

Curriculum Vitae

Personal information

First name(s) / Surname(s)

Rafael González Serrano



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rafael.gonzalezs@umh.es

Nationality

Spanish

Date of birth

26/03/1982

Gender

Male

Work experience

Dates

10/02/2015 – 26/06/2015 // Total hours: 665 (35 hours per week)

Occupation or position held

Microbiologist in the Extremophile Laboratory at the Astrobiology Center (CAB) INTA-CSIC (associated with NASA Astrobiology Institute)

Main activities and responsibilities

Detection of anaerobic acidophilic microorganisms associated with the Fe metabolism and from the subsurface of the Iberian Pyritic Belt (Rio Tinto): preparation of samples in the anaerobic chamber; preparation of anaerobic cultures using a mixed gas cylinder (CO₂/N₂); DNA extraction adapted to acidophiles; DNA concentration using a centrifugal evaporator (Speed Vac); DNA quantification using NanoDrop; filtering of resuspended microorganisms using a vacuum pump, a membrane filter and a kitasato flask; preparation of positive controls for PCR; PCR; electrophoresis.

Coordinator and institution

Dr. Felipe Gómez Gómez – Centro de Astrobiología INTA-CSIC (National Institute for Aerospace Technology – Spanish National Research Council)
Carretera de Torrejón a Ajalvir Km 4, Torrejón de Ardoz – 28850, Madrid (Spain)
Planetology and Habitability Department – (Extreme Environments and Habitability)
<http://www.cab.inta.es/en/inicio>
E-mail: gomezgf@cab.inta-csic.es
Phone: +34 - 91-520-64-61

Dates

01/09/2013 - 30/04/2014 // Total hours: 480 (15-20 hours per week)

Occupation or position held

Final Degree Research Project in Microbial Ecology

Main activities and responsibilities

Detection and characterization of methane oxidising bacteria in different Canadian thermal environments using biogeochemical methods and DNA-based methods. Techniques employed included: Gas Chromatography, DNA extraction, DNA quantification, PCR, q-PCR, DNA purification, electrophoresis, molecular cloning, RFLP, Stable-Isotope Probing and comparative sequence analyses.

Coordinator and institution

Dr Peter F. Dunfield – University of Calgary; Department of Biological Sciences
Extremophile Microbiology Laboratory
2500 University Drive N.W. – Calgary AB, Canada T2N 1N4
E-mail: pfdunfie@ucalgary.ca
<http://www.bio.ucalgary.ca/contact/faculty/dunfield.html>

Dates	07/01/2013 – 31/05/2013
Occupation or position held	Collaboration with the Microbiology Department at the Complutense University of Madrid
Main activities and responsibilities	Working with samples from a wastewater treatment plant using techniques like: Gram staining, aseptic culturing and isolation of bacteria, microtiter plate biofilm assays and bacterial viability testing based on Nomarski, confocal and fluorescence microscopy.
Coordinator and institution	Dr Lucía Arregui – Complutense University of Madrid; Microbiology Department III José Antonio Novais, 2. Ciudad Universitaria. 28040 – Madrid Phone: +34 - 91-394-49-64 E-mail: arregui@ucm.es
Type of business or sector	Microbiology
Dates	01/04/2008 - 31/03/2010
Occupation or position held	Psychologist in an old people's home
Main activities and responsibilities	Drafting psychological reports, coordination of the Day Centre at the old people's home, psychological evaluation, psychological assistance and therapeutic stimulation for the elderly, support and psychological assistance to the families, conflict resolution, intervention in mourning situations with the families.
Company	SAR Residencial y Asistencial, S.A. C/ Amapola, 38, 13300 Valdepeñas (Ciudad Real) (Spain)
Type of business or sector	Psychological therapy
Dates	10/12/2007 - 29/02/2008
Occupation or position held	Shellfish gatherer
Main activities and responsibilities	Cultivating and gathering shellfish at the Eo estuary and working in an assembly line.
Company	Remagro, S.A. C/ Muelle, 5, 33760 Castropol (Asturias) (Spain)
Type of business or sector	Marine aquaculture
Dates	01/07/2006 - 30/09/2006
Occupation or position held	Prison Psychologist
Main activities and responsibilities	Conducting group therapy for drug addicted prisoners in Herrera de la Mancha prison, individualised intervention for prisoners and implementation of several reintegration workshops.
Institution	Cruz Roja Española C/ Calatrava, 3-1ª, 13001 Ciudad Real (Spain)
Type of business or sector	Psychological therapy

