases estructurales de su función e identificación de compuestos moduladores.
Degree of contribution: Researcher
Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
City of entity: Salamanca, Castile and León, Spain
Name principal investigator (PI, Co-PI...): José María de Pereda Vega
Funding entity or bodies: Junta de Castilla y León **Type of entity:** Junta de Castilla y León
City funding entity: Valladolid, Castile and León, Spain
Code according to the funding entity: CS1181A12
Start-End date: 2012 - 2014
- 7** **Name of the project:** Structural biology of redox regulatory and metabolic enzymes
Entity where project took place: Instituto Paul Scherrer- Fuente suiza de luz sincrotrón
City of entity: Villigen, Switzerland
Name principal investigator (PI, Co-PI...): Rubén Martínez Buey
Nº of researchers: 3
Code according to the funding entity: 20130881
Start-End date: 21/10/2013 - 22/10/2013 **Duration:** 1 day
Total amount: 0 €



- 8** **Name of the project:** Modulating EB interactions through small molecules
Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
City of entity: Salamanca, Castile and León, Spain
Name principal investigator (PI, Co-PI....): Rubén Martínez Buey
Funding entity or bodies: Marie Curie Actions **Type of entity:** Marie Curie Actions
Code according to the funding entity: PCIG09-2011-29831
Start-End date: 2011 - 2013
Total amount: 75.000 €
- 9** **Name of the project:** Bases estructurales de interacciones en hemidesmosomas: integrina a6b4, BPAG1e y tetraspanina CD151
Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
City of entity: Salamanca, Castile and León, Spain
Name principal investigator (PI, Co-PI....): José María de Pereda Vega
Funding entity or bodies: Ministerio de Ciencia e Innovación. Investigación **Type of entity:** Ministerio de Ciencia, Innovación e Investigación
City funding entity: Madrid, Community of Madrid, Spain
Code according to the funding entity: BFU2009-08389
Start-End date: 2010 - 2012
- 10** **Name of the project:** Conformational dynamics associated to redox-dependent regulatory proteins
Entity where project took place: European Synchrotron Radiation Facility **Type of entity:** Public Research Body
City of entity: Grenoble, France
Name principal investigator (PI, Co-PI....): Rubén Martínez Buey
Funding entity or bodies: European Synchrotron Radiation Facility **Type of entity:** R&D Centre
City funding entity: Grenoble, France
Code according to the funding entity: MX 1267
Start-End date: 21/07/2011 - 22/07/2011 **Duration:** 1 day
Total amount: 0 €
- 11** **Name of the project:** Bio-SAXS for studying protein-protein interaction-induced structural changes of biomolecules
Entity where project took place: Instituto Paul Scherrer- Fuente suiza de luz sincrotrón
City of entity: Villigen, Switzerland
Name principal investigator (PI, Co-PI....): Kurt Balmert Hofer
Funding entity or bodies: Instituto Paul Scherrer
Code according to the funding entity: 20090882
Start-End date: 01/2010 - 06/2011 **Duration:** 5 days
Total amount: 0 €
- 12** **Name of the project:** Mechanisms of dynamic +TIP interactions
Entity where project took place: Instituto Paul Scherrer **Type of entity:** Public Research Body



City of entity: Villigen, Switzerland

Name principal investigator (PI, Co-PI....): Michel O Steinmetz

Funding entity or bodies:

CENTRO DE ACUSTICA APLICADA Y
EVALUACION NO DESTRUCTIVA

Type of entity: Associations and Groups

Fundación Suiza para la ciencia

Type of entity: Public Research Body

City funding entity: Switzerland

Code according to the funding entity: FNSNF. 3100A0-122545

Start-End date: 2009 - 2011

13 Name of the project: Insights into microtubule-lattice structure by SANS

Entity where project took place: Instituto Paul Scherrer- Fuente de neutrones por espalación

City of entity: Villigen, Switzerland

Name principal investigator (PI, Co-PI....): Rubén Martínez Buey

N° of researchers: 6

Funding entity or bodies:

Instituto Paul Scherrer

Type of entity: Public Research Body

City funding entity: Villigen, Switzerland

Type of participation: Principal investigator

Code according to the funding entity: 20091234

Start-End date: 10/09/2010 - 12/09/2010

Duration: 3 days

Total amount: 0 €

14 Name of the project: Protein-protein interaction-induced structural changes; Protein shape and complex assembly studies with SAXS

Entity where project took place: Instituto Paul Scherrer- Fuente suiza de luz sincrotrón

City of entity: Villigen, Spain

Name principal investigator (PI, Co-PI....): Kurt Ballmer Hoffer

Code according to the funding entity: 20090168

Start-End date: 07/2009 - 12/2009

Duration: 3 days

Total amount: 0 €

15 Name of the project: Interacción de los sitios reguladores de tubulina con sus ligandos activadores.

Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

City of entity: Madrid, Community of Madrid, Spain

Name principal investigator (PI, Co-PI....): José Fernando Díaz Pereira

Funding entity or bodies:

Ministerio de Ciencia e Innovación. Investigación

Type of entity: Ministerio de Ciencia e Innovación

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: BFU2004-00358

Start-End date: 2004 - 2006

16 Name of the project: Tecnologías de búsqueda de inhibidores funcionales de proteínas del citoesqueleto con actividad antitumoral o antibacteriana

Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

City of entity: Madrid, Community of Madrid, Spain

Name principal investigator (PI, Co-PI....): José Manuel Andreu Morales

**Funding entity or bodies:**

Comunidad de Madrid

Type of entity: Comunidad de Madrid**City funding entity:** Madrid, Community of Madrid, Spain**Code according to the funding entity:** CAM 07B/0026/2002**Start-End date:** 2002 - 2004**17 Name of the project:** Mecanismos de activación de tubulina por miméticos de taxol**Entity where project took place:** Consejo Superior de Investigaciones Científicas**Type of entity:** State agency**City of entity:** Madrid, Community of Madrid, Spain**Name principal investigator (PI, Co-PI....):** José Fernando Díaz Pereira**Funding entity or bodies:**

