

Curriculum Vitae

Raimon Sunyer, Ph.D.

(updated July 2021)

PERSONAL INFORMATION

Work address:

Facultat de Medicina,
Departament de Biomedicina
Universitat de Barcelona
C/ Casanova, 145, 5a planta, Ala Nord,
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Current positions (2021-present):

- Ramon y Cajal tenure track fellow

EDUCATION AND TRAINING

Education:

Ph.D. in Physics (*Excellent Cum Laude*). University of Barcelona, 22/7/2008. Title: “Contribution of active processes to the cytoskeleton dynamics of living cells”. Ph.D. supervisors: Prof. Daniel Navajas and Prof. Fèlix Ritort

B. Sc. in Physics, University of Barcelona, 1/03/2003

Postdoctoral training:

National Institutes of Health (NIH), Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), Bethesda, MD. Integrative Biophysics laboratory. Supervisor: Prof. Ralph Nossal (2010-2013)

Institute for the Bioengineering of Catalonia (IBEC), Barcelona, Spain. Integrative Cell and Tissue Dynamics laboratory. Supervisor: Prof. Xavier Trepat (2013-2019)

OBJECTIVES AND FIELDS OF INTEREST

Objective:

My goal for the next few years is to consolidate my independent research line, extend its focus to translational research and combine it with more teaching activities

Fields of Interest:

Mechanobiology, Cytoskeleton, Cadherins, Cell Migration, Collective Cell Migration, Directed cell Migration, Durotaxis, Haptotaxis, Biomaterials

SUMMARY OF MY CV

After an undergraduate B.Sc. in physics, I carried out my Ph.D. at the University of Barcelona (UB) in cell mechanics and biophysics (Directors: Daniel Navajas and Felix Ritort, 2004-2008). Then I carried out post-doctoral research at the Integrative Cell Biophysics Laboratory at the National Institutes of Health (NIH, Bethesda, MD, Advisors: R. Nossal and D. Sackett, 2010-2013). I continued with a second postdoc at the Institute for Bioengineering of Catalonia (IBEC) under the supervision of X. Trepat (2013-2019). I established my independent research line in 2019 with a grant from the Young Researcher’s program (Spanish Ministry of Science, Innovation and Universities) and a Ramon y Cajal Tenure Track fellowship.

My group currently includes 2 Ph.D. students that I co-supervise with X. Trepap. One of them is at the last year of his Ph.D. Our research focuses on how cells detect and respond to mechanical signals. We are particularly interested in how these signals trigger directed cell migration in a wide range of biological phenomena, from development to tumor growth and metastasis. To this end, we combine biophysical techniques such as traction force microscopy, micropatterning, microfluidics, hydrogel stiffness gradients and Atomic Force Microscopy with molecular biology, advanced optical microscopy, and computational modelling. So far, this approach has provided several key contributions to the field which have led to the following findings (see below for a full list of my publications):

- A robust technique to fabricate stiffness gradient hydrogels (Sunyer, et al, *PLoS ONE*, 2012)
- A microfluidic chip to create orthogonal gradients of chemical concentration and substrate stiffness (García et al, *Lab on a Chip*, 2015)
- The mechanism by which cell collectives migrate in response to rigidity gradients (Sunyer et al., *Science*, 2016)
- How physical forces propagate at repulsive epithelial boundaries (P. Rodríguez-Franco et al., *Nature Materials*, 2017)

With respect to teaching, my experience began as a Ph.D. student when I taught for several academic years Biophysical laboratory sessions for the grade of Medicine and Biophysical problems for the grade of Biology. Since 2018 I have a part-time Lecturer position in the Department of Biomedicine (School of Medicine, University of Barcelona) where I teach at the grades of Medicine and Biomedical Engineering. During this time, I have developed numerous teaching materials to explain the concepts addressed in the theory lessons. During the COVID-19 lockdown, I moved my lessons to online by providing high-quality video lectures and online discussions. An evaluation survey at the end of the course showed that most of the students scored my classes during COVID-19 period to be either excellent or very good (see below). Apart from these teaching activities, I have regularly participated in evaluation committees of research projects at the level of Master and Ph.D.

RESEARCH ACTIVITIES

Affiliations in research institutions (including mentors and research topics)

2021-present	Ramon y Cajal Tenure Track Fellow. Spanish Ministry of Science, Innovation and Universities (MICIU) <i>Topic:</i> Mechanobiology of fibrosis
2019-2021:	Senior Researcher. Young Researcher Program (“Jóvenes Investigadores”), Spanish Ministry of Science, Innovation and Universities (MICIU) <i>Topic:</i> Mechanical guidance of single cells and tissues
2016-2019:	Senior Postdoctoral Researcher. CIBER BIOINGENIERIA BIOMATERIALES Y NANOMEDICINA (CIBER-BBN), Barcelona, Spain (Mentor: Prof. X. Trepap) <i>Topic:</i> Fabrication of cadherin coated substrates for mechanobiology
2013-2016:	Postdoctoral Researcher. Institute for Bioengineering of Catalonia (IBEC), Barcelona, Spain (Mentor: Prof. X. Trepap) <i>Topic:</i> How single cells and tissues follow mechanical gradients (durotaxis)
2010-2013:	Postdoctoral Researcher. National Institutes of Health (NIH), Bethesda (MD), USA (Mentors: R. Nossal and D. Sackett) <i>Topic:</i> Development of stiffness gradient matrices to study mechanobiology
2009-2010	Researcher. CIBER ENFERMEDADES RESPIRATORIAS (CIBERES), Hospital Clínic, Barcelona, Spain
2005-2009:	Pre-doctoral researcher. Dept. of Physiological Sciences I, University of Barcelona, Spain (Mentors: D. Navajas and F. Ritort) <i>Topic:</i> Developing new tools to measure cytoskeleton mechanical properties