Education and training

Dates	29/06/2015 – 03/07/2015
Title of qualification awarded	XIII International School of Astrobiology <<Josep Comas i Solà>>. The Origin of Life. From Monomers to Cells.
Principal subjects / occupational skills covered	Lectures: <ul style="list-style-type: none">- Planetary Formation. (Victoria Meadows – University of Washington).- Meteorites, Comets and the Origin of Life. (George Cody – Carnegie Institution of Washington).- Origin of life: physical, geological and chemical characteristics. (John Baross - University of Washington).- Prebiotic chemistry on the primitive Earth. (George Cody).- From amphiphile molecules to replicating visicles. (Pierre-Alain Monnard – University of Southern Denmark).- The evolution of metabolic pathways. (Juli Peretó – Universidad de Valencia).- Origin and evolution of the RNA world. (Pierre-Alain Monnard).- Minimal genomes and the Last Universal Common Ancestor. (Juli Peretó).- Searching the origins of life. (Carlos Briones – Centro de Astrobiología CSIC-INTA).- Origin of life environments, biochemical and microbial characteristics. (John Baross). Project development and group presentation in English.
Institution	International University Menéndez Pelayo Península de la Magdalena. 39005 – Santander (Spain)
Dates	01/09/2010 - 30/07/2014
Title of qualification awarded	Degree in Biology
Subjects related with the field of Microbiology	<ul style="list-style-type: none">- Microbiology- Environmental Microbiology- Petroleum Microbiology- Microbial Genetics- Microbial Diversity- Independent Studies in Cellular, Molecular and Microbial Biology- Biochemistry and Molecular Biology- Biology Methods
Institutions	<ul style="list-style-type: none">▪ Complutense University of Madrid Faculty of Biological Sciences, C/ José Antonio Novais, 12 – Ciudad Universitaria 28040 – Madrid, Spain.▪ University of Calgary. Student of international mobility at TASSEP (Trans-Atlantic Science Student Exchange Program) during the last academic year. Department of Biological Sciences, 2500 University Drive N.W. – Calgary AB, Canada - T2N 1N4
Dates	18/07/2013 - 27/07/2013
Title of qualification awarded	Amazon Vertebrates course
Principal subjects / occupational skills covered	Expeditions by boat and by canoe to the Amazon river and several of its tributaries in the heart of the Peruvian Amazon region; expeditions by walking to the Amazon jungle and wildlife management, including the following: <ul style="list-style-type: none">- Manatees, river dolphins, otters and other aquatic mammals- Birds and bats- Butterflies- Apes- Sloths- Reptiles and amphibians
Institution	Institut de Biodiversitat Tropical (IBT) i Ambients Extrems - www.ibt.cat Estación Biológica Yanayacu – Loreto (Perú) - www.ebyanayacu.org

