



SCIENTIFIC PROGRAM

Congress Secretariat, coffee breaks, lunches, and the poster session will be held in the **Edificio Constitución de 1812**. SEFIN Assembly, Welcome and Closing Ceremonies, Opening, Closing and Palomares conferences, Oral and Flash talks will be held in the **Salón de Grados (Facultad de Medicina)**.

Tuesday, 26th May 2026

15:00-17:00	Registration (<i>Edificio Constitución de 1812</i>)
17:00-18:00	SEFIN Assembly (<i>Facultad de Medicina</i>)
18:15-18:45	Welcome Ceremony (<i>Facultad de Medicina</i>)
18:45-19:45	Opening Conference (<i>Facultad de Medicina</i>)

Francisco Miguel Cornejo Castillo (Institut de Ciències del Mar, CSIC)
“The nitroplast: the first known nitrogen-fixing organelle in eukaryotes”

20:00	Welcome Cocktail (<i>Parador de Cádiz</i>)
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Wenesday, 27th May 2026

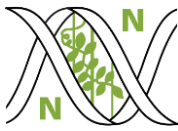
9:30-11:10 Session 1: Biological Nitrogen Fixation. Diversity of beneficial microorganisms for plants. *Facultad de Medicina.*

Chairs: Juan Ignacio Vílchez (GREEN-IT, Univ. Nova de Lisboa)
Esther Menéndez (Univ. Salamanca)

Oral presentations.

9:30-9:50 01.1. Flores-Félix JD, Igual M, García Fraile P.
“Differential modulation of rhizosphere microbial communities by *Mesorhizobium* and *Bradyrhizobium* symbionts of *Lotus corniculatus*”

9:50-10:10 01.2. Jacott CN, Lopez-Beltran M, Thuss R, Cutiño-Gobeia A, Manfrin TP, Requena P, de la Peña M, Fuentes-Romero F, Acosta-Jurado S, Espuny MJ, Ollero FJ, Vinardell JM, López-Baena FJ, del Cerro P.
“Natural genetic variation in soybean identifies a novel locus restricting symbiosis with rhizobia”



10:10-10:30 O1.3. Mariscal V, Paganelli A, Sánchez del Solar C, Álvarez C.
“Dependence of the CSSP signalling pathway for endophytic colonization of rice by *Nostoc punctiforme*”

Presentaciones Flash/Flash Talks

10:30-10:35 F1.1. Collantes-García JA, Rosa-Núñez E, Armas AM, Raimunda C, Pérez-González A, Guo Y, Echávarri-Erasun C, Rubio LM, González-Guerrero M.
“*Azotobacter vinelandii* glutaredoxin D delivers the core [Fe₂S₂] cluster to nitrogenase cofactor scaffold protein NifU”

10:35-10:40 F1.2. Domingo-Serrano L, De Sousa BFS, Romero-Ulloa A, Sánchez-Crespo M, Cuesta-Morrondo S, Cubero J, Alvarez-Martinez C, Palacios JM, Rey L.
“Analysis of the role of rhizobial type VI secretion systems in microbial competition”

10:40-10:45 F1.3. Pérez-González A, Martín Del Campo JS, Dean DR.
“*In vivo* production of hybrid nitrogenases in *Azotobacter vinelandii*”

10:45-10:50 F1.4. Pérez-González S, Montañez M, De Ron AM, Rodiño AP, Vílchez JI, Delgado MJ, Tortosa G.
“The endophytic role and growth-promoting ability of *Burkholderia alba* in *Rhizobium leucaenae*-common bean symbiosis”

10:50-10:55 F1.5. Santiesteban-Serrano A, Karst J, Rincón A, Aponte C.
“A global meta-analysis of soil fungal responses to changing fire regimes in ectomycorrhizal-dominated forests”

10:55-11:00 F1.6. Thuss R, Lopez-Beltran M, Cutiño-Gobea A, Manfrin TP, Requena P, de la Peña M, Fuentes-Romero F, Acosta-Jurado S, Espuny MJ, Ollero FJ, Vinardell JM, López-Baena F, del Cerro P, Jacott CN.
“Unlocking the genetic basis of soybean-rhizobia compatibility through GWAS in wild populations”

11:20-12:00 Coffee break. *Edificio Constitución de 1812.*

12:10-13:50 Session 2: Molecular Biology and Physiology of Plant-Microorganism Interactions (I). *Facultad de Medicina.*

Chairs: Catherine N. Jacott (Univ. Sevilla)

Marta Albareda (CBGP-UPM-INIA)



Oral presentations.

