

CURRICULUM VITAE ABREVIADO (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION *

First name	Younes		
Family name	Smani		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	ysma@upo.es	URL Web	https://smaniyouneslab.jimdosite.com/
Open Researcher and Contributor ID (ORCID)(*)	0000-0001-9302-8384		

(*) *Mandatory*

A.1. Current position

Position	<i>Profesor Titular Universidad</i>		
Initial date	17/01/2022		
Institution	University of Pablo de Olavide (UPO)		
Department/Center	Microbiology	Andalusian Centre for Developmental Biology (CABD)	
Country	Spain	Teleph. number	
Key words	Bacterial infections, antimicrobial resistance, treatment		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2021-2022	Miguel Servet II, Institute of Biomedicine of Seville, Spain (cause of the interruption: I got a Professor position)
2016-2021	Miguel Servet I, Institute of Biomedicine of Seville, Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Drugs Sciences	Henri Poincare University, Nancy, France	2006

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I have a broad background in antimicrobial resistance, bacterial virulence and treatments, with specific training and expertise in molecular and cellular biology and in animal models of infection. During my doctoral studies, I investigated patterns of hemoglobin-based oxygen carrier (HBOC) side effects, and the interaction between HBOC and vascular reactivity mechanisms. As postdoc my research centered on the pathogenicity of Gram-negative bacilli (GNB), especially the study of cellular and molecular mechanisms involved in their interaction with host cell. I have also developed new projects resulting in the identification of new virulence factors of GNB, and the development of inhibitors that block these virulence factors, as a nonantimicrobial approach for multidrug-resistant bacteria therapy. In 2016 and 2021 I was awarded **Miguel Servet tipo I (MSI) and tipo II (MSII)** contracts (ISCIII) in the Institute of Biomedicine of Seville (IBiS) where I develop my research lines focused in the bacterial pathogenesis, new antimicrobial resistance mechanisms and antimicrobial and repurposing drugs treatment. Subsequently, I obtained a positive evaluation in the **I3 program**.

Since 2021 & 2022 I got a **Professor** and **Group Leader** positions in UPO and in CABD, respectively, where I continue with the development of my research lines. My research has consistently been interdisciplinary (infectious diseases, microbiology, molecular & cellular biology), and highly collaborative. To date, my scientific activity has led to the successful funding of competitive grants and the establishment of an extensive international network of collaborators. I have produced **79 publications**, 56 as first or last and/or corresponding author. My international experience is remarkable including **2 postdocs**: one year at Nancy Univ. (France), and 8 years at IBiS (Spain). I have participated in **32 research projects** (EU OPENSURE, COST ACTION, FP7, JPIAMR, CYTED, ISCIII, AEI, Junta de Andalucía, UPO). I have served as **PI in 19 projects**, 5 internationals and 14 nationals. Since the beginning of my research career in 2003, I have successfully secured multiple competitive grants and received awards from by regional and national research societies and governmental entities (SAEI, SEIMC, ISCIII). I am a **member of evaluation panels** for several

international (eCOST, EUROSTART, INNOWWIDE, Innovation Fund Denmark, JPIAMR, UK Research & Innovation, ESCMID, Poland National Science Centre), national (ANEP, Cidi-Salud, European Quality Assurance, Fundación Profesor Nova Santos), and regional (Comunidad de Madrid, Junta de Andalucía, Castilla y León) research agencies. I serve as **Associate Editor** for Front Pharmacol and have acted as **Guest-Editor** for 9 different Research Topics and Special Issues in Front Pharmacol, Front Microbiol and Antibiotics, and **Referee** over 200 manuscripts across 48 scientific journals. I have participated as reviewer for international conferences (11th Int. Symp. of the Biology of *Acinetobacter*; ESCMID Conference on Coronavirus Disease 2020, 31st and 32nd ECCMID). My **scientific dissemination** includes 24 invited talks and over 100 communications at national and international congress.

From an **organizational and management perspective**, I am currently the **Director of “Cellular Biology and Biotechnology” Department** at CABD (since 2023), member of the CABD Junta de Centro (since 2022), member of the **Scientific Advisory Board of the MSCA Acinetwork** (since 2025), and **Quality Manager** of the Master’s Program in Health Biotechnology at UPO (since 2022). Previously, I served on the **IBiS Scientific Board** (2017-22), and member of **Spanish Network in Infectious Diseases** (2007-21), **CIBER of Infectious Diseases** (2022), the Ethical Commission for Experimentation with GMOs and Biological Agents in UPO (2021-24), and the **Organized Committee** of the 11th ISBA (Seville, 2017) and the CA21145 3rd meeting (Seville, 2025). I served also as **moderator in Scientific Congress** (27th ECCMID, Vienna 2017; XVI Foro de Investigadores of IBiS, Seville 2020), **scientific manager** of the IBiS Hypoxia Chamber Facility (2015-22), **national ambassador** of the Reviewer Credits (Since 2018).

