CV date	22/10/2022

Part A. PERSONAL INFORMATION

First and Family name	Izaskun Jimenez-Serra		
Social Security, Passport, ID number	50125945K	Age	42
Researcher numbers	Researcher ID	AAA-1494-2019	
	Orcid code	0000-0003-4493-8714	

A.1. Current position

Name of University/Institution	Centro de Astrobiologia (INTA/CSIC)			
Department	Astrophysics Department			
Address and Country	Ctra. de Torrejon a Ajalvir km 4, 28850, Madrid, Spain			
Phone number	915201435	E-mail	ijimenez@cab.inta-csic.es	
Current position	Científico Titular CSIC		From	01/08/2018
Espec. cód. UNESCO				
Palabras clave	ASTRONOMIA, FORMACION ESTELAR, ASTROQUIMICA			

A.2. Education

PhD	University	Year
Astrophysics	Universidad Complutense de Madrid (UCM)	2007

A.3. JCR articles, h Index, thesis supervised…

My h Index is currently 37. The total number of citations that my publications have received are >3800. My results have been used for three science cases for the development of new instrumentation for the Atacama Large Millimetre Array (ALMA) and the Square Kilometer Array (SKA). These contributions were included in the ALMA Band2 White Paper, the Spanish SKA White Book, in a Science Use Case for SKA Band 5, and the SKA Band 6 White Paper. I have supervised four PhD students (Antonio Martinez-Henares, Andres Megias at CAB, Giuliana Cosentino at UCL, and Shaoshan Zeng at QMUL), three postdoctoral researchers (Juan Garcia de la Concepcion, Sarah Massalkhi at CAB, David Quenard at QMUL) and several students (Marina Centenera, Ana Santamaria, Lucas Rodriguez at CAB, Marion Dierickx at CfA, Massissilia Hamadouche at QMUL). I have also co-supervised other PhD students (Victor Rivilla, Sarolta Zahorecz). My research about the discovery of new prebiotic molecules in the ISM has triggered several press releases having a significant impact on the media (including interviews for the radio and podcasts).

Part B. CV SUMMARY

I am currently a staff member (Científico Titular) at the Astrobiology Center in Madrid (CAB). My research focuses on understanding the processes that lead to the formation of the most massive stars in the Universe, and on the chemistry of pre-biotic molecules such as amino acids and ribonucleotides in the Interstellar Medium (ISM). I have supervised PhD students, postdoctoral researchers, master students, and undergraduate students, who have published their results in Q1 journals. I have attracted financial support from the Spanish Research Agency (AEI), European Commission (ERC), the Smithsonian Institution and the Science and Technology Facilities Council (STFC) via fellowships and grants. I have taught two modules (Synoptic Physics and Our Universe) at QMUL in the UK, and I have been an instructor for two other modules at Harvard University and at the University of Leeds. I was one of the co-chairs of the SKA "Cradle of Life" Science Working Group during 2017-2020. I have been a committee member of the Astrophysical Chemistry Group of the Royal Society (2016-2019), and I have served as a Science Assessor for the ALMA Review Panel (2017-2018) and as the secretary of ESO's Scientific and Technical Committee (2013). I currently serve as a Science Assessor for the Yebes 40m and IRAM Proposal Committees. I have also served as a reviewer for ERC Consolidator Grants, and for grants submitted to the French National Research Agency (ANR), the Ducth National Research Agency (NOW), the STFC and the Leverhulme Trust. I am a regular referee for MNRAS, ApJ, A&A, PASJ and

Nature Astronomy. I have been the organiser of the weekly seminars at CAB (2019-2022) and I have organised journal clubs, seminars and workshops at all my previous affiliations. I actively participate in outreach activities (summer schools, podcast interviews, aspiration days at local schools, science fiction film screening), and I have delivered several outreach articles and press releases.