12:10-12:30 O2.1. Arbelo-Brito G, Gonzáles-Dominici LI, Ayala-García P, Borrero-de-Acuña JM, Pérez-Montaño F, García Fraile P, Saati-Santamaría Z.

“Peptidoglycan remodelling in *Pseudomonas* modulate host perception, defense activation and root hair development”

12:30-12:50 O2.2. Coca V, Arribas-Hernandez L, Pozueta-Romero J, Morcillo, RJL.

“m⁶A RNA methylation enables plant growth responses to microbial volatiles by regulating growth-defense balance”

Presentaciones Flash/Flash Talks

12:50-12:55 F2.1. Gómez-Fernández GO, Huisman R, Frances L, Zamarreño ÁM, García-Mina JM, Arrese-Igor C, de Carvalho-Niebel F, Kohlen W, Larrainzar E.

“NIN connects Nod factor signalling and ethylene biosynthesis in *Medicago truncatula*”

12:55-13:00 F2.2. Carvia-Hermoso C, Cuéllar V, del Cerro P, Vinardell JM, van Dillewijn P, Soto MJ.

“Functional characterization of a RelA-associated toxin-antitoxin system in *Sinorhizobium meliloti*”

13:00-13:05 F2.3. Cutugno L, Gigli A, Aguilar De Prada SS, Rubio LM.

“Engineering nitrogenase electron-transport component in *Saccharomyces cerevisiae*”

13:05-13:10 F2.4. Marqués-Gálvez JE, Navarro-Ródenas A, Arenas F, Guarnizo-Serrudo A, Andreu-Ardil L, Fernández-Cortés A, Gazquez F, Andrino A, Querejeta JI, Morte A.

“Elemental and isotopic characterization of *Terfezia claveryi* Chatin reveals key nutritional traits, trophic lifestyle and water use of desert truffles”

13:10-13:15 F2.5. García-Díaz, I, García-Calderón M, Betti M, Márquez AJ.

“Studies of differentially expressed genes in the *Lotus japonicus* - *Mesorhizobium loti* symbiosis”

13:15-13:20 F2.6. García-Rodríguez D, Ayala-García P, Ollero FJ, Borrero de Acuña JM, Vinardell JM, López-Baena FJ, Jiménez-Guerrero I.

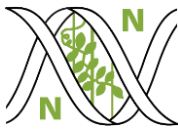
“*EveD*: an extracellular vesicle-secreted effector in rhizobia”

13:30-13:50

Conference by “Biomol” and “Fundación Instituto Biomol”

14:00-15:50

Lunch Break. *Edificio Constitución de 1812.*



16:00–17:40 Session 3: Molecular Biology and Physiology of Plant–Microorganism Interactions (II). *Facultad de Medicina.*

Chairs: Estíbaliz Larrainzar (Univ. Pública de Navarra)
María José Soto (EEZ-CSIC)

Oral presentations.

16:00–16:20 O3.1. Navarro-Gómez C, Collantes-García JM, Rodríguez-Simón M, Imperial J, Escudero V, González-Guerrero M.

“Unveiling new metalloproteins in *Medicago truncatula* nodules”

16:20–16:40 O3.2. Pérez-Mendoza D, Ruiz-Sáez L, Marchante JA, Muñoz S, Pacheco PJ, Peinado J, Lloret J, Rodríguez-Carvajal MA, Sanjuán J.

“Bioprospecting c-di-GMP activated exopolysaccharides in beneficial plant-interacting bacteria”

16:40–17:00 O3.3. Jiménez-Zurdo JI, García-Tomsig N, Guedes-García SK, Robledo M.