Regarding **scientific communication in social networks**, I am member of “Grupo de Divulgadores Científicos en twitter” of the SEIMC (2021-22) and Speed Dating of CAIXA FORUM (2023-25). In terms of mentoring, I am currently supervising **3 PhD students** and have supervised **6 others**, one of whom received the “**Premio Extraordinario de Doctorado**” from Seville Univ. These graduates are currently pursuing postdoctoral research positions in both BioTech (Norten Biotechnology, LeitTAT Managing Technology) and in academia (*Institut Hosp. del Mar d’Investigacions Mèdiques*, Hosp. Virgen del Rocío of Seville, and Hosp. Málaga). In addition, I have supervised 18 MSc theses and 10 undergraduate projects. Finally, I am the co-inventor of **4 patents and co-founder of a Spinoff** dedicated for antibacterial compounds development.

Part C. RELEVANT MERITS

C.1. Publications. (CA: corresponding author).

1. Molina-Panadero I, et al., **Smani Y (CA)** (14/14). 2025. ENOblock synergizes with colistin to treat *A. baumannii* infections. EMBO Mol. Med. Online ahead of print. [IF:8.3-D1](#).
2. Boulaamane Y, et al., **Smani Y (CA)** (8/8). 2024. Antibiotic discovery with artificial intelligence for the treatment of *A. baumannii* infections. **mSystems** 9:e032524. [IF:4.6-Q1](#).
3. Gálvez-Benítez L, de la Rosa JMO, et al., **Smani Y (CA)**. (12/12). 2023. Role of *bla*TEM and *OmpC* in the piperacillin-tazobactam resistance evolution by *E. coli* in patients with complicated intra-abdominal infection. **J. Infect.** 87: 220-9. [IF:28.2-D1](#).
4. Rodríguez Villodres A, et al., **Smani Y (CA)**. (8/8). 2022. Ultrasensitive and rapid identification of ESRI developer- and piperacillin/tazobactam-resistant *Escherichia coli* by the MALDIptaz test. **Emerg. Microbes Infect.** 2022 11:2034-44. [IF:13.2-D1](#).
5. Miro-Canturri A, Vila-Domínguez A, Carretero-Ledesma M, Ayerbe-Algaba R, Pachón J, Jiménez-Mejías ME, **Smani Y (CA)**. (7/7). 2021. Repurposing of the tamoxifen metabolites to treat methicillin-resistant *Staphylococcus epidermidis* and vancomycin-resistant *Enterococcus faecalis* infections. **Microbiol. Spectr.** 9: e0040321. [IF:9.073-Q1](#).
6. Rodríguez-Villodres A, Gutiérrez Linares A, Gálvez-Benítez L, Pachón J, Lepe JA, **Smani Y (CA)**. (6/6). 2021. Semirapid detection of piperacillin/tazobactam resistance and extended-spectrum resistance to β -lactams/ β -lactamase inhibitors in clinical isolates of *Escherichia coli*. **Microbiol. Spectr.** 9: e0080121. [IF:9.073-Q1](#).
7. Rodríguez-Villodres A, Gil-Marques ML, Alvarez-Marin R, et al, **Smani Y (CA)**. (11/11). 2020. Extended-spectrum resistance to β -lactams/ β -lactamase inhibitors evolved from low level resistant *Escherichia coli*. *J. Antimicrob. Chemother.* 75:77-85. [IF:5.79-D1](#).

8. Parra-Millán R, Vila-Farrés X, Ayerbe-Algaba R, et al, **Smani Y (CA)**. (13/13). 2018. Synergistic activity of an OmpA inhibitor and colistin against colistin-resistant *Acinetobacter baumannii*: mechanistic analysis and *in vivo* efficacy. **J. Antimicrob. Chemother.** 73(12):3405-12. IF:5.113-D1.
9. Pachón-Ibáñez ME, **Smani Y[#]**, Pachón J, Sánchez-Céspedes J. (1/4). 2017. Perspectives for clinical use of engineered human host defense antimicrobial peptides. **FEMS Microbiol. Rev.** 41(3):323-42. IF:11.392-D1. [#]co-first author.
10. Sánchez-Encinales V, Alvarez-Marin R, Pachón-Ibáñez ME, et al, Pachón J (CA), **Smani Y**. (14/14). 2017. Overproduction of outer membrane protein A by *Acinetobacter baumannii* as a risk factor for nosocomial pneumonia, bacteremia, and mortality rate increase. **J. Infect. Dis.** 215(6):966-74. IF:5.186-D1.