Ministerio de Ciencia e Innovación. Investigación

Type of entity: Ministerio de Ciencia e Innovación. Investigación**City funding entity:** Madrid, Community of Madrid, Spain**Code according to the funding entity:** BIO2001-1725**Start-End date:** 2001 - 2004**18 Name of the project:** Estudio sobre la germinación en la colección de variedades locales de guisantes conservada en el banco de germoplasma de Valladolid: optimización y estimación de la viabilidad mediante el uso de marcadores moleculares.**Entity where project took place:** Consejo Superior de Investigaciones Científicas**Type of entity:** State agency**City of entity:** Salamanca, Castile and León, Spain**Name principal investigator (PI, Co-PI....):** Emilio Cervantes de la Torre**Funding entity or bodies:**

Junta de Castilla y León

Type of entity: Junta de Castilla y León**City funding entity:** Valladolid, Castile and León, Spain**Code according to the funding entity:** RF00-009-C2**Start-End date:** 2000 - 2004**19 Name of the project:** Reconocimiento molecular de nuevos ligandos por el sitio de unión de taxol de los microtúbulos**Entity where project took place:** Consejo Superior de Investigaciones Científicas**Type of entity:** State agency**City of entity:** Madrid, Community of Madrid, Spain**Name principal investigator (PI, Co-PI....):** José Manuel Andreu Morales**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

Type of entity: State agency**City funding entity:** Madrid, Community of Madrid, Spain**Code according to the funding entity:** BIO2000-0748**Start-End date:** 2001 - 2002**20 Name of the project:** Aplicaciones de los Chips de DNA: Identificación de dianas moleculares de compuestos con actividad antifúngica o antitumoral**Entity where project took place:** Universidad de Salamanca**Type of entity:** University**Name principal investigator (PI, Co-PI....):** José Luis Revuelta Doval**Code according to the funding entity:** 1FD97-1899**Start-End date:** 2000 - 2002



Results

Industrial and intellectual property

- 1 Title registered industrial property:** Genetic modification of Eremothecium to increase IMP dehydrogenase activity
Inventors/authors/obtainers: Rodrigo Ledesma Amaro; Andrea Molt; José Luis Revuelta Doval; Stefan Haeffner; Birgit Hoff; Rubén Martínez Buey; Oskar Zelder
Entity holder of rights: BASF SE
Nº of application: CN105603035 (A)
Country of inscription: China
Date of register: 12/09/2014
Conferral date: 25/05/2016

- 2 Title registered industrial property:** Genetic modification of eremothecium for improving GMP synthetase activation
Inventors/authors/obtainers: Andrea Molt; Stefan Haefner; José Luis Revuelta Doval; Rodrigo Ledesma Amaro; Rubén Martínez Buey; Birgit Hoff; Oskar Zelder; Alberto Jiménez García
Entity holder of rights: BASF SE
Nº of application: CN105603033 (A)
Country of inscription: China
Date of register: 12/09/2014
Conferral date: 25/05/2016

- 3 Title registered industrial property:** RIB genetic modification of eremothecium to downregulate gene expression by using the RIB7 promoter
Inventors/authors/obtainers: Adrea Molt; Alberto Jiménez García; Rubén Martínez Buey; Oskar Zelder; Rodrigo Ledesma Amaro; Birgit Hoff; Stefan Haefner; José Luis Revuelta Doval
Entity holder of rights: BASF SE
Nº of application: CN105603034 (A)
Country of inscription: China
Date of register: 12/09/2014
Conferral date: 25/05/2016



Scientific and technological activities

Scientific production

H index: 28

Date of application: 12/05/2021

Fuente de Índice H: GOOGLE SCHOLAR

Publications, scientific and technical documents

- 1** Anika L Burrell; Chuankai Niet; Meerit Said; Jacqueline Simonet; David Fernandez Justel; Matthew C Johnson; Joel Quispe; Ruben M Buey; Jeffrey R Peterson; Justin M Kollman. Nature Structural and Molecular Biology. IMPDH1 retinal variants control filament architecture to tune allosteric regulation. 29, pp. 47 - 58. 10/01/2022.
DOI: 10.1038/s41594-021-00706-2
Type of production: Scientific paper **Format:** Journal
Position of signature: 8
Total no. authors: 10 **Corresponding author:** No
- 2** Cristina Gallego Paramo; Noelia Henandez Ortiz; Ruben Martinez Buey; Palma Rico Lastres; Guadalupe Garcia; Jose Fernando Diaz; Pedro Garcia; Margarita Menendez. Frontiers in Microbiology. Structural and Functional Insights Into Skl and Pal Endolysins, Two Cysteine-Amidases With Anti-pneumococcal Activity. Dithiothreitol (DTT) Effect on Lytic Activity. 12, pp. 740194. Frontiers, 21/10/2021.
DOI: 10.3389/fmicb.2021.740914
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 8 **Corresponding author:** No
- 3** Ruben M Buey; David Fernández Justel; Gloria González Holgado; Marta Martínez Júlvez; Adrián González López; Adrián Velázquez Campoy; Milagros Medina; Bob B Buchanan; Mónica Balsera. Unexpected diversity of ferredoxin-dependent thioredoxin reductases in cyanobacteria. Plant Physiology. En prensa, Oxford University Press, 18/02/2021. Available on-line at: <<https://doi.org/10.1093/plphys/kiab072>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 4** Plana-Bonamaiso, Anna; Lopez-Begines, Santiago; Fernandez-Justel, David; Junza, Alexandra; Soler-Tapia, Ariadna; Andilla, Jordi; Loza-Alvarez, Pablo; Luis Rosa, Jose; Miralles, Esther; Casals, Isidre; Yanes, Oscar; de la Villa, Pedro; Buey, Ruben M.; Mendez, Ana. Post-translational regulation of retinal IMPDH1 in vivo to adjust GTP synthesis to illumination conditions. ELIFE. 9 - e56418, pp. 1 - 31. 2020. ISSN 2050-084X
DOI: 10.7554/eLife.56418
Type of production: Scientific paper **Format:** Journal
Position of signature: 13 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 14 **Corresponding author:** No
- 5** Estevez-Gallego, Juan; Josa-Prado, Fernando; Ku, Siou; Buey, Ruben M.; Balaguer, Francisco A.; Prota, Andrea E.; Lucena-Agell, Daniel; Kamma-Lorger, Christina; Yagi, Toshiki; Iwamoto, Hiroyuki; Duchesne, Laurence; Barasoain, Isabel; Steinmetz, Michel O.; Chretien, Denis; Kamimura, Shinji; Fernando Diaz, J.; Oliva, Maria A..

