CURRICULUM VITAE

Personal Data

Name:	Juan Carlos Montesinos López
Date and place of birth:	August 25th, 1984, Alicante, Spain.
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	WoS researcher ID: AAH-9486-2019
	Google Scholar ID: 7Qk3lZUAAAAJ

Education

2010 - 2014	PhD in Biotechnology. Excellent Cum Laude[I]. University of Valencia (UV), Spain. Supervisors: Prof. Fernando Aniento and Dr. Maria Jesus Marcote.
2011	3 months stay at the University of Heidelberg, Heidelberg Institute for Plant Sciences (HIP) - Zellbiologie (Germany). Supervisor: Prof. David G. Robinson.
2009	Master Thesis. University of Valencia (UV). Spain. Supervisor: Prof. Fernando Aniento
2007 - 2009	Master of Science in Molecular and Cellular Biology, and Genetics (Specialization in Molecular Biology of Plants). UV. Spain.
2002 - 2007	Bachelor of Science in Pharmacy. UV. Spain.

Professional Experience

2023 – Present	(Incoming) Group leader at University of Valencia (Spain).
2020 - 2023	Senior Postdoc and Project leader at ETH Zürich. Supervisor: Prof. Clara Sánchez Rodríguez. Zürich, Switzerland.
2015 - 2020	Postdoc position and Project leader at IST Austria. Supervisor: Prof. Eva Benkova. Klosterneuburg, Austria.
2009 - 2014	PhD student at the Department of Biochemistry and Molecular Biology, University of Valencia (Spain). Supervisors: Prof. Fernando Aniento and Dr. Maria Jesus Marcote.
2009	Senior research Technician at University of Valencia ("Gerónimo Forteza" Plan. Generalitat Valenciana). Spain.
2007	Internship at "Hospital Clínico Universitario de Valencia". Valencia, Spain.
2006 - 2007	Internship at the Department of Biochemistry and Molecular Biology, UV, Spain.

Fellowships/Grants

2023 - 2027	CIDEGENT grant (Plant GenT) CIDEXG/2022/21. Funded by Ministry of Innovation, Universities, Science and Digital Society (Spain). Role: PI.
2022 (- 2027)	Ramon y Cajal grant. RYC2021-031165-I. Funded by Ministry of Science and innovation Spain (kindly declined in favour of CIDEGENT grant). Role: PI.
2021 - 2022	Co-project leader of the Career Seed Grant (SEED-09) "Intercellular dynamics characterization of *Fusarium oxysporum* during plant root infection". Funded by ETH Zürich with 30.000 CHF.
2018 - 2020	Project leader of the Interdisciplinary Project "Cytokinin modulating microtubules dynamics, a common mechanism regulating cell division and differentiation in plant and non-plant cells". Funded by IST Austria with 200.010€.
2016 - 2018	EMBO Long-Term Fellowship. "Molecular mechanism of auxin driven formative divisions delineating lateral root organogenesis in plants" (ALTF 710-2016).

[I] Excellent Cum Laude is the best grade for PhD thesis in Spain

2009 - 2013 Pre-doctoral PhD Fellowship "FPU" (AP2008-01433), Ministry of Education, Spain.
2006 - 2007 Collaboration grant, Ministry of Education and Science, Spain.
2002 - 2007 University studies Fellowship, Ministry of Education, Spain.

Funded projects

2023 - 2027: Fast cellular response to environmental stress in plants. CIDEGENT grant (Plant GenT) CIDEXG/2022/21.Funding: Ministry of Innovation, Universities, Science and Digital Society (Comunidad Valenciana, Spain). Funding sum: 674638.4 €. **PI: Juan Carlos Montesinos** (University of Valencia).

2021 - 2022: Intercellular dynamics characterization of Fusarium oxysporum during plant root infection. Funding: ETH Zürich. Funding sum: 30.000 CHF. **PI: Dr. Juan Carlos Montesinos** and Dr. Francisco Gámez Arjona (ETH Zürich).

2018 - 2020: Cytokinin modulating microtubules dynamics, a common mechanism regulating cell division and differentiation in plant and non-plant cells. Funding: Institute of Science and Technology Austria (IST Austria). Funding sum: 200.010 €. **Project Leader: Dr. Juan Carlos Montesinos** (IST Austria).

