

c v n CURRÍCULUM VITAE NORMALIZADO



Angel Valverde Portal

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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.

B.1. Breve descripción del Trabajo de Fin de Grado (TFG) y puntuación obtenida **Reacciones multicomponente catalizadas por cobre: Síntesis estereoselectiva de alcoholes alílicos silil-sustituídos**. Trabajo de Fin de Grado en Química de la Universidad de Santiago de Compostela (USC), se ha llevado a cabo en el Centro Singular de Investigación en Química Biológica y Materiales Moleculares (CiQUS), durante el curso 2018/2019. RESUMEN:

En este Trabajo de Fin de Grado se desarrolló una metodología para la síntesis de alcoholes alílicos silil-sustituídos combinando una reacción de hidroboración de un alquino silil-sustituído catalizada por cobre y un acoplamiento tipo Suzuki catalizado por paladio. A través de esta metodología se consiguió sintetizar una familia de alcoholes alílicos silil-sustituídos que posteriormente serán utilizados como material de partida en futuros proyectos del grupo de investigación. Además, se intentó llevar a cabo una metodología basada en una reacción multicomponente de carbosililación de alquinos catalizada por cobre, sin embargo, mediante ésta no se consiguió sintetizar alcoholes alílicos silil-sustituídos.

Cualificación obtenida: 8.6

B.2. Breve descripción del Trabajo de Fin de Máster (TFM) y puntuación obtenida **Síntesis de 1,4-dienos multifuncionales mediante alquienilación alílica catalizada por cobre y paladio**.

Trabajo de Fin de Máster del Máster de Química Orgánica de la Universidad de Santiago de Compostela (USC), se ha llevado a cabo en el Centro Singular de Investigación en Química Biológica y Materiales Moleculares (CiQUS), durante el curso 2018/2019. RESUMEN:

En este trabajo se describen dos metodologías sintéticas para la obtención de 1,4-dienos bifuncionalizados mediante una reacción de alquienilación alílica de alquinos catalizada por catálisis bimetálica de cobre y paladio.

En un primer enfoque se estudió la reacción con alquinos y carbonatos alílicos, para obtener 1,4-dienos bifuncionalizados con dos ésteres borónicos en ambos extremos. Mientras que en un segundo enfoque partimos de vinil carbonatos cíclicos y alquinos para obtener 1,4-dienos bifuncionalizados con un alcohol alílico en un extremo y un éster borónico en el otro.

Cualificación obtenida: 8.3



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.

Over my career, I have co-authored four book chapters and contributed two invited book chapters, the first for a book on the applications of beneficial plant-microorganism interactions, and the second for a book on bioinformatics and data analysis. I have published 75 peer-reviewed papers (4652 citations; Google Scholar, May 2023). I have an h-index of 38 and an i10-index (number of papers cited 10 or more times) of 64, both in Google Scholar. I have 33 papers that have been cited 50 or more times.

An important contribution to my field has been through my role as supervisor and mentor to Higher Degree Research (HDR) students and Early Career Researchers (ECRs). I have supervised 9 Honours students, 12 MSc students and 12 PhD students. Most of these researchers have won prizes and awards and gone on to successful careers in academia, government and industry.



Angel Valverde Portal

Surname(s): **Valverde Portal**
 Name: **Angel**
 ORCID: **0000-0003-0439-9605**
 ScopusID: **7005337772**
 ResearcherID: **C-1308-2009**
 Contact aut. region/reg.: **Castile and León**

Current professional situation

Employing entity: Consejo Superior de Investigaciones Científicas
Department: Desarrollo Sostenible de Sistemas Agroforestales y Ganaderos, Instituto de Recursos Naturales y Agrobiología de Salamanca
Professional category: Científico Titular
City employing entity: Spain
Phone: (+34) 923269606 - 431655
Start date: 16/07/2020
Type of contract: Civil servant **Dedication regime:** Full time
Primary (UNESCO code): 241400 - Microbiology
Secondary (UNESCO code): 251109 - Soil microbiology
Identify key words: Terrestrial ecosystem; Biodiversity; Soil biology; Microbiology; Climate change

Previous positions and activities

	Employing entity	Professional category	Start date
1	Consejo Superior de Investigaciones Científicas	Investigador contratado	01/03/2020
2	University of the Free State, South Africa	Associate Professor	01/06/2018
3	University of the Free State, South Africa	Senior Researcher	01/07/2017
4	University of Pretoria, South Africa	Research Fellow	01/06/2012
5	University of the Western Cape, South Africa	Post Doctoral Research Associate	16/03/2011
6	Consejo Superior de Investigaciones Científicas	Researcher JAE-Doc	16/03/2008
7	Consejo Superior de Investigaciones Científicas	Postdoctoral Researcher	02/04/2007
8	Hebrew University of Jerusalem, Israel	Posdoctoral Fellow	01/02/2005
9	Consejo Superior de Investigaciones Científicas	Postdoctoral Researcher	01/01/2004
10	Consejo Superior de Investigaciones Científicas	Researcher	01/04/2003
11	Consejo Superior de Investigaciones Científicas	Predocctoral Researcher	01/06/1999



- 1** **Employing entity:** Consejo Superior de Investigaciones Científicas
Professional category: Investigador contratado
Start-End date: 01/03/2020 - 15/07/2020
Type of entity: State agency
- 2** **Employing entity:** University of the Free State, South Africa
Professional category: Associate Professor
Start-End date: 01/06/2018 - 31/12/2019
Type of entity: University
- 3** **Employing entity:** University of the Free State, South Africa
Professional category: Senior Researcher
Start-End date: 01/07/2017 - 31/05/2018
Type of entity: University
- 4** **Employing entity:** University of Pretoria, South Africa
Professional category: Research Fellow
Start-End date: 01/06/2012 - 30/06/2017
Type of entity: University
- 5** **Employing entity:** University of the Western Cape, South Africa
Professional category: Post Doctoral Research Associate
Start-End date: 16/03/2011 - 31/05/2012
Type of entity: University
- 6** **Employing entity:** Consejo Superior de Investigaciones Científicas
Professional category: Researcher JAE-Doc
Start-End date: 16/03/2008 - 15/03/2011
Type of entity: State agency
- 7** **Employing entity:** Consejo Superior de Investigaciones Científicas
Professional category: Postdoctoral Researcher
Start-End date: 02/04/2007 - 30/09/2007
Type of entity: State agency
- 8** **Employing entity:** Hebrew University of Jerusalem, Israel
Professional category: Posdoctoral Fellow
Start-End date: 01/02/2005 - 31/01/2007
Type of entity: University
- 9** **Employing entity:** Consejo Superior de Investigaciones Científicas
Professional category: Postdoctoral Researcher
Start-End date: 01/01/2004 - 31/12/2004
Type of entity: State agency
- 10** **Employing entity:** Consejo Superior de Investigaciones Científicas
Professional category: Researcher
Start-End date: 01/04/2003 - 31/12/2003
Type of entity: State agency



11 **Employing entity:** Consejo Superior de Investigaciones Científicas
Professional category: Predoctoral Researcher
Start-End date: 01/06/1999 - 31/03/2003

Type of entity: State agency



Education

University education

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

University degree: Higher degree
Name of qualification: BSc Biological Sciences
Degree awarding entity: University of Salamanca
Date of qualification: 28/07/1993

Doctorates

Doctorate programme: Molecular microbiology and genetics
Degree awarding entity: University of Salamanca **Type of entity:** University
Date of degree: 21/04/2003

Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

Title of course/seminar: Teaching certificate
Organising entity: University of Salamanca **Type of entity:** University
Start-End date: 1994 - 1995

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	A1	A1	A1	A1	A1

Teaching experience

General teaching experience

- Name of the course:** Applied microbial physiology
University degree: BSc Biology
Start date: 2018 **End date:** 2019
Entity: University of the Free State, South Africa **Type of entity:** University
- Name of the course:** Microbial ecology and environmental microbiology
University degree: BSc Biology
Start date: 2018 **End date:** 2019



Entity: University of the Free State, South Africa

Type of entity: University

3 Name of the course: Bacteriology

University degree: BSc Biology

Start date: 2017

Entity: University of Pretoria, South Africa

End date: 2017

Type of entity: University

Experience supervising doctoral thesis and/or final year projects

1 Project title: Denitrification: A metagenomics and kinetic study of bacterial consortia from nitrate contaminated sites

Type of project: Doctoral thesis

Entity: University of the Free State, South Africa

Type of entity: University

Student: Karabelo Moloantoa

Date of reading: 2022

2 Project title: Endophytes in African potato as a source of bioactive compounds

Type of project: MSc

Entity: University of the Free State, South Africa

City of entity: South African Republic

Student: Aoate Tsimatsima

Date of reading: 2022

3 Project title: Microbial characterization of a passive water treatment BDAS (Barium Dispersed Alkaline Substrate) system

Type of project: MSc

Entity: University of the Free State, South Africa

Student: Jameel Alom

Date of reading: 2022

4 Project title: Scoping and quantification study of emerging contaminants in the Free State and Eastern Cape regions: effects on bacterial diversity and potential fate of compounds

Type of project: Doctoral thesis

Entity: University of the Free State, South Africa

Type of entity: University

Student: Jou-An Chen

Date of reading: 2021

5 Project title: Characterization of bacterial diversity and chemical composition of alkaline pitlakes: insights into natural desalination processes

Type of project: MSc

Entity: University of the Free State, South Africa

City of entity: South African Republic

Student: Martha Mogale

Date of reading: 2021

6 Project title: Unexplored bacterial diversity and metabolic potential within South African scalding springs

Type of project: MSc

Entity: University of the Free State, South Africa

Type of entity: University

Student: Andisiwe Matu

Date of reading: 2021



- 7** **Project title:** Biodegradation of chloroethene compounds under microoxic conditions
Type of project: Doctoral thesis
Entity: University of the Free State, South Africa **Type of entity:** University
Student: Abidemi Ojo
Date of reading: 2020
- 8** **Project title:** The soil microbiome in a dryland crop rotation programme in South Africa
Type of project: Doctoral thesis
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Joel P. Dube
Date of reading: 2020
- 9** **Project title:** Analysing the potential of the African elephant gut microbiome for biogas optimization
Type of project: MSc
Entity: University of the Free State, South Africa **Type of entity:** University
Student: Elzette van der Walt
Date of reading: 2020
- 10** **Project title:** Exploring the blood microbiome in Alzheimer's disease and healthy individuals
Type of project: MSc
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Diego Castillo Vaca
Date of reading: 2020
- 11** **Project title:** Insights into Rare Earth Metal microbe interactions using a known metal resistant bacterium and a site-specific isolate
Type of project: Doctoral thesis
Entity: University of the Free State, South Africa **Type of entity:** University
Student: Maleke Maleke
Date of reading: 2019
- 12** **Project title:** Analysis of the bacterial microbiome from prostate tissue of South African men
Type of project: MSc
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Pieter Bowman
Date of reading: 2019
- 13** **Project title:** Anthropogenic arsenic biological management: characterization of arsenic hyper-resistance in bacterial consortia
Type of project: MSc
Entity: University of the Free State, South Africa **Type of entity:** University
Student: Gerhard Potgieter
Date of reading: 2019
- 14** **Project title:** Novel insights into precipitation and interactions of copper with *Desulfosporosinus* sp. and *Rhodanobacter* sp
Type of project: MSc
Entity: University of the Free State, South Africa **Type of entity:** University
Student: Corinne Fourie
Date of reading: 2019