Structural model for differential cap maturation at growing microtubule ends. ELIFE. 9 - e50155, pp. 1 - 26. 2020. ISSN 2050-084X

DOI: 10.7554/eLife.50155

Type of production: Scientific paper

Position of signature: 4

Total no. authors: 17

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

- 6** David Fernández Justel; Rael Pelaez Lammamie; José Luis Revuelta Doval; Rubén Martínez Buey. The Bateman domain of IMP dehydrogenase is a binding target for dinucleoside polyphosphates. *Journal of Biological Chemistry*. 294 - 40, pp. 14768 - 14775. 15/08/2019.

DOI: 10.1074/jbc.AC119.010055

Type of production: Scientific paper

Position of signature: 4

Total no. authors: 4

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

- 7** Alberto Jimenez; Gloria Muñoz Fernandez; Rodrigo Ledesma Amaro; Ruben Martinez Buey; Jose Luis Revuelta Doval. One-vector CRISPR/Cas9 genome engineering of the industrial fungus *Ashbya gossypii*. *Microb Biotechnol*. 12 - 6, pp. 1293 - 1301. 05/2019.

DOI: 10.1111/1751-7915.13425

Type of production: Scientific paper

Total no. authors: 5

Format: Journal

Corresponding author: No

- 8** David Fernandez Justel; Rafael Nuñez; Jaime Martin Benito; David Jimeno; Adrian Gonzalez Lopez; Eva Maria Soriano; Jose Luis Revuelta Doval; Ruben Martinez Buey. A Nucleotide-Dependent Conformational Switch Controls the Polymerization of Human IMP Dehydrogenases to Modulate their Catalytic Activity. *J Mol Biol*. 431 - 5, pp. 956 - 969. 01/2019.

Type of production: Scientific paper

Total no. authors: 8

Format: Journal

Corresponding author: Yes

- 9** Ruben Martinez Buey; David Fernandez Justel; Jose Luis Revuelta Doval; Jose Maria de Pereda Vega; Peter Schürmann; Bob B Buchanan; Monica Balsera. Ferredoxin-linked flavoenzyme defines a family of pyridine nucleotide-independent thioredoxin reductases. *Proc Natl Acad Sci U S A*. 115 - 51, pp. 12967 - 12972. 12/2018.

Type of production: Scientific paper

Total no. authors: 7

Format: Journal

Corresponding author: No

- 10** Ruben Martinez Buey; RA Smitz; Bob B Buchanan; Monica Balsera. Crystal Structure of the Apo-Form of NADPH-Dependent Thioredoxin Reductase from a Methane-Producing Archaeon. *Antioxidants (Basel)*. 7 - 11, pp. E166. 11/2018.

Type of production: Scientific paper

Total no. authors: 4

Format: Journal

Corresponding author: No

- 11** Noemí Bustamante; Manuel Iglesias Bexiga; Noelia Bernardo García; Noelia Silva Martín; Guadalupe García; María Asunción Campanero Rhodes; Esther García; Isabel Usón; Rubén Martínez Buey; Pedro García; Juan Antonio Hermoso; Marta Bruix; Margarita Menéndez. Deciphering how Cpl-7 cell wall-binding repeats recognize the bacterial peptidoglycan. *Scientific Reports*. 7 - 1, pp. 16494. 11/2017.

Type of production: Scientific paper

Position of signature: 9

Total no. authors: 13

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No



- 12** Rubén Martínez Buey; Juan Bautista Arellano; Luis López Maury; Sergio Galindo Trigo; Adrián Velázquez Campoy; José Luis Revuelta Doval; José María de Pereda Vega; Francisco Javier Florencio; Peter Schuermann; Bob Buchanan; Mónica Balsera Diéguez. Unprecedented pathway of reducing equivalents in a diflavin-linked disulfide oxidoreductase. *Proc Natl Acad Sci U S A.* 114 - 48, pp. 12725 - 127230. 11/2017.
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 11
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 13** Rubén Martínez Buey; David Fernández Justel; Íñigo Marcos Alcalde; Greg Winter; Paulino Gómez Puertas; José María de Pereda Vega; José Luis Revuelta Doval. A nucleotide-controlled conformational switch modulates the activity of eukaryotic IMP dehydrogenases. *Scientific Reports.* 7 - 1, pp. 2648. 06/2017.
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 7
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: Yes
- 14** Patricia Lozano Martínez; Rubén Martínez Buey; Rodrigo Ledesma Amaro; Alberto Jiménez; José Luis Revuelta Doval. Engineering *Ashbya gossypii* strains for de novo lipid production using industrial by-products. *Microbial Biotechnology.* 10, pp. 425 - 433. 03/2017.
Type of production: Scientific paper
Position of signature: 2
Total no. authors: 5
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 15** David Díaz Fernández; Patricia Lozano Martínez; Rubén Martínez Buey; José Luis Revuelta Doval; Alberto Jiménez. Utilization of xylose by engineered strains of *Ashbya gossypii* for the production of microbial oils. *Biotechnology for Biofuels.* 10, pp. 3. 01/2017.
Type of production: Scientific paper
Position of signature: 3
Total no. authors: 5
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
- 16** Audrey Guesdon; Franck Bazile; Rubén Martínez Buey; Renu Mohan; Solange Monier; Ruddi Rodríguez García; Morgan Angevin; Claire Heichette; Ralph Wieneke; Robert Tampe; Laurence Duchesne; Anna Akamanova; Michel Steinmetz; Denis Chretien. EB1 interacts with outwardly curved and straight regions of the microtubule lattice. *Nature Cell Biology.* 18 - 10, pp. 1102 - 1108. 01/10/2016.
DOI: 10.1038/ncb3412
Type of production: Scientific paper
Corresponding author: No
Format: Journal
- 17** Esther Ortega Portero; José Antonio Manso; Rubén Martínez Buey; Ana María Carballido; Arturo Carabias; Arnoud Sonnenberg; José María de Pereda Vega. The Structure of the Plakin Domain of Plectin Reveals an Extended Rod-like Shape. *Journal of Biological Chemistry.* 291 - 36, pp. 18643 - 18662. 01/09/2016.
Type of production: Scientific paper
Corresponding author: No
- 18** Rodrigo Ledesma Amaro; Rubén Martínez Buey; José Luis Revuelta. The filamentous fungus *Ashbya gossypii* as a competitive industrial inosine producer. *Biotechnology & Bioengineering.* 113 - 9, pp. 2060 - 2063. 01/09/2016.
Type of production: Scientific paper
Corresponding author: No
Format: Journal