2013 - 2015: Intracellular trafficking of proteins in plant cells. Funding: Ministry of Innovation and Competitiveness. I+D National Plan (BFU2012-33883). Funding sum: 178.717,00 €. PI: Dr. Fernando Aniento Company (University of Valencia).

2010 - 2012: Intracellular trafficking of proteins in plant cells. Funding: Ministry of Science and Innovation. I+D Nacional Plan (BFU2009-07039). Funding sum: 120.000 €. PI: Dr. Fernando Aniento Company (University of Valencia).

2007 - 2010: Proteomic analysis of endosomal compartments in Arabidopsis. Funding: European Commission. ERA (European Research Area)-Net Plant Genomics. U. Funding sum: 939.059 €. PI: Dr. Gerd Jurgens (Germany).

2009: Intracellular trafficking of PIN family anionic auxin transporter and p24 family proteins cargo receptors in plant cells. Funding: Generalitat Valenciana (GVACOMP2009). Funding sum: 18.000 €. PI: Dr. Fernando Aniento Company (University of Valencia).

2006 - 2009: Intracellular trafficking of PIN family anionic auxin transporter and p24 family proteins cargo receptors in plant cells. Funding: Ministry of Education and Science. I+D National Plan (BFU2006-01149). Funding sum: 110.000 €. PI: Dr. Fernando Aniento Company (University of Valencia).

Publication List

Publications, accepted to peer-reviewed journals

1. Gámez-Arjona F; Sánchez-Rodríguez C; Montesinos JC. 2022. "The root apoplastic pH as an integrator of plant signaling'. Front Plant Sci, 13:931979. doi: 10.3389/fpls.2022.931979.

2. Gámez-Arjona F; Vitale S; Voxeur A; Dora S; Müller S; Sancho-Andrés G; Montesinos JC; Di Pietro A; Sánchez-Rodríguez C. 2021. "Impairment of the cellulose degradation machinery enhances fungal virulence but limits reproductive fitness". Science Advances, 8(16):abl9734) doi: 10.1126/sciadv.abl9734. Also available in bioRxiv (doi: 10.1101/2021.10.08.463612).

3. Ötvös K; Marconi M; Vega A; O'Brien J; Johnson A; Abualia R; Antonielli L; Montesinos JC; Zhang Y; Tan S;Cuesta C; Artner C; Bouguyon E; Gojon A; Friml J; Gutierrez R; Wabnik K; Benkova E. 2020. "Modulation of plant root growth by nitrogen source-defined regulation of polar auxin transport". EMBO J. doi: 10.15252/embj.2020106862.

4. Kubiasová K*; Montesinos JC* (* = equal contribution); Šamajová O; Nisler J; Mik V; Semeradova H; Plíhalová L; Novák O; Marhavý P; Cavallari N; Zalabák D; Berka K; Doležal K; Galuszka P; Šamaj J; Strnad M; Benková E; Plíhal O; Spíchal L. 2020. "Cytokinin fluoroprobe reveals multiple sites of cytokinin perception at plasma membrane and endoplasmic reticulum". Nature Communications 11. doi:10.1038/s41467-020-17949-0.

5. Montesinos JC; Abuzeineh A; Kopf A; Juanes-Garcia A; Ötvös K; Petrasek J; Sixt M; Benková E. 2020. "Phytohormone cytokinin guides microtubule dynamics during cell progression from proliferative to differentiated stage". EMBO J. 1–22. doi:10.15252/embj.2019104238.

6. Hoermayer L; Montesinos JC; Marhava P; Benkova E; Yoshida S; Friml J. 2020. "Wounding-induced changes in cellular pressure and localized auxin signalling spatially coordinate restorative divisions in roots". Proc Natl Acad Sci U S A. 117, 15322–15331. doi:10.1073/pnas.2003346117.

7. Semeradova H*; Montesinos JC* (* = equal contribution); Benková E. 2020. "All Roads Lead to Auxin: Post-translational Regulation of Auxin Transport by Multiple Hormonal Pathways". Plant Communications 1, 3; doi: 10.1016/j.xplc.2020.100048.