C.2. Congress. List includes a selection of 10 out of 24 invited conferences.

1. The development of a new antibiotic class targeting enolase in *Acinetobacter baumannii*. The 4th International Electronic Conference on Antibiotics, 2025.
2. Innovative antimicrobial strategy for the treatment of MDR bacterial infection. COST ACTION CA21145; Lisboa, Portugal, 2022.
3. *Acinetobacter baumannii* infections: new targets and new treatment strategies. Instituto de Investigación Biomedica de Cadiz, Cadiz, Spain, 2021.
4. Infections by multidrug-resistant bacteria: new strategies for prevention and treatment. Reunión Académica de la Red para la “Búsqueda y Desarrollo de Péptidos Antivirales y Antimicrobianos para cepas Multirresistentes”, México, Mexico, 2020.
5. Anti-Virulence drugs. B-Debate “Reversing a dystopian future. New strategies to discover antibacterial agents”. CosmoCaixa Barcelona, Spain, 2019.
6. Infección por bacterias multirresistentes: nuevas dianas y estrategias de prevención y tratamiento. Instituto de Parasitología y Biomedicina López Neira. Grenade, Spain, 2018.
7. Estrategias para el diseño de nuevos antimicrobianos. 1era Escuela de Verano de la SEIMC. Barcelona, Spain, 2018.
8. Non-antimicrobial strategies for the prevention and treatment of infections by multidrug-resistant GNB. 11th Int. Symposium on the Biology of *Acinetobacter*, Seville, Spain, 2017.
9. Biostars. The **Startups Accelerator**. Oxford Biotech. Oxford, United Kingdom, 2016.
10. Role of oxy-radicals and endothelin in HBOC-mediated vasoconstriction. XIth International Symposium on Blood Substitutes, Vasoactivity Forum, Beijing, China, 2007.

C.3. Research projects (2,110,276€ of competitive funding as PI and 780,118€ of competitive Human Resources recruitment in the last 10 years).

1. Estrategia antimicrobiana innovadora para el tratamiento de infecciones por bacterias multirresistentes (2026-27). Ref. DTS/00037; 120,516€; ISCIII. **PI**.
2. European Network for diagnosis and treatment of antibiotic-resistant bacterial infections (2022-26). Ref. CA21145; 674,153€; COST ACTION, Europe. **WG2 leader**.
3. Estrategia antimicrobiana innovadora para el tratamiento de infecciones por bacterias multirresistentes (2023-26). Ref. PID2022-136357OB-100; 140,000€; AEI. **PI**.
4. Validación de un modelo celular de interacción patógeno-huésped basado en células iPSCs para el cribado de fármacos que bloquean esta interacción (2022-25). Ref. ProyExcel_00116; 175,869€; Junta de Andalucía. **PI**.
5. Estudio de interacción patógeno-huésped (2024-25). Ref. PPI2405; 12,000€. VI Plan Propio UPO. **PI**.
6. Fosfolipasa A2 y factor de transcripción EB (TFEB): Papel en la interacción patógeno-huésped y posibles dianas terapéuticas (2023-24). Ref. PPI2303; 4,000€; UPO. **PI**.
7. Estudio clínico y microbiológico del impacto del tratamiento con piperacilina/tazobactam (P/T) en pacientes con infecciones intraabdominales por *Escherichia coli* portadores de beta-lactamasas (2020-22). Ref. PI19/01009; 93,170€, ISCIII. **PI**.
8. Red temática para el desarrollo de péptidos antimicrobianos para cepas multirresistentes (2019-22). Ref. 219RT0573; 80,000€. Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo (CYTED). **PI of WP2**.
9. Análisis epidemiológico, microbiológico y clínico del brote de listeriosis de Andalucía. Estudio LISMOAN (2020-22). Ref. PI-0001-2020; 114,954€. Consejería de Salud y Familias, Junta de Andalucía. **co-PI of WP2**.