INTERNSHIPS

- 2017 **INSTITUTE OF MATERIALS SCIENCE OF ARAGÓN (CSIC)**
JM de la Fuente Lab, Zaragoza, Spain
Visiting Researcher (2 weeks).
Topic: Developing matrices coated with E-cadherins
Contact: Dr. Valeria Grazú/Prof. JM de la Fuente
- 2013 **MAX PLANK INSTITUTE**
Arancha del Campo lab, Mainz (Germany)
Visiting Researcher (2 weeks)
Topic: Developing an assay to combine photo-activable RGD with soft matrices to study collective cell migration
Contact: Prof. Arancha del Campo
- 2006 **HARVARD UNIVERSITY**
JJ Fredberg lab, Cambridge MA (USA)
Visiting researcher (3 months)
Topic: Developing an assay to measure forces of collective cell systems
Mentor: Prof. JJ Fredberg
- 2004 **UNIVERSITAT POLITECNICA DE CATALUNYA**
Centre Transferencia Calor i Massa, Terrassa (Spain)
Visiting Researcher (2 months)
Topic: Numerical integration of Navier-Stokes equations
Mentor: Dr. Kilian Claramunt
- 2003 **CNRS**
Louis Neel Laboratoire, Grenoble (France)
Visiting researcher (3 months)
Topic: Monte-Carlo simulations of antiferromagnets systems with Dzyaloshinsky-Moriya interactions
Mentors: Dr. Maged Elhajal and C. Lacroix

TECHNOLOGY TRANSFER EXPERIENCE

INNoVATE tech-transfer program: 1-year training on transferring technology developed in research to market
Carey Business School, Johns Hopkins University, 2012 (Certificate)

Technology I developed obtained the funding from ERC-PoC program MICROGRADIENTPAGE (148,963€)
(Principal investigator: X. Trepata).

I helped to conceive, co-wrote the project and coordinate its implementation

SCIENCE OUTREACH ACTIVITIES

Popular Science articles:

P. Rodríguez-Franco, X. Trepata and R. Sunyer. [Mecanobiología de los tejidos celulares](#). Investigación y Ciencia. (Scientific American, Spanish edition). June 2018

X. Trepata and R. Sunyer. [Mechanobiology of collective cell systems](#). SBE Magazine January 2017 (Spanish Society of Biophysics)

Other outreach activities

Training of undergraduate students in summer (Parc Científic de Barcelona, 2016)

Participation in outreach activities to promote the scientific career to undergraduate students (Research4Talent, IBEC, 2016-2017)

Talks to explain what the Ph.D. is to undergraduate students (“*Encontres amb el Tercer Cicle*”, Physics Faculty, University of Barcelona, 2005)

FUNDING OBTAINED AS A PRINCIPAL INVESTIGATOR, COORDINATOR OR IMPLEMENTATION

Ramon y Cajal Tenure Track fellowship (September 2020). **Title:** Mechanobiology of directed cell migration driven by physical signals. **Affiliation institution:** ongoing negotiations with University of Barcelona. **PI:** Raimon Sunyer. **Funding body:** Ministerio de Ciencia, Innovación y Universidades. **Reference:** RYC2019-026721-I. **Total amount:** Full salary for 5 years + 40,000€ for research. **Funding period:** 2021-2026.

Title: Bio-compatible hydrogels with dynamically tunable stiffness to study mechanobiology of cells and tissues (DYNAGEL). **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Raimon Sunyer. **Funding body:** Ministerio de Ciencia, Innovación y Universidades. **Reference:** RTI2018-101256-J-I00. **Funding period:** 2019-2022. **Total amount:** 189,970€

Title: Cell mechanosensing through cadherin complexes (CADHFORCE). **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Xavier Trepapat. **Coordinator:** Raimon Sunyer. **Funding body:** CIBER-BBN. **Reference:** CADHFORCE. **Funding period:** 2018-2020. **Total amount:** 64,000€

Title: Micro Gradient Polyacrylamide Gels for High Throughput Electrophoresis Analysis. **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Xavier Trepapat. **Implementation:** Raimon Sunyer. **Funding body:** European Research Council, Proof of Concept. **Reference:** 632269. **Funding period:** 2014-2015. **Total amount:** 148,963€

FUNDING (SINCE 2010)

Title: Durotaxis of Cancer Associated Fibroblasts (DUROCAF). **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **Coordinator:** Xavier Trepapat. **Funding body:** CIBER-BBN. **Reference:** DUROCAF. **Funding period:** 2016-2018. **Total amount:** 64,000€