Part C. RELEVANT MERITS

C.1. Publications (including books)

I have published 156 refereed papers in primary journals such as the Proceedings of the National Academy of Sciences (PNAS), the Astrophysical Journal (ApJ), Astronomy & Astrophysics (A&A) and Monthly Notices of the Royal Astronomical Society (MNRAS), and 5 proceedings book chapters. I am the first author in 19 out of 156 papers published, and 10 out of the 19 publications as PI appeared as Letters, stressing the innovative and original nature of my research. I list here some of my last publications:

1) **Jimenez-Serra, I.** et al. 2022, A&A, 663A, 181J. Title: *Precursors of fatty alcohols in the interstellar medium: Discovery of n-propanol.*

2) **Jimenez-Serra, I.** et al. 2022, Frontiers in Astronomy and Space Sciences. Title: *The SKA as a prebiotic molecule detector.*

3) Garcia-Sanchez, **Jimenez-Serra, I.** et al. 2022, PNAS, 119, 30. Title: *The emergence of interstellar molecular complexity explained by interacting networks.*

4) **Jimenez-Serra, I.** et al. 2021, ApJ, 917, 44J. Title: *The complex organic molecular content in the L1498 starless core.*

5) Rodríguez-Almeida, L., **Jimenez-Serra, I.**, et al. 2021, ApJ, 912, L11R. Title: *Thiols in the Interstellar Medium: First Detection of HC(O)SH and Confirmation of* C_2H_5SH

6) Rivilla, V. M., **Jimenez-Serra, I.**, et al. 2021, PNAS, 118, 22. Title: *Discovery in space of ethanolamine, the simplest phospholipid head group.*

7) **Jiménez-Serra, I.**, et al. 2020, AstroBio, 20, 1048J. Title: *Toward the RNA-World in the Interstellar Medium—Detection of Urea and Search of 2-Amino-oxazole and Simple Sugars.*

8) **Jiménez-Serra, I.**, et al. 2020, ApJ, 897, L33J. Title: *The Ionized Warped Disk and Disk Wind of the Massive Protostar Monoceros R2-IRS2 Seen with ALMA.*

9) Zeng, S., Quenard, D., **Jiménez-Serra, I.**, et al. 2019, MNRAS, 484, L43Z. Title: *First detection of the pre-biotic molecule glycolonitrile (*$HOCH_2CN$*) in the interstellar medium.*

10) **Jiménez-Serra, I.,** Viti, S., et al. 2018, ApJ, 862, 128J. Title: *The Chemistry of Phosphorus-bearing Molecules under Energetic Phenomena.*

C.2. Research projects and grants

As PI:

2020-2023: AEI Project ”Retos de la Sociedad” PID2019-105552RB-C41. Title: “CAB Contribution to SPICA, development of cryogenic instrumentation and multiwavelength scientific exploitation”. PIs: Francisco Najarro de la Parra and Izaskun Jiménez-Serra. Starting date: 01/06/2020. Duration: 3 years. *Funds awarded: 1.108.965 €.*

2015-2018: STFC project to fund a PDRA (3 years). Project number: ST/M004139/2. Country: UK. *Funds awarded: 442.643 €.*

2015-2020: STFC Ernest Rutherford Fellowship (5 years). Project number: ST/L004801/2. Country: UK. *Funds awarded: 638.085 €.*

2013-2015: IIF Marie Curie Fellowship (2 years). Project number: PIIF-GA-2011-301538. Country: Germany. *Funds awarded: 167.390 €.*

As Co-I:

2021-2022: CSIC i-Link project LINKA20353. Title: LInking ice, gas, and dust: Laboratory AstroChemistry (LILAC). PI: Belén Mate. Duration: 2 years. *Funds awarded: 24.000 €.*

2018-2019: MINECO: “Contribucion Española A Las Misiones Espaciales Criogenicas Spica Y Athena, Postoperaciones De Herschel Y Explotacion Cientifica Multifrecuencia”. PIs: Francisco Najarro, Giovanni Miniutti. Project number: ESP2017-86582-C4-1-R. Country: Spain. *Funds awarded: 735.680 €.*

2016-2017: MINECO: "Contribución Española en Criogenia a Misiones Espaciales: Desarrollos para SPICA y ATHENA, Post-operaciones de HERSCHEL y Explotación Científica Multifrecuencia". PIs: Francisco Najarro, Jesus Martin-Pintado. Project number: ESP2015-65597-C4-1-R. Country: Spain. *Funds awarded: 460.000 €.*

2013-2018: ERC Advance Grant: The calm before the storm: Pre-stellar cores as Astrophysical Laboratories (PALs). PI: Prof. Paola Caselli. Project Number: 320620. Country: Germany. *Funds awarded: 5.000.000 €.*

2012-2015: NASA ADAP: Dark Filaments, Clouds and Cores: A Multiband IR Study of the Early Stages of Star Formation in Extended Structures as Seen by Herschel and Spitzer. PI: Howard Smith. Project number: 11-ADAP11-0128. Country: USA. *Fund awarded:* 400.000 *€.*

2007-2010: MINECO: Herschel: Contribución al centro de control del instrument HIFI y al programa científico. PI: Prof. Jesus Martin-Pintado. Project number: ESP2007-65812-C02-01. Country: Spain.