- 15** **Project title:** Plant invasions and the role of mutualistic microbes
Type of project: Doctoral thesis
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Casper Kamutando
Date of reading: 2018
- 16** **Project title:** Unravelling the sorghum root microbiome: a route to enhancing crop performance
Type of project: Doctoral thesis
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Tanzelle Oberholster
Date of reading: 2018
- 17** **Project title:** Analysis of the bacterial microbiome from prostate tissue of South African men
Type of project: MSc
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Pieter Bowman
Date of reading: 2018
- 18** **Project title:** Distribution and diversity of rhizobial populations associated with *Acacia dealbata* in South Africa
Type of project: MSc
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Percy Mutseka
Date of reading: 2018
- 19** **Project title:** Occurrence, causal agents and management of atypical potato skin blemishes in South Africa and Zimbabwe
Type of project: Doctoral thesis
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Josephine Zimudzi
Date of reading: 2017
- 20** **Project title:** Microbial community structure of soil from potato fields
Type of project: MSc
Entity: University of Pretoria, South Africa **Type of entity:** University
Student: Linda Nhukarume
Date of reading: 2015
- 21** **Project title:** Peat bogs: temporal and spatial diversity of bacterial communities
Type of project: Doctoral thesis
Entity: National University of San Martin, Argentina **Type of entity:** University
Student: María Victoria Quiroga
Date of reading: 2013
- 22** **Project title:** Caracterización bioquímica y microbiológica de un suelo de pradera de *Dactylis glomerata* y *Medicago sativa* bajo diferentes proporciones de siembra
Type of project: Doctoral thesis
Entity: University of Salamanca, Spain **City of entity:** Spain
Student: Marisol Medina Sierra
Obtained qualification: Sobresaliente Cum Laude



Date of reading: 2012

- 23** **Project title:** Micro-eukaryotic diversity in Antarctic hypolithons
Type of project: MSc
Entity: University of Western Cape, South Africa **Type of entity:** University
Student: Jarishma K Gokul
Date of reading: 2012
- 24** **Project title:** Phenotypic variation in Azospirillum brasilense
Type of project: Doctoral thesis
Entity: The Hebrew University of Jerusalem, Israel **Type of entity:** University
Student: Anat Lerner
Date of reading: 2007

Teaching experience in courses and seminars for university teacher training

- 1** **Type of event:** Postgraduate course
Name of the event: R for microbial diversity analyses
Organising entity: University of Pretoria, South Africa **Type of entity:** University
Teaching date: 2114
- 2** **Type of event:** Postgraduate course
Name of the event: Marker-gene metagenomics data analysis
Organising entity: University of the Free State, South Africa **Type of entity:** University
Teaching date: 2019
- 3** **Type of event:** Postgraduate course
Name of the event: Marker-gene metagenomics data analysis
Organising entity: University of the Free State, South Africa **Type of entity:** University
Teaching date: 2018
- 4** **Type of event:** Postgraduate course
Name of the event: Bioinformatics: analysing microbial diversity
Organising entity: Université de la Manouba, Tunisia **Type of entity:** University
Teaching date: 2016
- 5** **Type of event:** Postgraduate course
Name of the event: Analysis of microbial diversity: MOTHUR
Organising entity: National University of San Martin, Argentina **Type of entity:** University
Teaching date: 2013
- 6** **Type of event:** Postgraduate course
Name of the event: R for microbial diversity analyses
Organising entity: University of Pretoria, South Africa **Type of entity:** University
Teaching date: 2013



- 7** **Type of event:** Postgraduate course
Name of the event: Biotechnological Applications of Microorganisms
Organising entity: University of Salamanca **Type of entity:** University
Teaching date: 2009
- 8** **Type of event:** Postgraduate course
Name of the event: Microorganisms and Biotechnology for future agriculture
Organising entity: University of Salamanca **Type of entity:** University
Teaching date: 2009
- 9** **Type of event:** Postgraduate course
Name of the event: Microorganisms and Biotechnology for future agriculture
Organising entity: University of Salamanca **Type of entity:** University
Teaching date: 2008

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:** Efecto de la restauración de núcleos rurales abandonados sobre los Servicios Ecosistémicos: hacia una transición ecológica sostenible del medio rural (RENURSE)
Name principal investigator (PI, Co-PI....): 1
Start-End date: 2022 - 2024
Total amount: 100.050 €
- 2** **Name of the project:** Linking crop diversification to microbial energy allocation and organic carbon storage in soils (ENERGYLINK)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Anke Herrmann; Angel Valverde Portal
Nº of researchers: 12
Funding entity or bodies: European Union **Type of entity:** Public
Start-End date: 2021 - 2024
Total amount: 147.653 €
- 3** **Name of the project:** SUPERA: Sanidad vegetal sostenible mediante RNAi medioambiental para reducir el impacto de las enfermedades en la agricultura y los bosques
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Julio Javier Diez Casero; Angel Valverde Portal
Funding entity or bodies: Ministerio de Ciencia e Innovación **Type of entity:** Public



Start-End date: 2021 - 2024

Total amount: 91.837 €

- 4 Name of the project:** Nuevas tendencias en el manejo adaptativo de la dehesa: Evaluación de cambios en la estructura y función de las comunidades microbianas del suelo

Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca

Type of entity: State agency

City of entity: Salamanca, Spain

Name principal investigator (PI, Co-PI....): Angel Valverde Portal; José Mariano Igual Arroyo

Nº of researchers: 2

Start-End date: 2020 - 2024

Total amount: 117.370 €

- 5 Name of the project:** Defining functional microbiomes of two major crops in South Africa for improved productivity

Entity where project took place: University of the Free State, South Africa

City of entity: Bloemfontein, South African Republic

Name principal investigator (PI, Co-PI....): Karin Jacobs; Angel Valverde Portal

Nº of researchers: 2

Funding entity or bodies:

NRF

Start-End date: 2019 - 2021

Total amount: 319.800 €

- 6 Name of the project:** African soil microorganisms as a critical resource for agriculture and biotechnology

Entity where project took place: University of Pretoria, South Africa

City of entity: Pretoria,

Name principal investigator (PI, Co-PI....): Don Cowan; Angel Valverde Portal

Nº of researchers: 2

Funding entity or bodies:

USAID

City funding entity: United States of America

Start-End date: 2018 - 2020

Total amount: 500.000 €

- 7 Name of the project:** Improving crop productivity using metagenomics

Entity where project took place: University of the Free State, South Africa

City of entity: Bloemfontein,

Name principal investigator (PI, Co-PI....): Angel Valverde Portal

Nº of researchers: 1

Funding entity or bodies:

Technology Innovation Agency

Start-End date: 2018 - 2020

Total amount: 502.000 €

- 8 Name of the project:** Unravelling the microbiome of Sesotho (sorghum beer) through targeted metagenomics

Entity where project took place: University of the Free State, South Africa

City of entity: Bloemfontein,

Name principal investigator (PI, Co-PI....): Angel Valverde Portal; Errol Cason



Nº of researchers: 2

Funding entity or bodies:

UFS-CUT

Start-End date: 2018 - 2019

Total amount: 5.300 €

- 9** **Name of the project:** Incentive funding for rated researchers
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Angel Valverde Portal
Nº of researchers: 1
Funding entity or bodies:
NRF
Start-End date: 2014 - 2019
Total amount: 17.000 €

- 10** **Name of the project:** Plant invasions and the role of mutualistic microbes: Acacia dealbata as a case study
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Angel Valverde Portal; Don Cowan
Nº of researchers: 2
Funding entity or bodies:
NRF
Start-End date: 2015 - 2017
Total amount: 75.000 €

- 11** **Name of the project:** What are the impacts of global change on arid soil microbial communities?
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Thulani Makhwanyane; Angel Valverde Portal
Nº of researchers: 2
Start-End date: 2016 - 2016
Total amount: 4.500 €

- 12** **Name of the project:** Ecosystem functioning: hypolithic communities as a model system
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Angel Valverde Portal
Nº of researchers: 1
Start-End date: 2014 - 2016
Total amount: 39.800 €

- 13** **Name of the project:** Unravelling the sorghum root microbiome: a route to enhancing crop performance
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Don Cowan; Angel Valverde Portal
Nº of researchers: 2
Start-End date: 2014 - 2016
Total amount: 65.000 €



- 14** **Name of the project:** Bacterial phylogenetic and functional diversity in Sub-Antarctic peatlands from Tierra del Fuego (Argentina)
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Angel Valverde Portal
Nº of researchers: 2
Funding entity or bodies:
University of Pretoria
Start-End date: 2015 - 2015
Total amount: 4.000 €
- 15** **Name of the project:** Unveiling endophytic bacterial communities in the Fynbos biome
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Angel Valverde Portal
Nº of researchers: 1
Funding entity or bodies:
NRF
Start-End date: 2014 - 2015
Total amount: 7.200 €
- 16** **Name of the project:** Effects of cyanobacterial diversity on food web structure in a desert ecosystem
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria, South African Republic
Name principal investigator (PI, Co-PI....): Angel Valverde Portal
Start-End date: 2013 - 2015
Total amount: 10.600 €
- 17** **Name of the project:** Root-associated microorganisms in crop productivity
Entity where project took place: University of Pretoria, South Africa
City of entity: Pretoria,
Name principal investigator (PI, Co-PI....): Don Cowan; Angel Valverde Portal
Nº of researchers: 2
Funding entity or bodies:
NRF
Start-End date: 2014 - 2014
Total amount: 5.000 €
- 18** **Name of the project:** Dessert microbial ecology
Entity where project took place: University of the Western Cape, South Africa
City of entity: Cape Town, South African Republic
Name principal investigator (PI, Co-PI....): Don Cowan
Start-End date: 2011 - 2013
Total amount: 122.319 €
- 19** **Name of the project:** Optimization of the diversity-carbon balance linkage through agro-pastoral management strategies (OBAMA)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca
Type of entity: State agency



Name principal investigator (PI, Co-PI....): Angel Valverde Portal
Start-End date: 2010 - 2010
Total amount: 9.000 €