“Multifaceted regulation of legume nodulation by the rhizobial small RNA NfeR1”

Presentaciones Flash/Flash Talks

17:00–17:05 F3.1. Aranda-Pérez J, Sánchez-Aguilar MC, Cutiño-Gobea AM, Pérez-Montaña F, Medina C.

“Cyclic di-GMP Modulation of Quorum Sensing and Its Impact on Type VI Secretion System Function in *Sinorhizobium fredii*”

17:05–17:10 F3.2. González-Dominici LI, Yeshvekar R, Benitez-Alfonso Y, Saati-Santamaría Z, García-Fraile P.

“Microbial and light signalling converge to shape root system architecture”

17:10–17:15 F3.3. Herrero-Gómez I, Krenz B, Ayala-García P, Jiménez-Guerrero I, Pérez-Montaña F, Borrero-de Acuña JM.

“Engineering bacterial extracellular vesicles as tools for intracellular effector delivery and activation of the plant immune system.”

17:15–17:20 F3.4. Jiménez-Leiva A, Cabrera JJ, García-Pedrosa MA, Mesa S, Delgado MJ.

“The *Bradyrhizobium diazoefficiens* transcriptome in response to copper starvation under denitrifying conditions: Insights into the FixLJ-FixK2 and RegSR-NifA regulatory cross-talk”

17:20–17:25 F3.5. Kozikova D, Martínez-Lüscher J, Torrens J, Antolín MC, Gogorcena Y, Goicoechea N, Pascual I.

“Cultivar-specific flavonoid responses to arbuscular mycorrhizal inoculation under projected climate change scenarios”



17:25-17:30 F3.6. Payá-Tormo L1, Echavarri-Erasun C, Makarovskiy-Saavedra N, Pérez-González A, Yang ZY, Guo Y, Seefeldt LC, Rubio LM.

“FeMo-cofactor synthesis by a thermophilic nitrogenase lacking the NifEN scaffold”

17:50-19:20

Posters session with “piscobalis”. *Edificio Constitución de 1812.*

19:30-21:00

Guided visit. *Edificio Constitución de 1812.*

— Free time for dinner

Thursday, 28th May 2026

9:30-11:10 Session 4: Agronomic and Ecological Uses of Plant-Microorganism Interactions. *Facultad de Medicina.*

Chairs: Carmen Sánchez Cañizares (IRNASA-CSIC)

Rafael Rivilla (Univ. Autónoma de Madrid)

Oral presentations.

9:30-9:50 O4.1. García-Toledo M, Amador-Laguna FJ, Rodelas B, Pozo C, Purswani J.
“Evaluation of Social PGPR SynComs on Common Greenhouse Crops under Climatic Stress”

9:50-10:10 O4.2. Lidoy J, Minchev Z, España-Luque L, Benítez-González AM, Ramos A, García J, Berrio E, Nesterenko O, Díaz-Ortiz P, Meléndez-Martínez AJ, Pozo MJ, López-Ráez JA.

“Use of arbuscular mycorrhizal fungi as biostimulants for carotenoid biofortification in tomato fruits under field conditions”

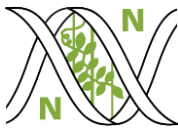
10:10-10:30 O4.3. Carola JM, Vílchez JI.

“Synthetic Assemblies for Microbiome-Based Agriculture (SAMBA): a trait-based framework for predicting and designing microbial consortia”

Presentaciones Flash/Flash Talks

10:30-10:35 F4.1. Escudero-Martinez C, Browne E Y, Schwalm H, Brown M, Brown L, Roberts D, Morris J, Hedley P, Thorpe P, Abbott J, Brennan FP, Bulgarelli D, George TS, Oburger E.

“Evaluation of combined root exudates and rhizosphere microbiome sampling to elucidate rhizosphere traits”



10:35-10:40 F4.2. Shahid I, Arrese-Igor C, Mehnaz, Larrainzar E.

“Metabolomic and genomic characterization of *Pseudomonas chlororaphis* strains for biofungicide applications”

10:40-10:45 F4.3. Majo-Cuervo M, Saati-Santamaría Z, García-Fraile P, diCenzo G, Mateos PF, Menéndez E.