10. Stem cells of marine/aquatic invertebrates: from basic research to innovative (2017-20). Ref. CA16203; 186,500€. COST ACTION, Europa. **co-PI of WP4.**
11. Eficacia terapéutica de la oxiclozanida como terapia combinada con colistina *in vitro* y en modelos experimentales murinos de infecciones graves (2017-19). Ref. PI16/01378; 64,735€, ISCIII. **PI.**
12. Overexpression of OmpA as a risk factor for mortality in bacteremia by *E. coli* and *K. pneumoniae* (2016-18). Ref. CP15-00132; 121,500€, ISCIII. **PI.**
13. Eficacia terapéutica de la lisofosfatidilcolina como terapia combinada con antibióticos en modelos experimentales murinos de infecciones graves (2014-16). Ref. PI13/01744; 67.155€. ISCIII. **co-PI.**
14. Estudio de la eficacia terapéutica de los inhibidores de OmpA en modelos murinos de infección por *A. baumannii* multiresistente y panresistente (2013-15). Ref. PI-0069; 52,496.50€. Junta de Andalucía. **PI.**
15. Caracterización de la respuesta inflamatoria inducida por *A. baumannii* y eficacia terapéutica de la lisofosfatidilcolina en modelos murinos de infección por este patógeno nosocomial (2011-15). Ref. CTS/6317; 203,227.50€. Junta de Andalucía. **co-PI.**
16. Contrato Juan de la Cierva (M. Ortiz, 2026-27). Ref. JDC2024-053654-I; AEI. **PI.**
17. Cell interactions in microbial communities “Ayudas para contratos predoctorales para la formación de doctores” (A. Moreno Rodríguez, 2023-26). Ref. CEX2020-001088-M-20-5; 111,758€, AEI. **PI.**
18. Ayuda B2 “Ayudas para Investigación Tutorizada” (C. Atalaya Rey 2023-24). Ref. PPI2205; 21.760€; UPO. **PI.**
19. Contrato pFIS (A. Vila, 2021-24). Ref. FI20/00160; 82,400€, ISCIII. **PI.**
20. Contrato MSII (2021-23). Ref. CPII20/00018; 195,000€. ISCIII. **PI.**
21. Contrato MSI (2016-20). Ref. CP15-00132; 300,000€. ISCIII. **PI.**

C.4. Contracts, technological or transfer merits

Contracts

1. Modelo 3D de organoides alveolares para el estudio de la interacción patógeno-huésped (2025-2026). Ref. 2025/00263/001. Biomol. **PI.**
2. Screening of the antibacterial activity of 2500 diverse compounds (2020-2021). Ref. PID12737, EU-OPENSREEN, EU. **PI.**
3. Detection of piperacillin-tazobactam-resistant *Escherichia coli* using MALDI-TOF mass spectrometry (2020-22). Clover Bioanalytical Software. **PI.**
4. Determinar las concentraciones y los parámetros PK/PD de P/T en el líquido peritoneal y en sangre después de la administración prolongada de P/T en pacientes sometidos a cirugía abdominal (2020-22). Ref. FIS-PIP-2020-22, FISEVI. **PI.**
5. In vivo studies of Ceragenin (CSA-97) and its derivatives against colistin-resistant Gram-negative bacteria (2014-15). 67.687,50€. N8 Medical, Inc. PI: J. Pachon.
6. Efficacy of ceftaroline vs. vancomycin in the treatment of experimental foreign body infection by methicillin-resistant *S. epidermidis* (2013). 48.300€. AstraZeneca. PI: J. Pachón.

Patents

1. Nuevos derivados útiles como agentes antibacterianos. C. Gil, A. Martinez, **Y. Smani**. Ref. PCT/P202330628. 2024. UPO and CSIC.
2. Desarrollo de un sistema de detección rápida de resistencia de espectro extendido a los betalactámicos en combinación con inhibidores de betalactamasas. **Y. Smani**, A. Rodríguez Villodres, JA. Lepe, J. Pachón. Ref. PCT/EP2020/070406. 2020. Servicio Andaluz de Salud y Univ. Sevilla.
3. Péptidos antiproteína de la membrana externa A para el tratamiento de las infecciones causadas por patógenos Gram negativos. **Y. Smani**; J. Pachón, E. Giralt, M. Teixido, N. Bayo, J. Vila, X. Vila. Ref. PCT/EP2015/072166. 2015. SAS, Fundacio Institut De Recerca Biomédica, Hospital Clinic De Barcelona, IDIBAPS, Univ. Sevilla, Univ. Barcelona.
4. Uso de lisofosfatidilcolina como tratamiento profiláctico frente a infección nosocomial causada por *Acinetobacter baumannii*. **Y. Smani**; J. Pachón. Ref. P201331715. España, 2015. Hospital Virgen del Rocío, FISEVI.
5. Spin-Off DrugID BioTech, S.L. **Y. Smani**; J. Sanchez; ME. Pachón; S. Arriaza; C. García; O. Peces; JC. Rubio; D. Meron. Ref. B90252701. España, 2016.