- 20 Name of the project:** Carbon storage in agro-pastoral ecosystems under contrasted environments and management regimes (CARBOAGROPAS)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Ignacio Santa Regina
Start-End date: 2006 - 2009
Total amount: 42.350 €
- 21 Name of the project:** Identification et selection de souches de Frankia symbiotiques d'Alnus glutinosa, les plus compétitives et les mieux adaptées aux conditions pedoclimatiques de la Tunisie et de l'Espagne
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): José Mariano Igual Arroyo
Start-End date: 2007 - 2008
Total amount: 6.300 €
- 22 Name of the project:** Mejora de la productividad de los altramuces (Lupinus sp.) en Castilla y León mediante su biofertilización con rizobios solubilizadores de fosfato
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): José Mariano Igual Arroyo
Start-End date: 2006 - 2008
Total amount: 18.000 €
- 23 Name of the project:** Arabinose-rich exopolysaccharide (EPS) and Polyhydroxybutyrate (PHB) in Azospirillum brasilense
Entity where project took place: The Hebrew University of Jerusalem, Israel
City of entity: Rehovot, Israel
Name principal investigator (PI, Co-PI....): Yaacov Okon
Start-End date: 2005 - 2008
Total amount: 91.906 €
- 24 Name of the project:** Estudio de los patrones de nodulación en el género actinorrónico Alnus
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): José M. Igual Arroyo
Start-End date: 2006 - 2007
Total amount: 30.000 €
- 25 Name of the project:** Two-component regulatory systems in Xanthomonas oryzae pv. oryzae
Entity where project took place: The Hebrew University of Jerusalem, Israel
City of entity: Rehovot, Israel
Name principal investigator (PI, Co-PI....): Saul Burdman
Start-End date: 2005 - 2007
Total amount: 82.715 €



- 26** **Name of the project:** Efecto de las bacterias solubilizadoras de fosfatos inorgánicos (BSP) aisladas de suelos marroquíes sobre el crecimiento y el rendimiento de la alubia (*Phaseolus vulgaris*)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Claudino Rodríguez Barrueco
Start-End date: 2004 - 2006
Total amount: 12.000 €
- 27** **Name of the project:** Ecological role of chestnut (*Castanea sativa* Mill) and the use of this forest as resource for sustainable development (MANCHEST)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Ignacio Santa Regina
Start-End date: 2001 - 2005
Total amount: 107.000 €
- 28** **Name of the project:** Trophic linkages between above and below-ground organisms as a key to successful restoration of biodiversity on ex-arable land across Europe (TLinks)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Claudino Rodríguez Barrueco
Start-End date: 2001 - 2005
Total amount: 215.000 €
- 29** **Name of the project:** Desarrollo de nuevos biofertilizantes para leguminosas de interés agronómico en Castilla y León
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Emilio Cervantes Ruiz de las Torre
Start-End date: 1999 - 2001
- 30** **Name of the project:** Desarrollo de variedades y biofertilizantes para el cultivo del garbanzo
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Emilio Cervantes Ruiz de la Torre
Start-End date: 1999 - 2001
- 31** **Name of the project:** Caracterización molecular de cepas de *Rhizobium* y *Frankia* aisladas en la región de El Chaco (Argentina)
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI....): Emilio Cervantes Ruiz de la Torre
Start-End date: 1998 - 2000



- 32** **Name of the project:** Estudio molecular de simbiosis actinorrízicas
Entity where project took place: Instituto de Recursos Naturales y Agrobiología de Salamanca **Type of entity:** State agency
City of entity: Salamanca, Spain
Name principal investigator (PI, Co-PI...): Emilio Cervantes Ruiz de la Torre
Start-End date: 1998 - 2000

Scientific and technological activities

Scientific production

- 1** **H index:** 31
Date of application: 12/07/2022
Fuente de Índice H: WOS
- 2** **H index:** 37
Date of application: 12/07/2022
Fuente de Índice H: GOOGLE SCHOLAR
- 3** **H index:** 32
Date of application: 12/07/2022
Fuente de Índice H: SCOPUS

Publications, scientific and technical documents

- 1** DA Cowan; PH Lebre; CER Amon; RW Becker; HI Boga; A Boulangé; TL Chiyaka; T Coetzee; PC de Jager; O Dikinya; F Eckardt; M Greve; MA Harris; DW Hopkins; HB Houngnandan; P Houngnandan; K Jordaan; E Kaimoyo; AK Kambura; G Kamgan-Nkuekam; TP Makhalanyane; G Maggs-Kölling; E Marais; H Mondlane; E Nghalipo; BW Olivier; M Ortiz; LR Pertierra; J-B Ramond; M Seeley; I Sithole-Niang; A Valverde; G Varliero; S Vikram; DH Wall; A Zeze. Biogeographical survey of soil microbiomes across sub-Saharan Africa: structure, drivers and predicted climate-driven changes. *Microbiome*. 10, pp. 131. 2022.
Type of production: Scientific paper
- 2** Y. Naidoo; A. Valverde; RE. Pierneef; DA. Cowan. Differences in precipitation regime shape microbial community composition and functional potential in Namib desert soils. *Microbial Ecology*. 83, pp. 689 - 701. 2022.
Type of production: Scientific paper
- 3** A. de los Ríos; I Garrido-Benavente; A. Limon; ED. Cason; DA. Cowan; A. Valverde. Novel lichen-dominated hypolithic communities in the Namib Desert. *Microbial Ecology*. 83, pp. 1036 - 1048. 2022.
Type of production: Scientific paper
- 4** MV Quiroga; A Valverde; G Mataloni; V Casa; JC Stegen; D Cowan. The ecological assembly of bacterial communities in Antarctic wetlands varies across levels of phylogenetic resolution. *Environmental Microbiology*. 24, pp. 3486 - 3499. 2022.
Type of production: Scientific paper
Corresponding author: Yes



- 5** JJ. Le Roux; PW. Crous; CN. Kamutando; DM. Richardson; D. Strasberg; MJ. Wingfield; MG. Wright; A. Valverde. A core of rhizosphere bacterial taxa associates with two of the world's most isolated plant congeners. *Plant and Soil*. 468, pp. 277 - 294. 2021.
Type of production: Scientific paper **Format:** Journal
- 6** Valverde, A.; Cason, E.D.; Gomez-Arias, A.; Bozkale, D.; Govender, D.; Riddell, E.; Cowan, D.. Pollution shapes the microbial communities in river water and sediments from the Olifants River catchment, South Africa. *Archives of Microbiology*. 203, pp. 295 - 303. 2021. Available on-line at: <<https://doi.org/10.1007/s00203-020-02035-2>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 7** Y. Naidoo; A. Valverde; E.D. Cason; R.E. Pierneef; D.A. Cowan. A clinically important, plasmid-borne antibiotic resistance gene (β -lactamase TEM-116) present in desert soils. *Science of the Total Environment*. 719, pp. 137497. 2020. Available on-line at: <<http://dx.doi.org/10.1016/j.scitotenv.2020.137497>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 8** E.D. Cason; B.J. Mahlomaholo; M.M. Taole; G.O. Abong; J.-G. Vermeulen; O. de Smidt; M. Vermeulen; L. Steyn; A. Valverde; B. Viljoen. Bacterial and Fungal Dynamics During the Fermentation Process of Sesotho, a Traditional Beer of Southern Africa. *Frontiers in Microbiology*. 11, 2020. Available on-line at: <<http://dx.doi.org/10.3389/fmicb.2020.01451>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 9** E.D. Cason; J.-G. Vermeulen; W.J. Müller; E. van Heerden; A. Valverde. Aerobic and anaerobic enrichment cultures highlight the pivotal role of facultative anaerobes in soil hydrocarbon degradation. *Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering*. 54 - 5, pp. 408 - 415. 2019. Available on-line at: <<http://dx.doi.org/10.1080/10934529.2018.1558902>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 10** M. Maleke; A. Valverde; A. Gomez-Arias; E.D. Cason; J.-G. Vermeulen; L. Coetsee-Hugo; H. Swart; E. van Heerden; J. Castillo. Anaerobic reduction of europium by a *Clostridium* strain as a strategy for rare earth biorecovery. *Scientific Reports*. 9 - 1, 2019. Available on-line at: <<http://dx.doi.org/10.1038/s41598-019-50179-z>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 11** M. Maleke; A. Valverde; J.-G. Vermeulen; E. Cason; A. Gomez-Arias; K. Moloantoa; L. Coetsee-Hugo; H. Swart; E. Van Heerden; J. Castillo. Biomineralization and bioaccumulation of europium by a thermophilic metal resistant bacterium. *Frontiers in Microbiology*. 10 - JAN, 2019. Available on-line at: <<http://dx.doi.org/10.3389/fmicb.2019.00081>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 12** J.P. Dube; A. Valverde; J.M. Steyn; D.A. Cowan; J.E. van der Waals. Differences in bacterial diversity, Composition and function due to long-term agriculture in soils in the Eastern Free State of South Africa. *Diversity*. 11 - 4, 2019. Available on-line at: <<http://dx.doi.org/10.3390/d11040061>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 13** T.R. Kinge; E.D. Cason; A. Valverde; M. Nyaga; M. Gryzenhout. Endophytic seed mycobiome of six sorghum (*Sorghum bicolor*) cultivars from commercial seedlots using an Illumina sequencing approach. *Mycosphere*. 10 - 1, pp. 739 - 756. 2019. Available on-line at: <<http://dx.doi.org/10.5943/MYCOSPHERE/10/1/16>>.



Type of production: Scientific paper

Format: Journal

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

- 14** J.D. Flores-Félix; F. Sánchez-Juanes; P. García-Fraile; A. Valverde; P.F. Mateos; J.M. González-Buitrago; E. Velázquez; R. Rivas. Phaseolus vulgaris is nodulated by the symbiovar viciae of several genospecies of Rhizobium laguerreae complex in a Spanish region where Lens culinaris is the traditionally cultivated legume. Systematic and Applied Microbiology. 42 - 2, pp. 240 - 247. 2019. Available on-line at: <<http://dx.doi.org/10.1016/j.syapm.2018.10.009>>.

Type of production: Scientific paper

Format: Journal

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

- 15** C.N. Kamutando; S. Vikram; G. Kamgan-Nkuekam; T.P. Makhalanyane; M. Greve; J.J. Le Roux; D.M. Richardson; D.A. Cowan; A. Valverde. The Functional Potential of the Rhizospheric Microbiome of an Invasive Tree Species, Acacia dealbata. Microbial Ecology. 77 - 1, pp. 191 - 200. 2019. Available on-line at: <<http://dx.doi.org/10.1007/s00248-018-1214-0>>.

Type of production: Scientific paper

Format: Journal

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

- 16** G.K. Nkuekam; D.A. Cowan; A. Valverde. Arable agriculture changes soil microbial communities in the South African Grassland Biome. South African Journal of Science. 114 - 5-6, 2018. Available on-line at: <<http://dx.doi.org/10.17159/sajs.2018/20170288>>.

Type of production: Scientific paper

Format: Journal

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

- 17** T. Oberholster; S. Vikram; D. Cowan; A. Valverde. Key microbial taxa in the rhizosphere of sorghum and sunflower grown in crop rotation. Science of the Total Environment. 624, pp. 530 - 539. 2018. Available on-line at: <<http://dx.doi.org/10.1016/j.scitotenv.2017.12.170>>.