2004-2006: MINECO: Herschel: Contribución al centro de control del instrument HIFI y al programa científico. PI: Prof. Jesus Martin-Pintado. Project number: ESP2004-00665. Country: Spain.

C.3. Contracts

2015-2018: STFC Ernest Rutherford Fellow (5 yrs) at University College London (1 yr) and Queen Mary University of London (2 yrs). Last 2 years deferred in favor of the CSIC position.

2013-2015: Marie Curie International Incoming Fellow (IIF) at the European Southern Observatory (ESO; 2 yrs).

2009-2012: Submillimeter Array (SMA) Fellow, Harvard-Smithsonian Center for Astrophysics (CfA; 3 yrs).

2007-2009: Postdoctoral researcher at University of Leeds under the supervision of Prof. Paola Caselli (2 yrs).

C.5. Commision of Trust

2020-*present*: Science Assessor for the Yebes 40m and IRAM Proposals Committee.

2019-present: Reviewer for the French and Dutch National Research Agencies (ANR, NWO).

2017-2020: Co-chair of the SKA Cradle of Life/Astrobiology Science Working Group.

2017-2018: Science Assessor for the ALMA Review Panel.

2016-2019: Committee member of the Astrophysical Chemistry Group of the Royal Society.

2017: Reviewer for STFC and Leverhulme Trust grant proposals.

2016, 2019: Contributor to the ALMA Band 2 and SKA Band 6 White Papers.

2015: Contributor to the Spanish SKA White Book (Acosta-Pulido et al. 2015).

2013-present: Regular Referee for Nature Astronomy, ApJ, A&A, MNRAS, and PASJ.

2013: Reviewer for ERC Consolidator Grant proposals.

C.6. MEMBERSHIP OF SCIENTIFIC SOCIETIES

- Member of the Royal Astronomical Society (RAS).

- Member of the International Astronomical Union (IAU).

- Member of the European Astronomical Society (EAS).

- Member of the Spanish Sociedad Española de Astronomía (SEA).

C.7. ORGANISATION OF SCIENTIFIC MEETINGS (in the last 5 years)

2022: SOC member of the conference "From Clouds to Planets II: The Astrochemical Link" (Berlin, October 2022).

2022: Chair of the 1st Workshop on “Origin of life” within the framework of Conexiones LifeHUB.CSIC (7-9 March 2022).

2019-2022: Organiser of the CAB weekly seminars.

2021: SOC member of the conference "A precursor view of the SKA sky", virtual, 15-19/03/2021.

2019: SOC member of the conference “Astrochemistry, Astrobiology, and the Origin of Life, Puerto Vallarta, 31/03-05/04 2019.

2019: SOC member of the SKA meeting *“New Science enabled by New Techniques in the SKA era”, Manchester, 8-12 April 2019*.

2018: SOC chair of the EWASS2018 SS5 Special Session: *“Complex organic molecules in the Universe: current understanding and perspectives”, Liverpool, 3-6 April 2018.*

2014: LOC for the II Star and Planet Formation workshop, ESO Headquarters, Germany, 17 Jan 2014.

C. 8. OUTREACH (in the last 5 years)

03-05/2020: Radio interviews for Radio Carcoma and CienciaEs.com.

22-26/07/2019: Lecturer at the XVII International School of Astrobiology «JOSEP COMAS I SOLÀ» organized by the UIMP.

8-10/07/2019: Lecturer at the UCM Summer School titled “20 years of Astrobiology in Spain”.

20/02/2017: Talk before film screening at the Science Fiction Theater (https://sciencefictiontheatre.co.uk/).

25/11/2016: Participation in Aspiration Day event in a local primary school (Bluegate Fields Junior School).

04/2016: Radio interview for The Jodcast (http://www.jodcast.net/archive/201604Extra/).

09/2014: Article for the ESO Messenger.

27/06/2014: Press release for the RadioNet EC webpage (http://www.radionet-eu.org/articles/news).

2013-2014: Volunteer at the ESO Open House Day organized yearly by ESO.