8. Hurný A; Cuesta C; Cavallari N; Ötvös K; Duclercq J; Dokladal L; Montesinos JC; Gallemí M; Semerádová H; Rauter T; Stenzel I; Persiau G; Benade F; Bhalerao R; Sykorova E; Gorzsás A; Sechet J; Mouille G; Heilmann I; De Jaeger G; Ludwig-Müller J; Benková E. 2020. "Synergistic on auxin and cytokinin 1 integrates growth and pathogen defense". Nature Communications 11, 2170. doi:10.1038/s41467-020-15895-5.

9. Marhavý P; Montesinos JC; Abuzeineh A; Van Damme D; Vermeer JE; Duclercq J; Rakusová H; Nováková P; Friml J; Geldner N; Benková E. 2016. "Targeted cell elimination reveals auxin-guided biphasic mode of lateral root initiation"*. Genes and Development 30, 471-483 (*Our microscopy picture was selected as cover picture of the journal issue). doi:10.1101/gad.276964.115.

10. Pastor-Cantizano N; Montesinos JC; Bernat-Silvestre C; Marcote MJ; Aniento F. 2015. "p24 family proteins: key players in the regulation of trafficking along the secretory pathway". Protoplasma 30, 1-19. doi:10.1007/s00709-015-0858-6.

11. Montesinos JC; Pastor-Cantizano N; Robinson DG; Marcote MJ; Aniento F. 2014. "Arabidopsis p24δ5 and p24δ9 facilitate Coat Protein I-dependent transport of the K/HDEL receptor ERD2 from the Golgi to the endoplasmic reticulum". The Plant Journal 80, 1014–1030. doi:10.1111/tpj.12700.

12. Montesinos JC; Langhans M; Sturm S; Hillmer S; Aniento F; Robinson DG; Marcote MJ. 2013. "Putative p24 complexes in Arabidopsis contain members of the delta and beta subfamilies and cycle in the early secretory pathway". Journal of Experimental Botany 64, 3147–3167. doi:10.1093/jxb/ert157.

13. Montesinos JC; Sturm S; Langhans M; Hillmer S; Marcote MJ; Robinson DG; Aniento F. 2012. "Coupled transport of Arabidopsis p24 proteins at the ER–Golgi interface". Journal of Experimental Botany 63, 4243–4261. doi:10.1093/jxb/ers112.

Manuscripts submitted to peer-reviewed journals, preprints, in preparation/submission soon

1. Hoermayer L; **Montesinos JC**; Spona L; Yoshida S; Marhava P; Caballero S; Benkova E; Heisenberg CP; Friml J. 2021. "Cell stretching drives microtubule stability and cell division plane selection in the Arabidopsis root meristem" (*Submitted*).

2. **Montesinos JC**; Huang HY; Sancho-Andres G; Huerta AI; Kashyap A; Yang H; Coll N; Zipfel C; Sanchez-Rodriguez C. "A novel leucine-rich repeat receptor-like kinase facilitates plant defense against *Fusarium oxysporum* infection". [Link]

3. Huerta AI; **Montesinos JC**; Jimenez-Sandoval PJ; Sancho-Andres G; Kesten C; Schlechter R; Ayupov T; Santiago J; Sanchez-Rodriguez C. "RFO1 - a novel pectin integrity receptor with dual functionality in development and defense". [Link]

4. **Montesinos JC (#)**; Kubiasova K; Inumella S; Gallemi M; Cavallari N; Kesten C; Rodriguez L; Sanchez-Rodriguez C; Benkova E (#). "Cytokinin modulates microtubules dynamics in root epidermal cells controlling the phosphorylation status of MAP65-1 and CLASP proteins". **(#)** = corresponding authors.