- 19** Rubén Martínez Buey; Sergio Galindo Trigo; Luis López Maury; Adrián Velázquez Campoy; José Luis Revuelta Doval; Francisco Javier Florencio; José María de Pereda Vega; Peter Schuermann; Bob Buchanan; Mónica Balsera Diéguez. A New Member Of The Thioredoxin Reductase Family From Early Oxygenic Photosynthetic Organisms. *Molecular Plant*. S1674-2052 - 16, pp. 30133. 11/07/2016.
Type of production: Scientific paper
Corresponding author: No
- 20** Rubén Martínez Buey; Rodrigo Ledesma Amaro; Adrián Velázquez Campoy; Mónica Balsera; Mónica Chagoyen; José María de Pereda; José Luis Revuelta. Guanine nucleotide binding to the Bateman domain mediates the allosteric inhibition of eukaryotic IMP dehydrogenases. *Nature Communications*. 6, pp. 8923. 12/11/2015. ISSN 2041-1723
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
- 21** Rubén Martínez Buey; Rodrigo Ledesma Amaro; Mónica Balsera; José María de Pereda; José Luis Revuelta. Increased riboflavin production by manipulation of inosine 5'-monophosphate dehydrogenase in *Ashbya gossypii*. *Applied Microbiology and Biotechnology*. 99 - 22, pp. 9577 - 9589. 02/11/2015. ISSN 0175-7598
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
- 22** Rodrigo Ledesma Amaro; Rubén Martínez Buey; José Luis Revuelta. Increased production of inosine and guanosine by means of metabolic engineering of the purine pathway in *Ashbya gossypii*. *Microb Cell Fact*. 14 - 58, 17/04/2015. ISSN 1475-2859
Type of production: Scientific paper
Format: Journal
Corresponding author: No
- 23** Noelia Alonso García; Inés García Rubio; José Antonio Manso; Rubén Martínez Buey; Hector Urién; Arnoud Sonnenberg; Gunnar Jeschke; José María de Pereda. Combination of X-ray crystallography, SAXS and DEER to obtain the structure of the FnIII-3,4 domains of integrin $\alpha 5\beta 1$. *Acta Crystallogr D Biol Crystallogr*. 71 - Pt 4, pp. 969 - 985. 01/04/2015. ISSN 1399-0047
Type of production: Scientific paper
Format: Journal
Corresponding author: No
- 24** AE Prota; F Danel; F Bachmann; K Bargsten; RM Buey; J Pohlmann; S Reinelt; H Lane; MO Steinmetz. The Novel Microtubule-Destabilizing Drug BAL27862 Binds to the Colchicine Site of Tubulin with Distinct Effects on Microtubule Organization. *JOURNAL OF MOLECULAR BIOLOGY*. 11/02/2014. ISSN 0022-2836
Type of production: Scientific paper
Format: Journal
Corresponding author: No
- 25** M Sammito; C Millan; DD Rodriguez; IM de Ilarduya; K Meindl; I de Marino; G Petrillo; RM Buey; JM de Pereda; K Zeth; GM Sheldrick; I Uson. Exploiting tertiary structure through local folds for crystallographic phasing. *NATURE METHODS*. 10 - 11, pp. 1099 - 1101. *Nature*, 01/11/2013. ISSN 1548-7091
Type of production: Scientific paper
Format: Journal
Corresponding author: No
- 26** Buey, Ruben M.; Sen, Indrani; Kortt, Oliver; Mohan, Renu; Gfeller, David; Veprintsev, Dmitry; Kretschmar, Ines; Scheuermann, Joerg; Neri, Dario; Zoete, Vincent; Michielin, Olivier; Maria de Pereda, Jose; Akhmanova, Anna; Volkmer, Rudolf; Steinmetz, Michel O.. Sequence Determinants of a Microtubule Tip Localization Signal (MtLS). *JOURNAL OF BIOLOGICAL CHEMISTRY*. 287 - 34, pp. 28227 - 28242. 17/08/2012. ISSN 0021-9258
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes



- 27** Lopus, Manu; Manatschal, Cristina; Buey, Ruben M.; Bjelic, Sasa; Miller, Herbert P.; Steinmetz, Michel O.; Wilson, Leslie. Cooperative Stabilization of Microtubule Dynamics by EB1 and CLIP-170 Involves Displacement of Stably Bound P-i at Microtubule Ends. *BIOCHEMISTRY*. 51 - 14, pp. 3021 - 3030. 10/04/2012. ISSN 0006-2960
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 28** Buey, Ruben M.; Mohan, Renu; Leslie, Kris; Walzthoeni, Thomas; Missimer, John H.; Menzel, Andreas; Bjelic, Sasa; Bargsten, Katja; Grigoriev, Ilya; Smal, Ihor; Meijering, Erik; Aebersold, Ruedi; Akhmanova, Anna; Steinmetz, Michel O.. Insights into EB1 structure and the role of its C-terminal domain for discriminating microtubule tips from the lattice. *MOLECULAR BIOLOGY OF THE CELL*. 22 - 16, pp. 2912 - 2923. 15/08/2011. ISSN 1059-1524
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
- 29** Ortega, Esther; Buey, Ruben M.; Sonnenberg, Arnoud; de Pereda, Jose M.. The Structure of the Plakin Domain of Plectin Reveals a Non-canonical SH3 Domain Interacting with Its Fourth Spectrin Repeat. *JOURNAL OF BIOLOGICAL CHEMISTRY*. 286 - 14, 08/04/2011. ISSN 0021-9258
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 30** Balsera, Monica; Buey, Ruben M.; Li, Xiao-Dan. Quaternary Structure of the Oxaloacetate Decarboxylase Membrane Complex and Mechanistic Relationships to Pyruvate Carboxylases. *JOURNAL OF BIOLOGICAL CHEMISTRY*. 286 - 11, pp. 9457 - 9467. 18/03/2011. ISSN 0021-9258
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 31** Gouveia, Susana Montenegro; Leslie, Kris; Kapitein, Lukas C.; Buey, Ruben M.; Grigoriev, Ilya; Wagenbach, Michael; Smal, Ihor; Meijering, Erik; Hoogenraad, Casper C.; Wordeman, Linda; Steinmetz, Michel O.; Akhmanova, Anna. In Vitro Reconstitution of the Functional Interplay between MCAK and EB3 at Microtubule Plus Ends. *CURRENT BIOLOGY*. 20 - 19, pp. 1717 - 1722. 12/10/2010. ISSN 0960-9822
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 32** Pera, Benet; Razzak, Mina; Trigili, Chiara; Pineda, Oriol; Canales, Angeles; Buey, Ruben M.; Jimenez-Barbero, Jesus; Northcote, Peter T.; Paterson, Ian; Barasoain, Isabel; Diaz, Jose Fernando. Molecular Recognition of Peloruside A by Microtubules. The C24 Primary Alcohol is Essential for Biological Activity. *CHEMBIOCHEM*. 11 - 12, pp. 1669 - 1678. 16/08/2010. ISSN 1439-4227
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 33** Martin-Galiano, Antonio J.; Buey, Ruben M.; Cabezas, Marta; Andreu, Jose M.. Mapping Flexibility and the Assembly Switch of Cell Division Protein FtsZ by Computational and Mutational Approaches. *JOURNAL OF BIOLOGICAL CHEMISTRY*. 285 - 29, pp. 22554 - 22565. 16/07/2010. ISSN 0021-9258
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 34** De Groot, Christian O.; Jelesarov, Ilian; Damberger, Fred F.; Bjelic, Sasa; Schaerer, Martin A.; Bhavesh, Neel S.; Grigoriev, Ilya; Buey, Ruben M.; Wuethrich, Kurt; Capitani, Guido; Akhmanova, Anna; Steinmetz, Michel O.. Molecular Insights into Mammalian End-binding Protein Heterodimerization. *JOURNAL OF BIOLOGICAL CHEMISTRY*. 285 - 8, pp. 5802 - 5814. 19/02/2010. ISSN 0021-9258
Type of production: Scientific paper **Format:** Journal
Corresponding author: No