Type of production: Scientific paper

Format: Journal

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

- 18** J. Zimudzi; J.E. van der Waals; T.A. Coutinho; D.A. Cowan; A. Valverde. Temporal shifts of fungal communities in the rhizosphere and on tubers in potato fields. Fungal Biology. 122 - 9, pp. 928 - 934. 2018. Available on-line at: <<http://dx.doi.org/10.1016/j.funbio.2018.05.008>>.

Type of production: Scientific paper

Format: Journal

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

- 19** M.W. Van Goethem; T.P. Makhalanyane; D.A. Cowan; A. Valverde. Cyanobacteria and Alphaproteobacteria may facilitate cooperative interactions in niche communities. Frontiers in Microbiology. 8 - OCT, 2017. Available on-line at: <<http://dx.doi.org/10.3389/fmicb.2017.02099>>.

Type of production: Scientific paper

Format: Journal

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

- 20** C.N. Kamutando; S. Vikram; G. Kamgan-Nkuekam; T.P. Makhalanyane; M. Greve; J.J.L. Roux; D.M. Richardson; D. Cowan; A. Valverde. Soil nutritional status and biogeography influence rhizosphere microbial communities associated with the invasive tree Acacia dealbata. Scientific Reports. 7 - 1, 2017. Available on-line at: <<http://dx.doi.org/10.1038/s41598-017-07018-w>>.

Type of production: Scientific paper

Format: Journal

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

- 21** M.W. Van Goethem; T.P. Makhalanyane; A. Valverde; S.C. Cary; D.A. Cowan. Characterization of bacterial communities in lithobionts and soil niches from Victoria Valley, Antarctica. FEMS Microbiology Ecology. 92 - 4, pp. 1 - 22. 2016. Available on-line at: <<http://dx.doi.org/10.1093/femsec/fiw051>>.

Type of production: Scientific paper

Format: Journal



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

- 22** F. Oloo; A. Valverde; M.V. Quiroga; S. Vikram; D. Cowan; G. Mataloni. Habitat heterogeneity and connectivity shape microbial communities in South American peatlands. *Scientific Reports*. 6, 2016. Available on-line at: <<http://dx.doi.org/10.1038/srep25712>>.

Type of production: Scientific paper

Format: Journal

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

- 23** T. Miyambo; T.P. Makhalanyane; D.A. Cowan; A. Valverde. Plants of the fynbos biome harbour host species-specific bacterial communities. *FEMS Microbiology Letters*. 363 - 15, 2016. Available on-line at: <<http://dx.doi.org/10.1093/femsle/fnw122>>.

Type of production: Scientific paper

Format: Journal

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

- 24** A. Valverde; P. De Maayer; T. Oberholster; J. Henschel; M.K. Louw; D. Cowan. Specific microbial communities associate with the rhizosphere of *Welwitschia mirabilis*, a living fossil. *PLoS ONE*. 11 - 4, 2016. Available on-line at: <<http://dx.doi.org/10.1371/journal.pone.0153353>>.

Type of production: Scientific paper

Format: Journal

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

- 25** A. Armstrong; A. Valverde; J.-B. Ramond; T.P. Makhalanyane; J.K. Jansson; D.W. Hopkins; T.J. Aspray; M. Seely; M.I. Trindade; D.A. Cowan. Temporal dynamics of hot desert microbial communities reveal structural and functional responses to water input. *Scientific Reports*. 6, 2016. Available on-line at: <<http://dx.doi.org/10.1038/srep34434>>.

Type of production: Scientific paper

Format: Journal

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

- 26** A. Valverde; T.P. Makhalanyane; M. Seely; D.A. Cowan. Cyanobacteria drive community composition and functionality in rock-soil interface communities. *Molecular Ecology*. 24 - 4, pp. 812 - 821. 2015. Available on-line at: <<http://dx.doi.org/10.1111/mec.13068>>.

Type of production: Scientific paper

Format: Journal

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

- 27** T.P. Makhalanyane; A. Valverde; D. Velázquez; E. Gunnigle; M.W. Van Goethem; A. Quesada; D.A. Cowan. Ecology and biogeochemistry of cyanobacteria in soils, permafrost, aquatic and cryptic polar habitats. *Biodiversity and Conservation*. 24 - 4, pp. 819 - 840. 2015. Available on-line at: <<http://dx.doi.org/10.1007/s10531-015-0902-z>>.

Type of production: Scientific paper

Format: Journal

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

- 28** T.P. Makhalanyane; A. Valverde; E. Gunnigle; A. Frossard; J.-B. Ramond; D.A. Cowan. Microbial ecology of hot desert edaphic systems. *FEMS Microbiology Reviews*. 39 - 2, pp. 203 - 221. 2015. Available on-line at: <<http://dx.doi.org/10.1093/femsre/fuu011>>.

Type of production: Scientific paper

Format: Journal

Degree of contribution: Author or co-author of review

- 29** M.V. Quiroga; A. Valverde; G. Mataloni; D. Cowan. Understanding diversity patterns in bacterioplankton communities from a sub-Antarctic peatland. *Environmental Microbiology Reports*. 7 - 3, pp. 547 - 553. 2015. Available on-line at: <<http://dx.doi.org/10.1111/1758-2229.12287>>.

Type of production: Scientific paper

Format: Journal

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



- 30** A. Valverde; T.P. Makhalanyane; D.A. Cowan. Contrasting assembly processes in a bacterial metacommunity along a desiccation gradient. *Frontiers in Microbiology*. 5 - DEC, 2014. Available on-line at: <<http://dx.doi.org/10.3389/fmicb.2014.00668>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 31** D.A. Cowan; E.P. Rybicki; M.I. Tuffin; A. Valverde; M.J. Wingfield. Biodiversity: So much more than legs and leaves. *South African Journal of Science*. 109 - 11-12, 2013. Available on-line at: <<http://dx.doi.org/10.1590/sajs.2013/a0037>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 32** A.N. Roychoudhury; D. Cowan; D. Porter; A. Valverde. Dissimilatory sulphate reduction in hypersaline coastal pans: An integrated microbiological and geochemical study. *Geobiology*. 11 - 3, pp. 224 - 233. 2013. Available on-line at: <<http://dx.doi.org/10.1111/gbi.12027>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 33** T.P. Makhalanyane; A. Valverde; N.-K. Birkeland; S.C. Cary; I. Marla Tuffin; D.A. Cowan. Evidence for successional development in Antarctic hypolithic bacterial communities. *ISME Journal*. 7 - 11, pp. 2080 - 2090. 2013. Available on-line at: <<http://dx.doi.org/10.1038/ismej.2013.94>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 34** T.P. Makhalanyane; A. Valverde; D.C. Lacap; S.B. Pointing; M.I. Tuffin; D.A. Cowan. Evidence of species recruitment and development of hot desert hypolithic communities. *Environmental Microbiology Reports*. 5 - 2, pp. 219 - 224. 2013. Available on-line at: <<http://dx.doi.org/10.1111/1758-2229.12003>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 35** F. Stomeo; A. Valverde; S.B. Pointing; C.P. McKay; K.A. Warren-Rhodes; M.I. Tuffin; M. Seely; D.A. Cowan. Hypolithic and soil microbial community assembly along an aridity gradient in the Namib Desert. *Extremophiles*. 17 - 2, pp. 329 - 337. 2013. Available on-line at: <<http://dx.doi.org/10.1007/s00792-013-0519-7>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 36** F. Sánchez-Juanes; L. Ferreira; P. Alonso De La Vega; A. Valverde; M.L. Barrios; R. Rivas; P.F. Mateos; E. Martínez-Molina; J.M. González-Buitrago; M.E. Trujillo; E. Velázquez. MALDI-TOF mass spectrometry as a tool for differentiation of Bradyrhizobium species: Application to the identification of Lupinus nodulating strains. *Systematic and Applied Microbiology*. 36 - 8, pp. 565 - 571. 2013. Available on-line at: <<http://dx.doi.org/10.1016/j.syapm.2013.09.003>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 37** J.K. Gokul; A. Valverde; M. Tuffin; S.C. Cary; D.A. Cowan. Micro-eukaryotic diversity in hypolithons from Miers Valley, Antarctica. *Biology*. 2 - 1, pp. 331 - 340. 2013. Available on-line at: <<http://dx.doi.org/10.3390/biology2010331>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee



- 38** J.-D. Flores-Félix; L. Carro; E. Velázquez; Á. Valverde; E. Cerda-Castillo; P. García-Fraile; R. Rivas. *Phyllobacterium endophyticum* sp. nov., isolated from nodules of *Phaseolus vulgaris*. *International Journal of Systematic and Evolutionary Microbiology*. 63 - PART3, pp. 821 - 826. 2013. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.038497-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 39** E. Ramos; M.-H. Ramírez-Bahena; A. Valverde; E. Velázquez; D. Zúñiga; C. Velezmoro; A. Peix. *Pseudomonas punonensis* sp. nov., isolated from straw. *International Journal of Systematic and Evolutionary Microbiology*. 63 - PART 5, pp. 1834 - 1839. 2013. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.042119-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 40** F. Stomeo; T.P. Makhalyane; A. Valverde; S.B. Pointing; M.I. Stevens; C.S. Cary; M.I. Tuffin; D.A. Cowan. Abiotic factors influence microbial diversity in permanently cold soil horizons of a maritime-associated Antarctic Dry Valley. *FEMS Microbiology Ecology*. 82 - 2, pp. 326 - 340. 2012. Available on-line at: <<http://dx.doi.org/10.1111/j.1574-6941.2012.01360.x>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 41** G. Azziz; N. Bajsa; T. Haghjou; C. Taulé; Á. Valverde; J.M. Igual; A. Arias. Abundance, diversity and prospecting of culturable phosphate solubilizing bacteria on soils under crop-pasture rotations in a no-tillage regime in Uruguay. *Applied Soil Ecology*. 61, pp. 320 - 326. 2012. Available on-line at: <<http://dx.doi.org/10.1016/j.apsoil.2011.10.004>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 42** A. Valverde; M. Tuffin; D.A. Cowan. Biogeography of bacterial communities in hot springs: A focus on the actinobacteria. *Extremophiles*. 16 - 4, pp. 669 - 679. 2012. Available on-line at: <<http://dx.doi.org/10.1007/s00792-012-0465-9>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 43** L. Carro; R. Rivas; M. León-Barrios; M. González-Tirante; E. Velázquez; A. Valverde. *Herbaspirillum canariense* sp. nov., *Herbaspirillum aurantiacum* sp. nov. and *Herbaspirillum soli* sp. nov., isolated from volcanic mountain soil, and emended description of the genus *Herbaspirillum*. *International Journal of Systematic and Evolutionary Microbiology*. 62 - 6, pp. 1300 - 1306. 2012. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.031336-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 44** S. Salazar; L.E. Sánchez; J. Alvarez; A. Valverde; P. Galindo; J.M. Igual; A. Peix; I. Santa-Regina. Correlation among soil enzyme activities under different forest system management practices. *Ecological Engineering*. 37 - 8, pp. 1123 - 1131. 2011. Available on-line at: <<http://dx.doi.org/10.1016/j.ecoleng.2011.02.007>>.
Type of production: Scientific paper **Format:** Journal
Position of signature: 4 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
- 45** A. Valverde; M. González-Tirante; M. Medina-Sierra; I. Santa-Regina; A. García-Sánchez; J.M. Igual. Diversity and community structure of culturable arsenic-resistant bacteria across a soil arsenic gradient at an abandoned tungsten-tin mining area. *Chemosphere*. 85 - 1, pp. 129 - 134. 2011. Available on-line at: <<http://dx.doi.org/10.1016/j.chemosphere.2011.06.025>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee



- 46** A. Valverde; E. Velázquez; E. Cervantes; J.M. Igual; P. van Berkum. Evidence of an American origin for symbiosis-related genes in *Rhizobium lusitanum*. *Applied and Environmental Microbiology*. 77 - 16, pp. 5665 - 5670. 2011. Available on-line at: <<http://dx.doi.org/10.1128/AEM.02017-10>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 47** T. Pérez; J.L. Balcázar; A. Peix; A. Valverde; E. Velázquez; I. de Blas; I. Ruiz-Zarzuela. *Lactococcus lactis* subsp. *tractae* subsp. nov. isolated from the intestinal mucus of brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*). *International Journal of Systematic and Evolutionary Microbiology*. 61 - 8, pp. 1894 - 1898. 2011. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.023945-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 48** A. Valverde; A. Fterich; M. Mahdhi; M.-H. Ramírez-Bahena; M.A. Caviedes; M. Mars; E. Velázquez; I.D. Rodríguez-Llorente. *Paenibacillus prosopidis* sp. nov., isolated from the nodules of *Prosopis farcta*. *International Journal of Systematic and Evolutionary Microbiology*. 60 - 9, pp. 2182 - 2186. 2010. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.014241-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 49** A. Lerner; A. Valverde; S. Castro-Sowinski; H. Lerner; Y. Okon; S. Burdman. Phenotypic variation in *Azospirillum brasilense* exposed to starvation. *Environmental Microbiology Reports*. 2 - 4, pp. 577 - 586. 2010. Available on-line at: <<http://dx.doi.org/10.1111/j.1758-2229.2010.00149.x>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 50** E. Velázquez; A. Valverde; R. Rivas; V. Gomis; Á. Peix; I. Gantois; J.M. Igual; M. León-Barrios; A. Willems; P.F. Mateos; E. Martínez-Molina. Strains nodulating *lupinus albus* on different continents belong to several new chromosomal and symbiotic lineages within *bradyrhizobium*. *Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology*. 97 - 4, pp. 363 - 376. 2010. Available on-line at: <<http://dx.doi.org/10.1007/s10482-010-9415-7>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 51** P. Delvasto; A. Ballester; J.A. Muñoz; F. González; M.L. Blázquez; J.M. Igual; A. Valverde; C. García-Balboa. Mobilization of phosphorus from iron ore by the bacterium *Burkholderia caribensis* FeGL03. *Minerals Engineering*. 22 - 1, pp. 1 - 9. 2009. Available on-line at: <<http://dx.doi.org/10.1016/j.mineng.2008.03.001>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 52** A. Lerner; S. Castro-Sowinski; A. Valverde; H. Lerner; R. Dror; Y. Okon; S. Burdman. The *Azospirillum brasilense* Sp7 *noeJ* and *noeL* genes are involved in extracellular polysaccharide biosynthesis. *Microbiology*. 155 - 12, pp. 4058 - 4068. 2009. Available on-line at: <<http://dx.doi.org/10.1099/mic.0.031807-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 53** E.R. Álvarez-Martínez; Á. Valverde; M.H. Ramírez-Bahena; P. García-Fraile; C. Tejedor; P.F. Mateos; N. Santillana; D. Zúñiga; A. Peix; E. Velázquez. The analysis of core and symbiotic genes of rhizobia nodulating *Vicia* from diverent continents reveals their common phylogenetic origin and suggests the distribution of *Rhizobium leguminosarum* strains together with *Vicia* seeds. *Archives of Microbiology*. 191 - 8, pp. 659 - 668. 2009. Available on-line at: <<http://dx.doi.org/10.1007/s00203-009-0495-6>>.
Type of production: Scientific paper **Format:** Journal



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

- 54** M. Yishay; S. Burdman; A. Valverde; T. Luzzatto; R. Ophir; I. Yedidia. Differential pathogenicity and genetic diversity among *Pectobacterium carotovorum* ssp. *carotovorum* isolates from monocot and dicot hosts support early genomic divergence within this taxon. *Environmental Microbiology*. 10 - 10, pp. 2746 - 2759. 2008. Available on-line at: <<http://dx.doi.org/10.1111/j.1462-2920.2008.01694.x>>.

Type of production: Scientific paper

Format: Journal

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

- 55** P. Delvasto; A. Valverde; A. Ballester; J.A. Muñoz; F. González; M.L. Blázquez; J.M. Igual; C. García-Balboa. Diversity and activity of phosphate bioleaching bacteria from a high-phosphorus iron ore. *Hydrometallurgy*. 92 - 3-4, pp. 124 - 129. 2008. Available on-line at: <<http://dx.doi.org/10.1016/j.hydromet.2008.02.007>>.

Type of production: Scientific paper

Format: Journal

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

- 56** A. Valverde; A. Peix; R. Rivas; E. Velázquez; S. Salazar; I. Santa-Regina; C. Rodríguez-Barrueco; J.M. Igual. *Paenibacillus castaneae* sp. nov., isolated from the phyllosphere of *Castanea sativa* Miller. *International Journal of Systematic and Evolutionary Microbiology*. 58 - 11, pp. 2560 - 2564. 2008. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.65663-0>>.

Type of production: Scientific paper

Format: Journal

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

- 57** M.H. Ramírez-Babena; P. García-Fraile; A. Peix; A. Valverde; R. Rivas; J.M. Igual; P.F. Mateos; E. Martínez-Molina; E. Velázquez. Revision of the taxonomic status of the species *Rhizobium leguminosarum* (Frank 1879) Frank 1889^{AL}, *Rhizobium phaseoli* Dangeard 1926^{AL} and *Rhizobium trifolii* Dangeard 1926^{AL}. *R. trifolii* is a later synonym of *R. leguminosarum*. Reclassification of the strain *R. leguminosarum* DSM 30132 (=NCIMB 11478) as *Rhizobium pisi* sp. nov. *International Journal of Systematic and Evolutionary Microbiology*. 58 - 11, pp. 2484 - 2490. 2008. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.65621-0>>.

Type of production: Scientific paper

Format: Journal

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

- 58** A. Valverde; T. Hubert; A. Stolov; A. Dagar; J. Kopelowitz; S. Burdman. Assessment of genetic diversity of *Xanthomonas campestris* pv. *campestris* isolates from Israel by various DNA fingerprinting techniques. *Plant Pathology*. 56 - 1, pp. 17 - 25. 2007. Available on-line at: <<http://dx.doi.org/10.1111/j.1365-3059.2006.01456.x>>.

Type of production: Scientific paper

Format: Journal

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

- 59** A. Stolov; A. Valverde; P. Ronald; S. Burdman. Purification of soluble and active RaxH, a transmembrane histidine protein kinase from *Xanthomonas oryzae* pv. *oryzae* required for AvrXa21 activity. *Molecular Plant Pathology*. 8 - 1, pp. 93 - 101. 2007. Available on-line at: <<http://dx.doi.org/10.1111/j.1364-3703.2006.00374.x>>.

Type of production: Scientific paper

Format: Journal

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

- 60** A. Peix; A. Valverde; R. Rivas; J.M. Igual; M.-H. Ramírez-Bahena; P.F. Mateos; I. Santa-Regina; C. Rodríguez-Barrueco; E. Martínez-Molina; E. Velázquez. Reclassification of *Pseudomonas aurantiaca* as a synonym of *Pseudomonas chlororaphis* and proposal of three subspecies, *P. chlororaphis* subsp. *chlororaphis* subsp. nov. *P. chlororaphis* subsp. *aureofaciens* subsp. nov., comb. nov. and *P. chlororaphis* subsp. *aurantiaca* subsp. nov., comb. nov. *International Journal of Systematic and Evolutionary Microbiology*. 57 - 6, pp. 1286 - 1290. 2007. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.64621-0>>.

Type of production: Scientific paper

Format: Journal

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



- 61** E. Velásquez; R. Rivas; M. del Villar; A. Valverde; A. Peix; P.F. Mateos; E. Velázquez; E. Martínez-Molina. A new approach for separating low-molecular-weight RNA molecules by staircase electrophoresis in non-sequencing gels. *Electrophoresis*. 27 - 9, pp. 1732 - 1738. 2006. Available on-line at: <<http://dx.doi.org/10.1002/elps.200500705>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 62** A. Valverde; P. Delvasto; A. Peix; E. Velázquez; I. Santa-Regina; A. Ballester; C. Rodríguez-Barrueco; C. García-Balboa; J.M. Igual. *Burkholderia ferrariae* sp. nov., isolated from an iron ore in Brazil. *International Journal of Systematic and Evolutionary Microbiology*. 56 - 10, pp. 2421 - 2425. 2006. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.64498-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 63** P. Delvasto; A. Valverde; A. Ballester; J.M. Igual; J.A. Muñoz; F. González; M.L. Blázquez; C. García. Characterization of brushite as a re-crystallization product formed during bacterial solubilization of hydroxyapatite in batch cultures. *Soil Biology and Biochemistry*. 38 - 9, pp. 2645 - 2654. 2006. Available on-line at: <<http://dx.doi.org/10.1016/j.soilbio.2006.03.020>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 64** A. Valverde; A. Burgos; T. Fiscella; R. Rivas; E. Velázquez; C. Rodríguez-Barrueco; E. Cervantes; M. Chamber; J.-M. Igual. Differential effects of coinoculations with *Pseudomonas jessenii* PS06 (a phosphate-solubilizing bacterium) and *Mesorhizobium ciceri* C-2/2 strains on the growth and seed yield of chickpea under greenhouse and field conditions. *Plant and Soil*. 287 - 1-2, pp. 43 - 50. 2006. Available on-line at: <<http://dx.doi.org/10.1007/s11104-006-9057-8>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 65** J.M. Igual; A. Valverde; E. Velázquez; I.S. Regina; C. Rodríguez-Barrueco. Natural diversity of nodular microsymbionts of *Alnus glutinosa* in the Tormes River basin. *Plant and Soil*. 280 - 1-2, pp. 373 - 383. 2006. Available on-line at: <<http://dx.doi.org/10.1007/s11104-005-3700-7>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 66** A. Valverde; J.M. Igual; A. Peix; E. Cervantes; E. Velázquez. *Rhizobium lusitanum* sp. nov. a bacterium that nodulates *Phaseolus vulgaris*. *International Journal of Systematic and Evolutionary Microbiology*. 56 - 11, pp. 2631 - 2637. 2006. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.64402-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 67** A. Valverde; Y. Okon; S. Burdman. cDNA-AFLP reveals differentially expressed genes related to cell aggregation of *Azospirillum brasilense*. *FEMS Microbiology Letters*. 265 - 2, pp. 186 - 194. 2006. Available on-line at: <<http://dx.doi.org/10.1111/j.1574-6968.2006.00482.x>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 68** A. Valverde; E. Velázquez; F. Fernández-Santos; N. Vizcaíno; P.F. Mateos; E. Martínez-Molina; J.M. Igual; A. Willems. *Phyllobacterium trifolii* sp. nov., nodulating *Trifolium* and *Lupinus* in Spanish soils. *International Journal of Systematic and Evolutionary Microbiology*. 55 - 5, pp. 1985 - 1989. 2005. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.63551-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee



- 69** A. Valverde; J.M. Igual; I.S. Regina; S. Salazar; C. Rodríguez-Barrueco. Preliminary diversity studies of culturable phyllosphere bacteria on chestnut (*Castanea sativa*). *Acta Horticulturae*. 693, pp. 263 - 270. 2005. Available on-line at: <<http://dx.doi.org/10.17660/ActaHortic.2005.693.32>>.
Type of production: Scientific paper **Format:** Journal
- 70** J.M. Igual; A. Peix; I.S. Regina; J. Alvarez; S. Salazar; A. Valverde; C. Rodriguez-Barrueco. Soil microbiota and biochemical characteristics in chestnut stands of the sierra de Francia (Spain), under different conditions of exploitation and management. *Acta Horticulturae*. 693, pp. 655 - 662. 2005. Available on-line at: <<http://dx.doi.org/10.17660/ActaHortic.2005.693.88>>.
Type of production: Scientific paper **Format:** Journal
- 71** J.M. Igual; A. Valverde; R. Rivas; P.F. Mateos; C. Rodríguez-Barrueco; E. Martínez-Molina; E. Cervantes; E. Velázquez. Genomic fingerprinting of Frankia strains by PCR-based techniques. Assessment of a primer based on the sequence of 16S rRNA gene of *Escherichia coli*. *Plant and Soil*. 254 - 1, pp. 115 - 123. 2003. Available on-line at: <<http://dx.doi.org/10.1023/A:1024978426934>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 72** A. Valverde; E. Velázquez; C. Gutiérrez; E. Cervantes; A. Ventosa; J.-M. Igual. *Herbaspirillum lusitanum* sp. nov., a novel nitrogen-fixing bacterium associated with root nodules of *Phaseolus vulgaris*. *International Journal of Systematic and Evolutionary Microbiology*. 53 - 6, pp. 1979 - 1983. 2003. Available on-line at: <<http://dx.doi.org/10.1099/ijs.0.02677-0>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 73** E.V. Ral Rivas; A. Valverde; P.F. Mateos; E. Martnez-Molina. A two primers random amplified polymorphic DNA procedure to obtain polymerase chain reaction fingerprints of bacterial species. *Electrophoresis*. 22 - 6, pp. 1086 - 1089. 2001. Available on-line at: <[http://dx.doi.org/10.1002/1522-2683\(22:6<1086::AID-ELPS1086>3.0.CO;2-6](http://dx.doi.org/10.1002/1522-2683(22:6<1086::AID-ELPS1086>3.0.CO;2-6)>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 74** J.M. Igual; A. Valverde; E. Cervantes; E. Velázquez. Phosphate-solubilizing bacteria as inoculants for agriculture: Use of updated molecular techniques in their study. *Agronomie*. 21 - 6-7, pp. 561 - 568. 2001. Available on-line at: <<http://dx.doi.org/10.1051/agro:2001145>>.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
- 75** M Navarro-Perea; Y Pueyo; D Moret; A Valverde; JM Igual; CL Alados. Plant-soil interactions in response to grazing intensity in a semi-arid ecosystem for NE Spain. *Arid land research and management*. 37, pp. 184 - 196.
Type of production: Scientific paper
- 76** Cowan DA; Adriaenssens E; De Maayer P; Lebre P; Makhalanya TP; Ramond J-B; Trindade IM; Valverde A; Vikram S. Metagenomics of Extreme Environments: Methods and Applications. *Advanced Techniques for Studying Microorganisms in Extreme Environments*. pp. 93 - 126. Ed. Yergeau E, 2019. ISBN 978-31-105-2464-2
Type of production: Book chapter **Format:** Book
Degree of contribution: Author or co-author of chapter in book
- 77** Valverde A; De Maayer P; Cowan DA. Microbial community profiling: current approaches and future trends. *Bioinformatics and data analysis in microbiology*. pp. 133 - 161. Eds. Bishop TO, Joubert F, 2014. ISBN 978-19-082-3039-3
Type of production: Book chapter **Format:** Book



- 78** The current state of metagenomic analysis. Genome Analysis: Current Procedures and Applications. pp. 183 - 220. Ed. Poptsova M, 2014. ISBN 978-19-082-3029-4
Type of production: Book chapter **Format:** Book
- 79** Ramírez-Bahena MH; Valverde A; Robledo M; Rivera LP; Menéndez E; Medina-Sierra M; Mateos PF; Igual JM; Rivas R. Nitrogen fixing endosymbiotic bacteria: old chaps and new findings. Beneficial plant-microbial interactions: ecology and applications. pp. 1 - 19. Eds. Rodelas Gonzalez MB, Gonzalez-Lopez J, 2013. ISBN 978-14-665-8717-5
Type of production: Book chapter **Format:** Book
Degree of contribution: Author or co-author of chapter in book
- 80** El género Frankia: el otro gran protagonista. Fundamentos y aplicaciones agroambientales de las interacciones beneficiosas plantas-microorganismos. pp. 297 - 312. Eds. Megías M, Rivilla R, Soto MJ, Delgado MJ, Gonzalez E, Mateos PF, Leon M., 2011. ISBN 978-84-614-7364-9
Type of production: Book chapter **Format:** Book
- 81** Igual J. M.; A. Valverde; A. Peix; I. Santa Regina; C. Rodríguez-Barrueco. La simbiosis actinorrónica. Fijación de Nitrógeno: Fundamentos y Aplicaciones. pp. 232 - 243. Eds: E. J. Bedmar, J. González, C. Lluch y B. Rodelas. SEFIN. Granada, España, 2006. ISBN 978-84-611-1198-5
Type of production: Book chapter **Format:** Book
- 82** Valverde A.; R. Rivas; A. Peix; J. M. Cruz-Sánchez; M. E. Trujillo; J. M. Igual; E. Cervantes; P. F. Mateos; E. Martínez-Molina; E. Velázquez. Caracterización de cepas del grupo de inoculación cruzada de Rhizobium leguminosarum aisladas de nódulos efectivos de leguminosas del noroeste de España. Pastos y Ganadería Extensiva. pp. 157 - 161. Eds.: B García Criado, A. García, 2004. ISBN 84-688-6576-1
Type of production: Book chapter **Format:** Book
- 83** Igual J. M; A. Peix; A. Valverde; I. Santa Regina; C. Rodríguez-Barrueco. Microorganismos y Nutrición Mineral. Nutrição Mineral: Causas e consequências da dependência da fertilização. pp. 509 - 514. Eds.: M. A. Martins-Loução, C. Cruz. Lisboa, Portugal, 2004. ISBN 972-9348-11-1
Type of production: Book chapter **Format:** Book

Works submitted to national or international conferences

- 1** **Title of the work:** Ecological processes shaping the bacterial metacommunity at different taxonomic resolutions
Name of the conference: The ISME Virtual Microbial Ecology Summit
Date of event: 2020
Quiroga MV; Valverde A; Mataloni G; Casa V; Stegen JC; Cowan D.
- 2** **Title of the work:** Riverine microbial communities respond to chronic contamination
Name of the conference: FEMS 2019 8th Congress of European Microbiologists
City of event: Glasgow, United Kingdom
Date of event: 2019
Cason ED; Gómez A; Valverde A.
- 3** **Title of the work:** The soil resistome of a natural xeric gradient in the Namib desert
Name of the conference: FEMS 2019 8th Congress of European Microbiologists
City of event: Glasgow, United Kingdom
Date of event: 2019
Naidoo Y; Pierneef R; Cason ED; Valverde A; Cowan DC.



- 4** **Title of the work:** Diversity and distribution of rhizobial populations associated with *Acacia dealbata* in South Africa
Name of the conference: SASM 2018 conference
City of event: Johannesburg, South African Republic
Date of event: 2018
Mutseka-Lunga P; Kabwe MH; Kamgan G; Makhalanyane TP; Valverde A.
- 5** **Title of the work:** Isolation and characterization of denitrifying bacteria from open cast mines of South Africa
Name of the conference: SASM 2018 conference
City of event: Johannesburg, South African Republic
Date of event: 2018
Moloantoa KM; Maleke MM; Cason E; Vermeulen J; Valverde A; van Heerden E; Castillo J.
- 6** **Title of the work:** Deciphering the functional capacity of the sorghum rhizosphere microbiome
Name of the conference: FEMS 2017 7th Congress of European Microbiologists
City of event: Valencia, Spain
Date of event: 2017
Oberholster T; Cowan D; Valverde A.
- 7** **Title of the work:** Microbial communities in acacia *dealbata* invaded ecosystems of South Africa
Name of the conference: SAGS-SASBI meeting
City of event: Durban, South African Republic
Date of event: 2016
Kamutando CN; Makhalanyane TP; Cowan D; Valverde A.
- 8** **Title of the work:** The sorghum rhizosphere microbiome under field conditions
Name of the conference: 16th International Symposium on Microbial Ecology
City of event: Montreal, Canada
Date of event: 2016
Oberholster T; Cowan D; Valverde A.
- 9** **Title of the work:** Cyanobacteria drive community composition and functionality in rock-soil interface communities
Name of the conference: 2nd International conference ATEM ii
City of event: Hammamet, Tunisia
Date of event: 2015
Valverde A; Makhalanyane TP; Seely M; Cowan DA.
- 10** **Title of the work:** Microbiological characterization of a semi-arid meadow soil seeded with different proportions of orchard grass and alfalfa
Name of the conference: National meeting of the Spanish society of Nitrogen Fixation.
City of event: León, Spain
Date of event: 2015
Medina M; Valverde A; Díaz-Raviña M; Santa-Regina I; Igual JM.
- 11** **Title of the work:** Effects of desert cyanobacterial communities on food web structure
Name of the conference: 15th International Symposium on Microbial Ecology
City of event: Seoul, Republic of Korea
Date of event: 2014
Makhalanyane TP; Cowan DA; Seely M; Valverde A.