Dates	10/08/2009 - 19/08/2009
Title of qualification awarded	Diving course
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> - Basic knowledge of sea ecology and description of the main species found at the Mediterranean Sea. - Scuba diving equipment description. - Physical concepts of diving. - Pressure change effects. - Breathing with a scuba set. - Limitations to breathing air underwater. - Planning and controlling of dives. - Training sessions at the Mediterranean Sea and 5 dives of one hour (maximum depth = 20 m).
Company	Planné-Underwater Services, S.L. (Professional diving school) Poligono Industrial Lo Bolarin, C/. Júbilo, Manzana 2, Nave C-6., 30360 La Unión (Murcia) (Spain)
Dates	26/09/2007 - 18/12/2007
Title of qualification awarded	Instructor of Environmental Education
Principal subjects / occupational skills covered	<p>General:</p> <ul style="list-style-type: none"> - Landscape interpretation. - Environmental legislation. - Environmental Problems (from a local, regional and world perspective). - Environmental Education objectives. - Environmental Education Resorts, teaching materials, new technologies. - Instructor's characteristics and functions. <p>Occupational:</p> <ul style="list-style-type: none"> - Recognition of botanical and zoological specimens. - Interpretation of maps. - Preparation and handling of data. - Visit to a water purification plant and a garbage dump. - Design and evaluation of environmental activities. - Planning of an Environmental Education program.
Institution	Gobierno del Principado de Asturias (Occupational training) Plaza España, 5, 33007 Oviedo (Spain)
Dates	01/11/2005 - 28/02/2007
Title of qualification awarded	Master's degree in Clinical Psychology
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> - Evaluation and intervention in emotional and cognitive disorders. - Therapeutic skills. - Conditioning principles applied to clinical practice. - Treatment techniques. - Evaluation and treatment in adult emotional disorders. - Evaluation and treatment in child emotional disorders.
Institution	ABA España (Association for Behavior Analysis) (Non-profit international organization) Apto. postal 2334, 18014 Granada (Spain)
Dates	01/09/2000 - 30/08/2005
Title of qualification awarded	Degree in Psychology
Principal subjects / occupational skills covered	<p>The following courses were related to Biology:</p> <ul style="list-style-type: none"> - Basic principles in Psychobiology - Growth Psychobiology - Neuropsychology - Psychoendocrinology - Physiological Psychology - Clinical Psychophysiology - Motor skills processing
Institution	Granada University Faculty of Psychology, Campus Universitario de Cartuja, s/n, 18071 Granada (Spain)

Personal skills and competences

Mother tongue

Spanish

Other language

English

Level	Understanding				Speaking				Writing	
	Listening		Reading		Spoken interaction		Spoken production			
	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

Social skills and competences

- My experience as a psychologist and waiter has played a key role in my developing of communication and interaction skills.
- Working as a waiter in England and Scotland and living during one year in Canada have helped me to develop the ability to adapt to multicultural environments.
- As a psychologist, I had to carry out my work in a multidisciplinary team, which involved developing teamwork skills. On a different level, being a member of a music band meant compromising different views and keeping spirits high.

Organisational skills and competences

- Being in charge of three people to coordinate the Day Centre has been vital to develop good leadership skills.
- I have experience in coordinating teams, when I volunteered in an NGO which works with physically- and psychically-disabled people.

Technical skills and competences

- Thanks to my collaboration with the Department of Microbiology during the third academic year at Complutense University of Madrid and thanks to my independent research project at the University of Calgary, I have developed essential skills to be able to manage in a laboratory of Molecular Biology.
- I have basic knowledge in soundtrack recording and assembling stages due to my experience as an audio technician assistant and playing in a rock band.

Computer skills and competences

- Good command of Microsoft Office tools (Word, Excel and PowerPoint).
- Command of statistical packages StatGraphics Centurion, SigmaPlot and SPSS.
- Command of mathematical programs Math Type and Derive.
- Good command of Stella (Modeling and Simulation Software).
- Good command of GCR (a database of SAR).
- Basic knowledge of PhotoShop and Camtasia Studio (an audiovisual recording program).

Other skills and competences

- Basic knowledge in Astrophysics and Astronomy. I have attended Astrophysics lectures for 5 months at the Faculty of Physics (Complutense University of Madrid) and I have taken an Astronomy course at ASAAF, an amateur astronomy association at Complutense University of Madrid.
- Collaboration with the Department of Geodynamics at Complutense University of Madrid. I have participated for two years in "GeoloGuías-BioloGuías", an educational innovation programme to develop GPS routes. The driving force behind the project was Dr Juan de Dios Centeno Carrillo (for more information visit this web site: www.geologuias-biologuias.org).
- Work experience with children from 8 to 12 years old. I worked as a monitor on a farm school where schoolchildren learned about animals and farm life.
- I enjoy sea diving (I have 14 dives to date), travelling, reading, jogging and listening to music.
- Course in First Aid.
- Hiking, karate and tennis.
- I play the guitar and the piano. I played the keyboard in a rock band for 10 years.

Driving licence(s)

B

Additional information

GPS route publication: Ruta Geológica y Biológica entre la Facultad de Biología y el paseo de la Palmera de Sevilla. www.geologuias-biologuias.org, 09/2012.

(File access: Educación en Ciencias Naturales/Sevilla Innatur 2012/bajar los ficheros de la memoria).