- 35** Honnappa, Srinivas; Gouveia, Susana Montenegro; Weisbrich, Anke; Damberger, Fred F.; Bhavesh, Neel S.; Jawhari, Hatim; Grigoriev, Ilya; van Rijssel, Frederik J. A.; Buey, Ruben M.; Lawera, Aleksandra; Jelesarov, Ilian; Winkler, Fritz K.; Wuethrich, Kurt; Akhmanova, Anna; Steinmetz, Michel O.. An EB1-Binding Motif Acts as a Microtubule Tip Localization Signal. *CELL*. 138 - 2, pp. 366 - 376. 23/07/2009. ISSN 0092-8674
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 36** Komarova, Yulia; De Groot, Christian O.; Grigoriev, Ilya; Gouveia, Susana Montenegro; Munteanu, E. Laura; Schober, Joseph M.; Honnappa, Srinivas; Buey, Ruben M.; Hoogenraad, Casper C.; Dogterom, Marileen; Borisy, Gary G.; Steinmetz, Michel O.; Akhmanova, Anna. Mammalian end binding proteins control persistent microtubule growth. *JOURNAL OF CELL BIOLOGY*. 184 - 5, pp. 691 - 706. 09/03/2009. ISSN 0021-9525
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 37** Bron, Patrick; Giudice, Emmanuel; Rolland, Jean-Paul; Buey, Ruben M.; Barbier, Pascale; Diaz, J. Fernando; Peyrot, Vincent; Thomas, Daniel; Garnier, Cyrille. Apo-Hsp90 coexists in two open conformational states in solution. *BIOLOGY OF THE CELL*. 100 - 7, pp. 413 - 425. 07/2008. ISSN 0248-4900
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 38** Buey, Ruben M.; Calvo, Enrique; Barasoain, Isabel; Pineda, Oriol; Edler, Michael C.; Matesanz, Ruth; Cerezo, Gemma; Vanderwal, Christopher D.; Day, Billy W.; Sorensen, Erik J.; Lopez, Juan Antonio; Andreu, Jose Manuel; Hamel, Ernest; Diaz, J. Fernando. Cyclostreptin binds covalently to microtubule pores and luminal taxoid binding sites. *NATURE CHEMICAL BIOLOGY*. 3 - 2, pp. 117 - 125. 02/2007. ISSN 1552-4450
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 39** Buey, Ruben M.; Monterroso, Begona; Menendez, Margarita; Diakun, Greg; Chacon, Pablo; Hermoso, Juan Antonio; Diaz, J. Fernando. Insights into molecular plasticity of choline binding proteins (pneumococcal surface proteins) by SAXS. *JOURNAL OF MOLECULAR BIOLOGY*. 365 - 2, pp. 411 - 424. 12/01/2007. ISSN 0022-2836
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 40** Marcus, Adam I.; O'Brate, Aurora M.; Buey, Ruben M.; Zhou, Jun; Thomas, Shala; Khuri, Fadlo R.; Manuel Andreu, Jose; Diaz, Fernando; Giannakakou, Paraskevi. Farnesyltransferase inhibitors reverse taxane resistance. *CANCER RESEARCH*. 66 - 17, pp. 8838 - 8846. 01/09/2006. ISSN 0008-5472
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 41** Jimenez-Barbero, Jesus; Canales, Angeles; Northcote, Peter T.; Buey, Ruben M.; Andreu, Jose Manuel; Diaz, J. Fernando. NMR determination of the bioactive conformation of peloruside a bound to microtubules. *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*. 128 - 27, pp. 8757 - 8765. 12/07/2006. ISSN 0002-7863
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 42** Buey, RM; Diaz, JF; Andreu, JM. The nucleotide switch of tubulin and microtubule assembly: A polymerization-driven structural change. *BIOCHEMISTRY*. 45 - 19, pp. 5933 - 5938. 16/05/2006. ISSN 0006-2960
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 43** Buey, RM; Barasoain, I; Jackson, E; Meyer, A; Giannakakou, P; Paterson, I; Mooberry, S; Andreu, JM; Diaz, JF. Microtubule interactions with chemically diverse stabilizing agents: Thermodynamics of binding to the paclitaxel site predicts cytotoxicity. *CHEMISTRY & BIOLOGY*. 12 - 12, pp. 1269 - 1279. 12/2005. ISSN 1074-5521



Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 44** Edler, MC; Buey, RM; Gussio, R; Marcus, AI; Vanderwal, CD; Sorensen, EJ; Diaz, JF; Giannakakou, P; Ernest, H. Cyclostreptin (FR182877), an antitumor tubulin-polymerizing agent deficient in enhancing tubulin assembly despite its high affinity for the taxoid site. *BIOCHEMISTRY*. 44 - 34, pp. 11525 - 11538. 30/08/2005. ISSN 0006-2960

Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 45** Paterson, I; Menche, D; Hakansson, AE; Longstaff, A; Wong, D; Barasoain, I; Buey, RM; Diaz, JF. Design, synthesis and biological evaluation of novel, simplified analogues of laulimalide: modification of the side chain. *BIOORGANIC & MEDICINAL CHEMISTRY LETTERS*. 15 - 9, pp. 2243 - 2247. 02/05/2005. ISSN 0960-894X

Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 46** Gaitanos, TN; Buey, RM; Diaz, JF; Northcote, PT; Teesdale-Spittle, P; Andreu, JM; Miller, JH. Peloruside A does not bind to the taxoid site on beta-tubulin and retains its activity in multidrug-resistant cell lines. *CANCER RESEARCH*. 64 - 15, pp. 5063 - 5067. 01/08/2004. ISSN 0008-5472

Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 47** Buey, RM; Diaz, JF; Andreu, JM; O'Brate, A; Giannakakou, P; Nicolaou, KC; Sasmal, PK; Ritzen, A; Namoto, K. Interaction of epothilone analogs with the paclitaxel binding site: Relationship between binding affinity, microtubule stabilization, and cytotoxicity. *CHEMISTRY & BIOLOGY*. 11 - 2, pp. 225 - 236. 02/2004. ISSN 1074-5521

Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 48** Nicolaou, KC; Ritzen, A; Namoto, K; Buey, RM; Diaz, JF; Andreu, JM; Wartmann, M; Altmann, KH; O'Brate, A; Giannakakou, P. Chemical synthesis and biological evaluation of novel epothilone B and trans-12,13-cyclopropyl epothilone B analogues. *TETRAHEDRON*. 58 - 32, pp. 6413 - 6432. 05/08/2002. ISSN 0040-4020

Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 49** Rivas, R; Vizcaino, N; Buey, RM; Mateos, PF; Martinez-Molina, E; Velazquez, E. An effective, rapid and simple method for total RNA extraction from bacteria and yeast. *JOURNAL OF MICROBIOLOGICAL METHODS*. 47 - 1, pp. 59 - 63. 10/2001. ISSN 0167-7012

Type of production: Scientific paper

Format: Journal

Corresponding author: No

- 50** José Antonio Manso; Inés García Rubio; María Gómez Hernández; Esther Ortega; Rubén Martínez Buey; Ana María Carballido; Arturo Carabias; Noelia Alonso García; José María de Pereda. Purification and Structural Analysis of Plectin and BPAG1e. *Methods in Enzymology*. 569, pp. 177 - 196. 29/05/2015. ISSN 0076-6879

Type of production: Book chapter

Format: Journal

Corresponding author: No

- 51** Ruben M Buey; Pablo Chacón Montes; José Manuel Andreu Morales; José Fernando Díaz Pereira. Protein shape and assembly studied by X ray solution scattering: Fundamentals and practice. *Lecture Notes in Physics: Applications of Synchrotron Light to Non-crystalline Diffraction in Materials and Life Sciences*. 776, 2009. ISSN 0075-8450

Type of production: Book chapter

Format: Book



- 52** Ruben M Buey; Jose Fernando Diaz Pereira. Characterizing ligand-microtubule binding by competition methods. *Methods in Molecular Medicine: Microtubule Protocols*. 137, pp. 245 - 260. 2007. ISSN 1543-1894
Type of production: Book chapter **Format:** Book
- 53** José Luis Revuelta Doval; Rodrigo Ledesma Amaro; Patricia Lozano Martínez; David Díaz Fernández; Rubén Martínez Buey; Alberto Jiménez. Bioproduction of riboflavin: a bright yellow history. *Journal of Industrial Microbiology and Biotechnology*. 44, pp. 659 - 665. 05/2017.
Type of production: Bibliographic review **Format:** Journal
Position of signature: 5 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 6 **Corresponding author:** No
- 54** José Luis Revuelta Doval; Rubén Martínez Buey; Rodrigo Ledesma Amaro; Erick Vandamme. Microbial biotechnology for the synthesis of (pro)vitamins, biopigments and antioxidants: challenges and opportunities. *Microbial Biotechnology*. 9 - 5, pp. 564 - 567. 01/09/2016.
Type of production: Bibliographic review **Format:** Journal
Corresponding author: No
- 55** Calvo, Enrique; Buey, Ruben M.; Barasoain, Isabel; Pineda, Oriol; Edler, Michael C.; Matesanz, Ruth; Cerezo, Gemma; Vanderwal, Christopher D.; Day, Billy W.; Sorensen, Erik J.; Andreu, Jose Manuel; Hamel, Ernest; Diaz, J. Fernando; Lopez, Juan Antonio. Single platform, multitiered strategy to reveal cyclostreptin binding sites in microtubules. *Applied Biosystems Technical Notes*. 3 - 2, pp. 117 - 125. 2007. ISSN 1552-4450
Type of production: Scientific-technical report **Format:** Scientific and technical document or report
Corresponding author: No

Works submitted to national or international conferences

- 1** **Title of the work:** The binding of guanine nucleotides to the Bateman domain mediates the allosteric inhibition of eukaryotic IMP dehydrogenases
Name of the conference: 38 Congreso de la Sociedad Española de Bioquímica y Biología Molecular
Corresponding author: Yes
City of event: Valencia, Valencian Community, Spain
Date of event: 07/09/2015
End date: 13/09/2015
Organising entity: Sociedad Española de Bioquímica y Biología Molecular **Type of entity:** Sociedad científica
Rubén Martínez Buey; Rodrigo Ledesma Amaro; Adrián Velázquez Campoy; Mónica Balsera; Mónica Chagoyen; José María de Pereda; José Luis Revuelta.
- 2** **Title of the work:** The why of linkers in structural biology: the case of galectin-4
Name of the conference: 37 Congreso de la Sociedad Española de Bioquímica y Biología Molecular
Corresponding author: No
City of event: Granada, Andalusia, Spain
Date of event: 09/09/2014
Organising entity: Sociedad Española de Bioquímica y Biología Molecular
Mónica Álvarez Pérez; Eliza Buzamet; Rubén Martínez Buey; Sabine Vertesy; José Fernando Díaz; Sabine Andre; Hans-Joachim Gabius; Margarita Menéndez; Dolores Solís.
- 3** **Title of the work:** Molecular recognition mechanisms of microtubule plus ends tracking proteins
Name of the conference: VIII Reunión de la Red de Estructura y Función de Proteínas
Corresponding author: Yes



City of event: Madrid, Community of Madrid, Spain

Date of event: 02/04/2014

Organising entity: Red de Estructura y Función de Proteínas

City organizing entity: Madrid, Community of Madrid, Spain

Rubén Martínez Buey; Renu Mohan; Indrani Senn; Kris Leslie; Oliver Kortt; John H Missimer; Ines Kretschmar; Rudolf Volkmer; Anna Akhmanova; Michel Steinmetz.