Congress communications

Conferences

1. **Montesinos JC**; Huang HY; Sanchez-Rodriguez C. "A novel receptor involved in plant defence and response to alterations in cell wall integrity". Plant Cell biology International. Oral presentation. Crete (Greece), August 1st-5th, 2022.
2. **Montesinos JC**; Huang HY; Sanchez-Rodriguez C. "A novel receptor involved in plant defence and response to alterations in cell wall integrity". D-BIOL Symposium 2022. Flash talk (selected). Davos (Switzerland), June 13-15th, 2022.
3. **Montesinos JC**; Huang HY; Sanchez-Rodriguez C. "A novel receptor involved in plant defence and response to alterations in cell wall integrity". Control of Cell Wall Integrity Annual Meeting (CCWI). Oral presentation. Zürich (Switzerland), July 19-20th, 2021.
4. **Montesinos JC**; Benkova E. "Cytokinin modulation of the microtubules dynamics, a mechanism regulating cell differentiation in plants". Plant Cell Dynamics IX. Poster & short-talk. On-line. June 1st-3rd, 2021.
5. **Montesinos JC**; Benková E. "Cytokinin modulates microtubules dynamics, a mechanism regulating cell division and differentiation in plants". EMBO Fellows meeting. Oral presentation. Heidelberg (Germany), June 13-16th, 2019.
6. **Montesinos JC**; Benková E. "Cytokinin modulates microtubules dynamics, a mechanism regulating cell division and differentiation in plants". American Society of Plant Biology, ASPB 2019. Poster. San Jose (United States), August 3rd-7th, 2019.
7. **Montesinos JC**; Marhavy P; Abuzeineh A; Benkova E. "Role of cytoskeleton during formative divisions delineating lateral root organogenesis in planta". 21st ENPER Meeting. Poster. Vienna (Austria), September 4-7th, 2018.
8. **Montesinos JC**; Marhavy P; Abuzeineh A; Benkova E. "Role of cytoskeleton during formative divisions delineating lateral root organogenesis in planta". EMBO/EMBL Symposium Microtubules. Poster. Heidelberg (Germany), May 27-30th, 2018.
9. **Montesinos JC**; Marhavy P; Abuzeineh A; Benkova E. "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in planta". 8th International Symposium on Root Development. Poster. Umea (Sweden), May 29th-June 1st, 2017.
10. **Montesinos JC**; Marhavy P; Abuzeineh A; Benková E. "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in planta". Lateral Root Workshop. Oral presentation. Montpellier (France), October 26-27th, 2017.
11. **Montesinos JC**; Marhavy P; Abuzeineh A; Benkova E. "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in planta". Life Science retreat. Poster*. Sopron (Hungary), October 6-7th, 2016. (*Award for outstanding poster).
12. **Montesinos JC**; Marhavy P; Abuzeineh A; Benkova E. "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in planta". Tri-national Arabidopsis Meeting. Poster. Vienna (Austria), September 14-16th, 2016.

13. **Montesinos JC**; Marhavy P; Abuzeineh A; Benková E. "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in plants". European Plant Cytoskeletal Club (EPCC). Oral presentation. Prague (Czech Republic), June 25-26th, 2016.
14. **Montesinos, JC**; Pastor-Cantizano, N; Robinson, DG; Marcote, MJ, Aniento, F. 2014. "Arabidopsis p24δ5 and p24δ9 facilitate COPI-dependent Golgi-to-ER transport of the K/HDEL receptor ERD2". 2014. Annual ENPER Meeting 2014. Oral presentation. Lecce (Italy), September 8-12th, 2014.
15. **Montesinos, JC**; Langhans, M; Sturm, S; Hillmer, S; Aniento, F; Robinson, DG; Marcote, MJ. "Putative p24 complexes in Arabidopsis contain members of the delta and beta subfamilies and cycle in the early secretory pathway". Anual ENPER Meeting 2012. Oral presentation. Madrid (Spain), August 29th-31st, 2012.
16. **Montesinos, JC**; Sturm, S; Langhans, M; Hillmer, S; Marcote, MJ; Robinson, DG; Aniento, F. "Coupled transport of Arabidopsis p24 proteins at the ER-Golgi interface". Anual ENPER Meeting 2011. Oral presentation. Assisi (Italy), September 16-19th, 2011.
17. **Montesinos, JC**; Niemes, S; Marcote, MJ; Aniento, F. "Characterization of the enigmatic p24 protein family". Annual ENPER Meeting 2010. Oral presentation. Marienburg (Germany), September 27th–October 1st, 2010.
18. **Montesinos, JC**; Aniento, F; Niemes, S; Marcote, MJ; Robinson, DG. "Characterization of the enigmatic p24 protein family". XVII Congress of the Federation of European Societies of Plant Biology (FESPB). Oral presentation. Valencia (Spain), July 4-9th, 2009.