“Different strategies for synthetic community design drive distinct rhizoplane colonization and plant growth outcomes in the wheat rhizoplane”

10:45-10:50 F4.4. McQuade MR, Silva D, Vílchez J.I

“Algal extracts stimulate plant growth-promoting bacteria and enhance tomato growth through microbial biostimulation”

10:50-10:55 F4.5. Mazuecos-Aguilera I, Anta-Fernández F, March-Ballester V, López-Bornay P, González-Andrés F.

“Impact of PGPR addition to compost on nutrient use efficiency by crops and soil microbiome composition”

10:55-11:00 F4.6. Pajuelo E, Domínguez-Pérez GM, Mateos-Naranjo E, Redondo-Gómez S, Rodríguez-Llorente ID.

“Inter-domain plant-*Archaea* interactions: halophilic archaea as biofertilizers in saline soils?”

11:20-12:00

Coffee break. *Edificio Constitución de 1812.*

12:10-13:50 Session 5: Effects of Biotic and Abiotic Stresses on Beneficial Plant-Microorganism Interactions. *Facultad de Medicina.*

Chairs: Isabel Videira (INIA)

María Camacho (IFAPA)

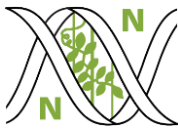
Oral presentations.

12:10-12:30 O5.1. Gómez-Morte A, Albó D, Oliach D, Bonet JJ, Ferrio JP, Peguero-Pina JJ, Rincón A.

“Black truffle mycelium growth and host specific antioxidant response under combined atmospheric and soil drought stress”

12:30-12:50 O5.2. Niraula K, Vílchez JI.

“Stress-induced root exudates recruit beneficial microbes and enhance stress tolerance in tomato”



12:50-13:10 05.3. Vergara A, Martín L, López-García A, Ochoa-Hueso R, Carrascosa A, Alarcón MV, Alguacil MM.

“Arbuscular mycorrhizal fungal communities show greater resilience to climate change under organic management, enhancing soil multifunctionality in Mediterranean vineyards”

Presentaciones Flash/Flash Talks

13:10-13:15 F5.1. García-Chávez, L, Igual JM, Amin H, Niño-Sánchez J, Díez-Casero JJ, Valverde A.

“Responses of non-target soil microbial communities to double-stranded RNA application”

13:15-13:20 F5.2. García-Gómez M, Saati-Santamaría Z, Castro JF, Gasmi M, Menéndez E, Carro L.

“Environmental drivers of fungal community diversity: a comparative ITS-based study across desert and temperate habitats”

13:20-13:25 F5.3. Ortega-Chávez J, Majo-Cuervo M, Menéndez E, Olmo R.

“Plant-associated bacteria with nematicidal potential: a sustainable biocontrol strategy”

13:25-13:30 F5.4. Piroli C, Lendínez S, Cáceres N, Garrido JL, Azcón-Aguilar C, Ferrol N, López-García A.

“Drivers of arbuscular mycorrhizal fungal communities in Mediterranean agroecosystems under global change”

13:30-13:35 F5.5. Poveda J, Velasco P.

“A new way to help their colleagues against the pathogen: *Trichoderma hamatum* induces plant systemic defenses by releasing elicitors from the *Sclerotinia sclerotiorum* cell wall”

13:35-13:40 F5.6. Sousa A, Vílchez JI.

“Halophilic bacteria from Iberian salt flats enhance crop tolerance to salinity stress”

14:00-15:50 Lunch break. *Edificio Constitución de 1812.*

16:00-17:00 Palomares Award Conference (*Facultad de Medicina*)

Pablo del Cerro (Univ. Sevilla)

“The molecular dialogue in rhizobia-legume symbiosis”



17:00–18:00

Closing Conference (*Facultad de Medicina*)

Sofie Goormachtig (Univ. Ghent)

“Rooted Partnerships: From Microbial Symbiosis to Climate-Ready Legumes, a High-Resolution Headshot.”

18:00–18:30

Closing Ceremony (*Facultad de Medicina*)

21:00

Gala Dinner (*Restaurante Baluarte de los Mártires*)