4 Title of the work: Molecular recognition mechanisms of microtubule plus ends tracking proteins

Name of the conference: CNIO Frontier Meetings. Allosteric regulation of cell signalling

Corresponding author: Yes

City of event: Madrid, Community of Madrid, Spain

Date of event: 17/09/2012

Organising entity: Centro Nacional de Investigaciones Oncológicas

Type of entity: Healthcare Institutions

City organizing entity: Madrid, Community of Madrid, Spain

Rubén Martínez Buey; Renu Mohan; Indrani Senn; Kris Leslie; Oliver Kortt; John H Missimer; Ines Kretschmar; Rudolf Volkmer; Anna Akhmanova; Michel Steinmetz.

5 Title of the work: Molecular recognition mechanisms of microtubule plus end tracking proteins

Name of the conference: 22nd IUBMB Congress/37th FEBS Congress

City of event: Sevilla, Andalusia, Spain

Date of event: 2012

Rubén M Buey; Renu Mohan; Indrani Sen; Kris Leslie; Oliver Kortt; John H Missimer; Inés Kretschmar; Rudolf Volkmer; Anna Akhmanova; Michel O Steinmetz.

6 Title of the work: Structure of the plakin domain of plectin

Name of the conference: 22nd IUBMB Congress/37th FEBS Congress

City of event: Sevilla, Andalusia, Spain

Date of event: 2012

Esther Ortega; Rubén M Buey; José María de Pereda Vega.

7 Title of the work: Structure of the second pair of fibronectin type III repeats of the integrin beta 4 subunit

Name of the conference: 22nd IUBMB Congress/37th FEBS Congress

City of event: Sevilla, Andalusia, Spain

Date of event: 2012

Noelia Alonso García; Rubén M Buey; Inés García Rubio; Hector Urien; Arnou Sonnenberg; José María de Pereda Vega.

8 Title of the work: Insights into the structure and function of end-binding proteins

Name of the conference: XXXIII SEBBM Congress

City of event: Córdoba, Andalusia, Spain

Date of event: 2010

Rubén M Buey; Michel O Steinmetz.

9 Title of the work: Structural insights into end-binding protein by SAXS

Name of the conference: 34th FEBS Congress

City of event: Praga, Praha, Czech Republic

Date of event: 2009

Rubén M Buey; Michel O Steinmetz.



- 10** **Title of the work:** Structural studies on the catalytic subunit of the oxaloacetate decarboxylase Na⁺ pump
Name of the conference: 34th Congress of the Federation-of-European-Biochemical-Societies
City of event: Praga, Praha, Czech Republic
Date of event: 2009
Mónica Balsera Diéguez; Rubén M Buey; Fritz Winkler; Xao Dan Li.
- 11** **Title of the work:** A chemical proteomics approach reveals the taxoid binding to microrotubules
Name of the conference: /th Sienna Meeting. From Genome to Proteome: Back to the Future
City of event: Siena, Italy
Date of event: 2006
End date: 2006
Organising entity: Universidad de Génova y Universidad del Siena
City organizing entity: Siena, Italy
Enrique Calvo; Rubén M Buey; Oriol Pineda; Michael C Edler; Ruth Matesanz; Gemma Cerezo; Chistopher D Vanderwal; Billy W Day; Erick J Sorensen; Juan antonio López; José Manuel Andreu Morales; Ernest Hamel; José Fernando Díaz Pereira.
- 12** **Title of the work:** La interacción covalente de la ciclostreptina con la beta-tubulina marca el camino de entrada del taxol a los microtúbulos
Name of the conference: Reunión de la Red Nacional de Plegamiento, Estabilidad e Ingeniería de Proteínas
City of event: Bilbao, Basque Country, Spain
Date of event: 2006
Rubén M Buey; Enrique Calvo; Isabel Barasoain; Oriol Pineda; Michael C Edler; Ruth Matesanz; Gemma Cerezo; Cristopher D Vanderwal; Billy W Day; Erik J Sorensen; Juan Antonio López; José Manuel Andreu Morales; Ernest Hamel.
- 13** **Title of the work:** The effect of peloruside A on tubulin polymerization, binding and apoptosis
Name of the conference: Keystone Symposia: Molecular Targets for Cancer
City of event: Santa Fe, United States of America
Date of event: 2005
Thomas N Gaitanos; Rubén M Buey; José Fernando Díaz Pereira; Peter T Northcote; John H Miller.
- 14** **Title of the work:** Energetics of interaction of C12, cyclopropyl and C15 side chain epothilone analogs with the paclitaxel binding site. Relationship between binding affinity, microtubule stabilization and cytotoxicity
Name of the conference: 48th Biophysical Society Annual Meeting
City of event: Baltimore, United States of America
Date of event: 2004
Rubén M Buey; José Fernando Díaz Pereira; José Manuel Andreu Morales; Aurora O'Brate; Pareskevi Giannakakou; Konstantinos C Nicolau; Pradip K Sasmal; Andreas Ritzen; Kenji Namoto.
- 15** **Title of the work:** Interactions of microtubule stabilizer ligands with the taxol binding site. Relationships between affinity, assembly and cytotoxicity
Name of the conference: 27 Reunión Anual de la Sociedad Española de Bioquímica y Biología Molecular
City of event: Lérida, Catalonia, Spain
Date of event: 2004
Ruben M Buey; José Fernando Díaz Pereira; Isabel Barasoain.
- 16** **Title of the work:** AFLP experiment designed to investigate the role of gibberellic acid in Arabidopsis germination
Name of the conference: 6th International Congress of Plant Molecular Biology
City of event: Quebec, Canada



Date of event: 2000

Juana Gutierrez de Diego; F david Rodriguez; Rubén M Buey; Enrique Battaner; Philippe Grappin; Emilio Cervantes de la Torre.