Invited lectures

1. IPMB Colloquium - University of Zürich. "Microtubule dynamics: key modulator of plant development and cellular stress response". Zürich (Switzerland), January 20th, 2022.
2. Plant Biology Colloquium - ETH Zürich. "A novel receptor involved in plant defence and response to alterations in cell wall integrity". Zürich (Switzerland), November 23rd, 2021.
3. IBMCP Online Seminars 2021. Colloquium talk. "Microtubule dynamics: key modulator of plant development and cellular stress response". Valencia (Spain), June 18th, 2021.
4. Plant Biology Colloquium - ETH Zürich. "Cytokinin regulation of the microtubules cytoskeleton dynamics". Zürich (Switzerland), December 3rd, 2019.
5. Seminar at University of Nottingham - School of Biosciences. Colloquium talk. "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in plants". Nottingham (United Kingdom), May 10th, 2016.

Teaching activities

2022:	Fundamentals of Biology II. ETH Zürich. 8 ECTS credits.
2018:	Teaching assistant in Biology Track Course 2018. IST Austria. 6 ECTS credits.
2017:	Teaching assistant in Biology Track Course 2017. IST Austria. 6 ECTS credits.
2011 - 2013:	Teaching in Biochemistry and Molecular Biology department of University of Valencia (120 hours, 12 ECTS credits): Biochemistry II, Introduction to Clinic Biochemistry, Clinic Biochemistry and Molecular Pathology (Pharmacy degree).

Supervision of graduate students

2021 - present:	Supervisor of Fortesa Rama, Master student & Master thesis. ETH Zürich.
2020 - 2021:	Supervisor of Hsin-Yao Huang, PhD student. ETH Zürich.
2020:	Consultant of Karolina Kubiasova PhD Thesis "Localization studies of the cytokinin receptor CRE1/AHK4 using fluorescently labelled cytokinin". University of Olomouc, Czech Republic. December, 10th December, 2020.

2018 - present: Supervisor of Syamala Inumella, PhD student. IST Austria.
2017 - 2021: Supervisor of Lukas Hoermayer, PhD student. IST Austria.
2017: Supervisor of Karolina Kubiasova, visiting PhD student in Erasmus+ mobility program at IST (January-July 2017).
2015 - 2017: Supervisor of Hana Semeradova, PhD student. IST Austria.

Organization and Services

2019: **Organizing committee**. 22nd Meeting of the European Network for Plant Endomembrane Research ENPER 2019. Valencia (Spain), September 3rd-6th, 2019.

Reviewing activities

Referee in peer-reviewed journals: Science, eLife, The Plant Journal and MDPI editorial (i.e., Plants and IJMS journals).

Honor and Prizes

2016: Award for Outstanding Poster "Molecular mechanism of auxin-driven formative divisions delineating lateral root organogenesis in plants". Life Science Retreat (October 6-7th 2016). IST Austria (Austria).

Training of transferable skills

2019: EMBO Laboratory Leadership course. Heidelberg (Germany). June 10-12th, 2019.
2012: "Introduction to microscopy and confocal microscopy" course. Organized: Zeiss Microscopy. Duration: 12 hours.

Collaborations

Eva Benkova. Plant Developmental Biology and hormonal cross-talk – IST Austria.
Michael Sixt / Alba Juanes / Aglaja Kopf. Morphodynamics of Immune Cells – IST Austria.
Lukas Spichal. Chemical biology of plant hormones – University of Olomouc, Czech Republic.
Jiří Friml. Developmental and Cell Biology of Plants – IST Austria.
Cyril Zipfel. Molecular and Cellular Plant Physiology – University of Zürich, Switzerland.
Jan Petrasek. Hormonal regulation in Plant – Institute of Experimental Botany, Prague, Czech Republic.
Alexis Maizel. Cell and Developmental Plant Biology – University of Heidelberg, Germany.
Joop Vermeer. Plant integration of chemical and mechanical signals – University of Neuchatel, Switzerland.

Languages skills

Spanish (Mother tongue), English (B1 certificate, fluent) and German (A2 certificate).

References

Dr. Fernando Aniento	Dr. Eva Benkova	Dr. Clara Sánchez-Rodríguez
Professor	Professor	Assistant Professor
University of Valencia	IST Austria	ETH Zürich
Fernando.aniento@uv.es	eva.benkova@ist.ac.at	clara_sanchez@ethz.ch
Dr. Jiri Friml	Dr. Michael Sixt	Dr. David G. Robinson
Professor	Professor	Professor
IST Austria	IST Austria	University of Heidelberg
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