- 12** **Title of the work:** Study of the bacterioplankton diversity of a feguián peat bog using metagenomic analysis tools
Name of the conference: VI Congreso Argentino de Limnología
City of event: La Plata, Argentina
Date of event: 2014
Quiroga MV; Valverde A; Cowan DA; Llamas ME; Gonzalez-Garraza; Mataloni G.
- 13** **Title of the work:** Evidence for successional development of cryptic bacterial communities from Miers Valley, Antarctica
Name of the conference: XIth SCAR Biology Symposium
City of event: Barcelona, Catalonia, Spain
Date of event: 2013
Niels Birkeland; Angel Valverde; Birkeland NK; Thulani P Makhalanyane; Tuffin MI; Cowan DA.
- 14** **Title of the work:** The role of moisture sufficiency in Antarctic microbial communities
Name of the conference: SASM 2013 conference
City of event: Bela-Bela, South African Republic
Date of event: 2013
Van Goethem MW; Makhalanyane TP; Valverde A; Pointing SB; Cowan DA.
- 15** **Title of the work:** Community structure of actinobacteria in hot springs from Zambia, Kenya, China and New Zealand
Name of the conference: South African Society for Microbiology Congress
Date of event: 2012
City organizing entity: Cape Town, South African Republic
Valverde A; Tuffin M; Cowan D.
- 16** **Title of the work:** Microbial diversity of Namib Desert Salt Pans
Name of the conference: 9th International Congress on Extremophiles
Date of event: 2012
City organizing entity: Sevilla, Spain
Du Plessis M; Valverde A; Tuffin M; Cowan D.
- 17** **Title of the work:** Diversidad y estructura de la comunidad de bacterias resistentes al arsénico a través de un gradiente de contaminación del suelo
Name of the conference: XXIII Congreso Nacional de Microbiología
Date of event: 2011
City organizing entity: Salamanca, Spain
Valverde A; González-Tirante M; Medina-Sierra M; Gracia-Sánchez A; Santa-Regina I; Igual JM.
- 18** **Title of the work:** Estudio de las bacterias filoféricas del castaño (*Castanea sativa* Mill.) y su potencial como antagonistas de los agentes causales del chancro y la tinta
Name of the conference: XXIII Congreso Nacional de Microbiología
Date of event: 2011
City organizing entity: Salamanca, Spain
Valverde A; González-Tirante; Medina-Sierra; Rivas R; Wackerow-Kouzova ND; Santa-Regina I; Igual JM.



- 19** **Title of the work:** Assessment of the bacterial diversity inhabiting *Alnus glutinosa* nodules in the Tormes River basin
Name of the conference: XIII National Meeting of the Spanish Society of Nitrogen Fixation; II Portuguese-Spanish Congress on Nitrogen Fixation
Date of event: 2010
City organizing entity: Zaragoza, Spain
Igal JM; Valverde A; González-Tirante; Medina-Sierra M; Santa-Regina I.
- 20** **Title of the work:** Evidence for lateral transfer of genes for symbiosis from *R. tropici* IIA to *R. lusitanum* that nodulate *Phaseolus vulgaris* in Portugal
Name of the conference: 9th European Nitrogen Fixation Conference
Date of event: 2010
City organizing entity: Geneva, Switzerland
Valverde A; Velázquez E; Igal JM; van Berkum P.
- 21** **Title of the work:** *Rhizobium tropici* IIA nodulates common bean in Portugal
Name of the conference: XIII National Meeting of the Spanish Society of Nitrogen Fixation; II Portuguese-Spanish Congress on Nitrogen Fixation
Date of event: 2010
City organizing entity: Zaragoza, Spain
Valverde A; Velázquez E; Igal JM.
- 22** **Title of the work:** Análisis de la biodiversidad de rizobios que nodulan habichuela (*Phaseolus vulgaris* L.) en la República Dominicana, basado en genes housekeeping
Name of the conference: XXIV Reunión Latinoamericana de Rhizobiología (XXIV RELAR) y I Conferencia Iberoamericana de Interacciones Beneficiosas Microorganismo-Planta-Ambiente
Date of event: 2009
City organizing entity: La Habana, Cuba
Diaz CA; Mulas D; Velázquez E; García-Fraile P; Valverde A; González-Andrés F.
- 23** **Title of the work:** Genetic diversity of salt-tolerant rhizobial strains nodulating *Phaseolus vulgaris* in Marrakech Tensif-Al Haouz region (Morocco)
Name of the conference: Congrès International Biotechnologie Microbienne au Service du Développement (MICROBIOD)
Date of event: 2009
City organizing entity: Marrakech, Morocco
Madri B; Oufdou K; Faghire M; Ghoulam C; Bargaz A; Valverde A; Igal JM; Velázquez E; Peix A.
- 24** **Title of the work:** Phylogenetic analysis of ribosomal, housekeeping and symbiotic loci in *Bradyrhizobium* strains nodulating *Lupinus albus* in North Spain. Evidence of a close evolutionary relationship between *nodC* and housekeeping genes in strains from biovar *genistearum*
Name of the conference: FEMS Microbiology Congress 2009
Date of event: 2009
City organizing entity: Gothenburg, Sweden
Rivas R; García-Fraile P; Velázquez E; Valverde A; Gomis V; Gantois I; Alvarez-Martinez ER; Peix A; Igal JM; León-Barrios M; Willems A; Mateos PF; Martínez-Molina E.
- 25** **Title of the work:** *Rhizobia* nodulating *Vicia sativa* and *Vicia faba* in different continents have a common phylogenetic origin and could have been distributed together with *Vicia* seeds
Name of the conference: FEMS Microbiology Congress 2009
Date of event: 2009
City organizing entity: Gothenburg, Sweden



García-Fraile P; Álvarez- Martínez ER; Valverde A; Ramírez-Bahena MH; Tejedor C; Santillana N; Zúñiga D; Peix A.

- 26** **Title of the work:** Aplicación de la técnica DGGE en el estudio de la diversidad de Frankia
Name of the conference: I congreso Luso-Español de Fijación de Nitrógeno
Date of event: 2008
City organizing entity: Estoril, Portugal
Gallina O; Valverde A; González-Tirante M; Santa-Regina I; Igual JM.
- 27** **Title of the work:** Formación de biofilms en Azospirillum brasilense
Name of the conference: I congreso Luso-Español de Fijación de Nitrógeno
Date of event: 2008
City organizing entity: Estoril, Portugal
Valverde A; Lerner A; Igual JM; Burdman S; Okon Y.
- 28** **Title of the work:** Phase variation in wild type and mutant strains of Azospirillum brasilense
Name of the conference: 11th International Symposium on Nitrogen Fixation with Non-Legumes
Date of event: 2008
City organizing entity: Ghent, Belgium
Lerner A; Burdman S; Valverdde A; Okon Y.
- 29** **Title of the work:** Presence and diversity of nitrogen-fixing bacteria associated with the phyllosphere of sweet chestnut (*Castanea sativa* Mill.) in the Sierra de Francia mountains (Salamanca, Spain)
Name of the conference: 11th International Symposium on Nitrogen Fixation with Non-Legume
Date of event: 2008
City organizing entity: Ghent, Belgium
Valverde A; Wackerow-Kouzova N; Santa-Regina I; Igual JM.
- 30** **Title of the work:** Study on the diversity of Frankia from environmental samples by applying DGGE fingerprinting and band sequencing
Name of the conference: 8th European Nitrogen Fixation Conference.
Date of event: 2008
City organizing entity: Ghent, Belgium
Gallina O; Valverde A; González-Tirante M; Santa-Regina I; Igual JM.
- 31** **Title of the work:** Exopolysaccharide production and cell aggregation in Azospirillum brasilense
Name of the conference: 15th International congress on nitrogen fixation and 12th international conference of the African association for biological nitrogen fixation
Date of event: 2007
City organizing entity: Cape Town, South African Republic
Valverde A; Castro-Sowinski S; Lerner A; Fibach S; Matan O; Burdman S; Okon Y.
- 32** **Title of the work:** A novel species of Burkholderia with strong phosphate-solubilizing activity
Name of the conference: 2nd FEMS Congress of European Microbiologist
Date of event: 2006
City organizing entity: Madrid, Spain
Peix A; Valverde A; Delvasto P; Velázquez E; Ballester A; Santa-Regina I; Rodríguez-Barrueco C; García-Balboa C; Igual JM.



- 33** **Title of the work:** A polyphasic approach to assess the genetic diversity among *Xanthomonas campestris* pv. *campestris* strains using PFGE, AFLP, rep-PCR and integron gene cassette PCR
Name of the conference: The 27th meeting of the Israeli Phytopathological Society
Date of event: 2006
City organizing entity: Bet Dagan, Israel
Valverde A; Hubert T; Stolov A; Dagar A; Kopelowitz J; Burdman S.
- 34** **Title of the work:** Análisis filogenético de cepas de *Frankia* mediante MLSA (multilocus sequence analysis")
Name of the conference: XI Reunión Nacional de Fijación de Nitrógeno
Date of event: 2006
City organizing entity: El Escorial, Spain
Igal JM; Valverde A; Velázquez E; Santa-Regina I; Rodríguez-Barrueco C.
- 35** **Title of the work:** Ecology of *Azospirillum brasilense* in the rhizosphere: cell survival and impact on bacterial populations
Name of the conference: 7th European Nitrogen Fixation Conference
Date of event: 2006
City organizing entity: Aarhus, Denmark
Castro-Sowinski S; Valverde A; Lerner A; Fibach S; Matan O; Dror R; Jurkevitch E; Burdman S; Okon Y.
- 36** **Title of the work:** Genetic study of rhizobial strains nodulating clover in Northwest Spain
Name of the conference: 11th International Symposium on Microbial Ecology
Date of event: 2006
City organizing entity: Vienna, Austria
Ramírez-Bahena MH; Valverde A; Igal JM; Martínez-Molina E; Mateos PF; Velázquez E.
- 37** **Title of the work:** Caracterización de cepas de rhizobia aisladas de trébol en suelos de diferentes características edáficas del noroeste de España
Name of the conference: XX Congreso Nacional de Microbiología. Sociedad Española de Microbiología
Date of event: 2005
City organizing entity: Cáceres, Spain
Ramírez-Bahena MH; Valverde A; Santo F; Fernández-Santos F; Mateos PF; Martínez-Molina E; Velázquez E.
- 38** **Title of the work:** Effects of plant growth promoting rhizobacteria (*Pseudomonas jessenii* PS06) and vesicular arbuscular mycorrhizal fungi (*Glomus intraradices*) on growth and nutrient uptake of durum wheat (*Mongibello*) under greenhouse conditions
Name of the conference: 8th National Biotechnology Congress
Date of event: 2005
City organizing entity: Siena, Italy
Fiscella T; Igal JM; Valverde A; Rodríguez-Barrueco C; Doust MA; Barbera AC.
- 39** **Title of the work:** Evaluación de la biodiversidad de aislados de *Frankia* mediante PCR-RFLP
Name of the conference: XX Congreso Nacional de Microbiología. Sociedad Española de Microbiología
Date of event: 2005
City organizing entity: Cáceres, Spain
Igal JM; Valverde A; Velázquez E; Santa-Regina I; Rodríguez-Barrueco C.
- 40** **Title of the work:** *Xanthomonas oryzae* pv. *oryzae* genes required for elicitation of disease resistance in Xa21-rice
Name of the conference: 12th International Congress on Molecular Plant-Microbe Interactions



Date of event: 2005

City organizing entity: Mérida, Mexico

Burdman S; Lee SW; Stolov A; Han SW; Jeong KS; Valverde A; Ronald P.