R&D management and participation in scientific committees

R&D management

Name of the activity: Coordinador de los Laboratorios Docentes del Campus Miguel de Unamuno
Type of management: Coordinador de los Laboratorios Docentes del Campus Miguel de Unamuno
Performed tasks: Gestión de la investigación / Cargo académico
Entity: Universidad de Salamanca **Type of entity:** University
Start date: 12/02/2018 **Duration:** 2 years - 3 months - 8 days

Evaluation and revision of R&D projects and articles

- 1 Name of the activity:** Revisión artículos en revistas científicas o tecnológicas
Performed tasks: Revisor de artículos en revistas científicas
Entity where activity was carried out: Nat Commun, J Ind Microb Biotechnol, Mol Therapy, Prot Cell, Cancer Letters, MBoC, ABB, etc.
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 20
Access system: Designated by the corresponding party without competition **Geographical area:** Non EU International
Start-End date: 2012 - 2020
- 2 Name of the activity:** Evaluación de proyectos de investigación: Programa Veni
Performed tasks: Evaluación de proyectos de investigación
Entity where activity was carried out: Netherlands Organization for Scientific Research division Earth and Life Sciences **Type of entity:** State agency
City of entity: Holland
Type of activity: Evaluación de proyectos **Frequency of the activity:** 1
Access system: Designated by the corresponding party without competition **Geographical area:** European Union
Start-End date: 2015 - 2015
- 3 Name of the activity:** Evaluación de proyectos de investigación
Performed tasks: Evaluación de proyectos de investigación
Entity where activity was carried out: Agencia Nacional de Evaluación y Prospectiva **Type of entity:** ANEP
Type of activity: evaluación proyectos científicos **Frequency of the activity:** 4
Access system: Designated by the corresponding party without competition **Geographical area:** National
Start-End date: 2012 - 2015



Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Instituto de Biología Molecular y Celular del Cáncer de Salamanca
City of entity: Salamanca, Castile and León, Spain
Start-End date: 01/05/2010 - 31/05/2010
Goals of the stay: Contracted
Type of entity: University Research Institute
Duration: 2 years
- 2** **Entity:** Instituto Paul Scherrer
City of entity: Villigen, Switzerland
Start-End date: 01/09/2007 - 30/04/2010
Goals of the stay: Post-doctoral
Duration: 2 years - 8 months
- 3** **Entity:** Universidad Técnica de Munich
Faculty, institute or centre: Dpto. Química Biológica
City of entity: Weihenstephan, Niederbayern, Germany
Start-End date: 01/05/2006 - 31/07/2007
Goals of the stay: Post-doctoral
Type of entity: University
Duration: 1 year - 3 months
- 4** **Entity:** Centro de Investigaciones Biológicas
City of entity: Madrid, Community of Madrid, Spain
Start-End date: 01/10/2001 - 30/03/2006
Goals of the stay: Doctorate
Type of entity: State agency
Duration: 4 years - 6 months
- 5** **Entity:** Universidad de Salamanca
Faculty, institute or centre: Dpto. Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Start-End date: 16/07/2001 - 30/09/2001
Goals of the stay: Contracted
Type of entity: University
Duration: 2 months - 15 days
- 6** **Entity:** Instituto de Recursos Naturales y Agrobiología de Salamanca
City of entity: Salamanca, Castile and León, Spain
Start-End date: 01/11/2000 - 28/02/2001
Goals of the stay: Contracted
Type of entity: State agency
Duration: 4 months
- 7** **Entity:** Universidad de Salamanca
Faculty, institute or centre: Dpto. Microbiología y Genética
City of entity: Salamanca, Castile and León, Spain
Start date: 01/06/2012
Goals of the stay: Contracted
Type of entity: University



Obtained grants and scholarships

- 1** **Name of the grant:** Contrato postdoctoral Ramón y Cajal
Aims: Post-doctoral
Awarding entity: Ministerio de Economía y Competitividad **Type of entity:** Ministerio
Conferral date: 01/06/2012 **Duration:** 5 years
End date: 31/05/2017
Entity where activity was carried out: Universidad de Salamanca
Faculty, institute or centre: Facultad de Biología
- 2** **Name of the grant:** Contrato postdoctoral Juan de La Cierva
Aims: Post-doctoral
Awarding entity: Ministerio de Economía y Competitividad **Type of entity:** Ministerio
Conferral date: 01/05/2010 **Duration:** 2 years
End date: 31/05/2012
Entity where activity was carried out: Consejo Superior de Investigaciones Científicas
Faculty, institute or centre: Instituto de Biología Molecular y Celular del Cáncer
- 3** **Name of the grant:** Beca postdoctoral de la Federación Europea de Sociedades de Bioquímica (FEBS)
Aims: Post-doctoral
Awarding entity: Federación Europea de Sociedades de Bioquímica (FEBS)
Conferral date: 01/09/2007 **Duration:** 2 years - 8 months
End date: 30/04/2010
Entity where activity was carried out: Instituto Paul Scherrer
- 4** **Name of the grant:** Beca postdoctoral de la Fundación Alexander von Humboldt
Aims: Post-doctoral
Awarding entity: Fundación Alexander von Humboldt
Conferral date: 01/05/2006 **Duration:** 1 year - 2 months
End date: 31/07/2007
Entity where activity was carried out: Universidad Técnica de Munich
- 5** **Name of the grant:** Beca predoctoral del Programa de Formación de Profesorado Universitario
Aims: Pre-doctoral
Awarding entity: Ministerio de Educación, Política Social y Deporte **Type of entity:** State agency
Conferral date: 01/09/2001 **Duration:** 4 years
End date: 31/01/2005
Entity where activity was carried out: Consejo Superior de Investigaciones Científicas
Faculty, institute or centre: Centro de Investigaciones Biológicas



Scientific societies and professional associations

- 1** **Name of the society:** Sociedad de Biofísica de España
Start date: 18/04/2018
- 2** **Name of the society:** Sociedad Española de Bioquímica y Biología Molecular
Start date: 12/02/2002

Prizes, mentions and distinctions

- 1** **Description:** Premio de la Sociedad Española de Proteómica a la mejor publicación científica
Awarding entity: Sociedad Española de Proteómica
Conferral date: 2009
- 2** **Description:** Premio Extraordinario de Doctorado
Awarding entity: Universidad Complutense de Madrid **Type of entity:** University
City awarding entity: Madrid, Community of Madrid, Spain
Conferral date: 13/07/2007