41 Title of the work: A new species of *Phyllobacterium* that forms effective nodules in *Trifolium pratense* roots in Spain

Name of the conference: 6th European Nitrogen Fixation Conference

Date of event: 2004

City organizing entity: Toulouse, France

Valverde A; Igual JM; Santa-Regina I; Rodríguez-Barrueco C; Mateos PF; Martínez-Molina E; Velázquez E.

42 Title of the work: Biodiversidad y análisis taxonómico de cepas del actinomiceto *Frankia*

Name of the conference: X Reunión Nacional de Fijación de Nitrógeno

Date of event: 2004

City organizing entity: Granada, Spain

Igual JM; Valverde A; Santa-Regina I; Velázquez E; Rodríguez-Barrueco C.

43 Title of the work: Caracterización de cepas del grupo de inoculación cruzada de *Rhizobium leguminosarum* aisladas de nódulos efectivos de leguminosas del noroeste de España

Name of the conference: XLIV Reunión Científica de la S.E.E.P

Date of event: 2004

City organizing entity: Salamanca, Spain

Valverde A; Rivas R; Peix A; Cruz-Sánchez JM; Trujillo ME; Igual JM; Cervantes E; Mateos PF; Martínez-Molina E; Velázquez E.

44 Title of the work: Microorganismos y Nutrición Mineral

Name of the conference: Simpósio Ibérico de Nutrição Mineral das Plantas

Date of event: 2004

City organizing entity: Lisboa, Portugal

Igual JM; Peix; Valverde A; Santa-Regina I; Rodríguez-Barrueco C.

45 Title of the work: Phyllospheric bacteria isolated from chestnut

Name of the conference: III International chestnut congress

Date of event: 2004

City organizing entity: Chaves, Portugal

Valverde A; Igual JM; Santa-Regina I; Salazar S; Rodríguez-Barrueco C.

46 Title of the work: *Rhizobium lusitanum*, una nueva especie de *Rhizobium* aislada de nódulos de *Phaseolus vulgaris*

Name of the conference: X Reunión Nacional de Fijación de Nitrógeno

Date of event: 2004

City organizing entity: Granada, Spain

Valverde A; Igual JM; Rodríguez-Barrueco C; Santa-Regina I; Cervantes E; Velázquez E.

47 Title of the work: Soil enzyme activities in chestnut forests of the province of Salamanca (Spain) under different conditions of exploitation and management

Name of the conference: III International chestnut congress

Date of event: 2004

City organizing entity: Chaves, Portugal

Igual JM; Salazar S; Santa-Regina I; Valverde A; Peix A; Rodríguez-Barrueco C.



- 48** **Title of the work:** Caracterización de cepas de *Rhizobium tropici* aisladas de nódulos de plantas de *Phaseolus vulgaris* crecidas en suelos del Noroeste de Portugal
Name of the conference: XIX Congreso Nacional de Microbiología
Date of event: 2003
City organizing entity: Santiago de Compostela, Spain
Valverde A; Igual JM; Velázquez E; Cervantes E.
- 49** **Title of the work:** Identificación de cepas de *Frankia* utilizando secuenciación específica de un fragmento del gen ribosómico 16S y perfiles de LMW RNA
Name of the conference: XIX Congreso Nacional de Microbiología
Date of event: 2003
City organizing entity: Santiago de Compostela, Spain
Igual JM; Valverde A; Rivas R; Mateos PF; Cervantes E; Martínez-Molina E; Velázquez E; Rodríguez-Barrueco C.
- 50** **Title of the work:** Analysis of type strains from *Pseudomonas chlororaphis* and *Pseudomonas aureofaciens* (two P-solubilizers in vitro) by diverse techniques shows that belong to different species
Name of the conference: First International Meeting on Microbial Phosphate Solubilization
Date of event: 2002
City organizing entity: Salamanca, Spain
Valverde A; Igual JM; Peix A; Rivas R; Mateos PF; Martínez-Molina E; Velázquez E.
- 51** **Title of the work:** Análisis de los perfiles de TP-RAPD de cepas de *Frankia* aisladas a partir de hospedadores de diferentes grupos de inoculación cruzada
Name of the conference: IX Reunión Nacional de Fijación de Nitrógeno
Date of event: 2002
City organizing entity: Córdoba, Spain
Igual JM; Valverde A; Rivas R; Martínez-Molina E; Mateos PF; Cervantes E; Rodríguez-Barrueco C; Velázquez E.
- 52** **Title of the work:** Growth and yield promotion of chickpea by *Pseudomonas jessenii* PS06, an efficient phosphate-solubilizing bacteria
Name of the conference: First International Meeting on Microbial Phosphate Solubilization
Date of event: 2002
City organizing entity: Salamanca, Spain
Burgos T; Valverde A; Cervantes E; Chamber M; Igual JM.
- 53** **Title of the work:** *Herbaspirillum lusitanum* una nueva especie aislada de la rizosfera de *Phaseolus vulgaris* en Portugal
Name of the conference: IX Reunión Nacional de Fijación de Nitrógeno
Date of event: 2002
City organizing entity: Córdoba, Spain
Mateos PF; Valverde A; Igual JM; Martínez-Molina E; Cervantes E; Velázquez E.
- 54** **Title of the work:** Polyphasic characterization of phosphate-solubilizing bacteria isolated from rhizospheric soils of the northeastern region of Portugal
Name of the conference: First International Meeting on Microbial Phosphate Solubilization
Date of event: 2002
City organizing entity: Salamanca, Spain
Valverde A; Igual JM; Cervantes E.



- 55** **Title of the work:** Genomic fingerprinting of Frankia strains by PCR-based techniques using primers with increasing GC contents
Name of the conference: 12th International Meeting on Frankia and Actinorhizal Plants
Date of event: 2001
City organizing entity: Carry-Le-Rouet, France
Igal JM; Valverde A; Rivas R; Martínez-Molina E; Mateos PF; Cervantes E; Rodríguez-Barrueco C.
- 56** **Title of the work:** Biodiversity and molecular characterization of ectorhizospheric P-solubilizing bacteria
Name of the conference: Mediterranean Conference of Rhizobiology
Date of event: 2000
City organizing entity: Montpellier, France
Igal JM; Valverde A; Cervantes E.
- 57** **Title of the work:** Cellulase patterns in Frankia strains belonging to different cross-inoculation groups
Name of the conference: 4th European Nitrogen Fixation Conference
Date of event: 2000
City organizing entity: Sevilla, Spain
Igal JM; Velázquez E; Mateos PF; Valverde A; Rodríguez-Barrueco C; Cervantes E; Martínez-Molina E.
- 58** **Title of the work:** Evidence of species recruitment and development of hypolithic communities along and aridity gradient in the Namib Desert
Name of the conference: 9th International Congress on Extremophiles
City organizing entity: Sevilla, Spain
Tuffin M; Stomeo F; Makhalanyane T; Valverde A; McKay C; Warren-Rhodes K; Lacap D; Pointing S; Cowan D.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

Committee title: Foundational Biodiversity Information Programme (FBIP) Steering Committee
Primary (UNESCO code): 241404 - Bacteriology
City affiliation entity: South African Republic
Start-End date: 2018 - 2021

National and international forums and committees

- 1** **Name of the forum:** Foundational Biodiversity Information Programme (FBIP) Steering Committee
Organising entity: Department of Science & Technology
City organizing entity: Pretoria, South African Republic
Start-End date: 2018 - 2021
- 2** **Name of the forum:** Advisory panel
Organising entity: VITARTIS (Association of the food industry of Castilla y León)
Start date: 2020



Evaluation and revision of R&D projects and articles

- 1** **Name of the activity:** Grant reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Chilean National Commission for Scientific and Technological Research (CONICYT)
City of entity: Chile
Start date: 2019
- 2** **Name of the activity:** Grant reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Dutch Research Council (NWO)
City of entity: The Hague, Holland
Start date: 2019
- 3** **Name of the activity:** Grant reviewing
Performed tasks: Reviewer
Entity where activity was carried out: National Research Foundation
City of entity: Pretoria, South African Republic
Start date: 2014
- 4** **Name of the activity:** Article reviewing
Performed tasks: Editorial board member
Entity where activity was carried out: Frontiers in Microbiology
City of entity: Switzerland
Start date: 2013
- 5** **Name of the activity:** Grant reviewing
Performed tasks: Reviewer
Entity where activity was carried out: National Evaluation and Foresight Agency (ANEP)
City of entity: Spain
Start date: 2012
- 6** **Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Applied and Environmental Microbiology
- 7** **Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Ecology Letters
- 8** **Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Environmental Microbiology
- 9** **Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Frontiers in microbiology



- 10 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: ISME Journal
- 11 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Microbial Ecology
- 12 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Microbiome
- 13 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Molecular Ecology
- 14 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: New Phytologist
- 15 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Plant and Soil
- 16 Name of the activity:** Article reviewing
Performed tasks: Reviewer
Entity where activity was carried out: Scientific Reports

Other achievements

Stays in public or private R&D centres

- 1 Entity:** University of the Free State
City of entity: Bloemfontein, South African Republic
Start-End date: 07/2017 - 12/2019 **Duration:** 2 years - 5 months
Goals of the stay: Post-doctoral
- 2 Entity:** University of Pretoria
City of entity: Pretoria, South African Republic
Start-End date: 06/2012 - 06/2017 **Duration:** 5 years
Goals of the stay: Post-doctoral
- 3 Entity:** University of Western Cape
City of entity: Cape Town, South African Republic
Start-End date: 03/2011 - 05/2012 **Duration:** 1 year - 4 months
Goals of the stay: Post-doctoral



- 4** **Entity:** Hebrew University of Jerusalem
Faculty, institute or centre: Faculty of Agriculture
City of entity: Rehovot, Israel
Start-End date: 02/2005 - 01/2007 **Duration:** 2 years
Goals of the stay: Post-doctoral

Scientific societies and professional associations

- 1** **Name of the society:** South African Society for Microbiology (SASM)
City affiliation entity: Pretoria, South African Republic
Start date: 2013
- 2** **Name of the society:** International Society for Microbial Ecology
City affiliation entity: United States of America
Start date: 2005
- 3** **Name of the society:** Sociedad Española de Fijación de Nitrógeno (SEFIN)
Start date: 2000
- 4** **Name of the society:** Sociedad Española de Microbiología (SEM)
Start date: 2000

Obtained accreditations/recognitions

- 1** **Description:** Affiliate Associate Professor
Accrediting entity: University of the Free State
City accrediting entity: South African Republic
Date of recognition: 2020
- 2** **Description:** Affiliate member of the Centre for Microbial Ecology and Genomics (CMEG)
Accrediting entity: University of Pretoria
City accrediting entity: South African Republic
Date of recognition: 2020
- 3** **Description:** Rated researcher
Accrediting entity: National Research Foundation of South Africa
City accrediting entity: South African Republic
Date of recognition: 2014