Title: Mechanobiology of collective cell migration during haptotaxis and durotaxis: application to intestinal organoids (mGRADIENT). **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Xavier Trepapat. **Funding body:** Ministerio de Ciencia, Innovación y Universidades. **Reference:** PGC2018-099645-B-I00. **Funding period:** 2019-2022. **Total amount:** 375.100€

Title: Mechanical control of biological function (MECHANO-CONTROL). **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **Head(s) researcher(s):** Pere Roca and Xavier Trepapat. **Funding body:** H2020 FETPROACT. **Reference:** 731957. **Funding period:** 2017-2021. **Total amount:** 7.134.929€. IBEC budget: 1.952.420€

Title: Mecanobiología de la durotaxis: de las células aisladas a los tejidos. **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Xavier Trepapat. **Funding body:** Ministerio de Economía y Competitividad. **Reference:** BFU2015-65074-P. **Funding period:** 2016-2018. **Total amount:** 320.166€

Title: Multiscale regulation of epithelial tension (TensionControl). **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Xavier Trepapat. **Funding body:** European Research Council, Consolidator grant. **Reference:** ERC-2013-CoG-616480. **Funding period:** 2015-2019. **Total amount:** 1.981.761,45€

Title: The mechanome of epithelial adhesion: unveiling the mechanisms of intercellular force detection, resistance, and transmission. **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya (IBEC). **PI:** Xavier Trepap. **Funding body:** Ministerio de Economía y Competitividad. **Reference:** BFU2012-38146. **Funding period:** 2013-2015. **Total amount:** 210.000€

Title: Physical forces driving collective cell migration: From genes to mechanism. **Affiliation institution:** Fundació Privada Institut de Bioenginyeria de Catalunya. **PI:** Xavier Trepap. **Funding body:** European Research Council, Starting Grants. **Reference:** 242993. **Funding period:** 2009-2014. **Total amount:** 1.749.745€

Title: Integrative Cell Biophysics. **Affiliation institution:** National Institutes of Health **PI:** Ralph Nossal. **Funding body:** NIH intramural program. **Reference:** HD008841-06. **Funding period:** 2011-2012. **Total amount:** \$414.888€

PUBLICATIONS IN INDEXED JOURNALS

Summary of publications:

	<i>Google Scholar</i>	<i>Web of Science</i>	<i>SCOPUS</i>
Number of Scientific publications (JCR)	21	20†	21
Total publications in D1 (1 st decile)	-	6	
Total publications in Q1	-	14	19
<i>h</i> -index	18	15	16
Total number of citations	1836	1132	1183
Average citations/publication	77.67	56.6	56.33
Average impact factor/publication	-	8.98	-

† Last publication has not been included yet

First author publications: 5, including one in *Science* (2016)

Corresponding author publications: 3, including one in *Nature Materials* (2017) and a review in *Current Biology* (2020)

List of Publications

* Co-first author

** Corresponding author or co-corresponding author

IF indicates the impact factor according to Thomson Reuters (Web of Science) in the year of publication

Q indicates quartile according to Thomson Reuters (Web of Science) in the year of publication

D1 indicates that the Journal is in the first Decile according to Thomson Reuters (Web of Science) in the year of publication

Sunyer R**, Trepap** X: Durotaxis. *Curr Biol* 2020, 30:R383–R387. (IF=9.601, for 2019 as 2020 was not available, Q1, D1)

Escribano J, **Sunyer R**, Sánchez MT, Trepap X, Roca-Cusachs P, García-Aznar JM: A hybrid computational model for collective cell durotaxis. *Biomech Model Mechanobiol* 2018, 17:1037–1052. (IF=2.829, Q2)

Sehgal P, Kong X, Wu J, **Sunyer R**, Trepap X, Leckband D: Epidermal growth factor receptor and integrins control force-dependent vinculin recruitment to E-Cadherin junctions. *J Cell Sci* 2018, doi:10.1242/jcs.206656. (IF=4.517, Q2)

Rodríguez-Franco P, Brugués A, Marín-Llauradó A, Conte V, Solanas G, Batlle E, Fredberg JJ, Roca-Cusachs P, **Sunyer** R**, Trepap** X: Long-lived force patterns and deformation waves at repulsive epithelial boundaries. *Nat Mater* 2017, 16:1029–1037. (IF=39.235, Q1, D1)

- Li H, Xu B, Zhou EH, **Sunyer R**, Zhang Y: Multiscale Measurements of the Mechanical Properties of Collagen Matrix. *ACS Biomater Sci Eng* 2017, 3:2815–2824. (IF=4.511, Q2)
- Sunyer R**, Conte V, Escribano J, Elosegui-Artola A, Labernadie A, Valon L, Navajas D, García-Aznar JM, Muñoz JJ, Roca-Cusachs P, et al.: Collective cell durotaxis emerges from long-range intercellular force transmission. *Science* 2016, 353:1157–1161. (IF=34.661, Q1, D1)
- Przybyla L, Lakins JN, **Sunyer R**, Trepap X, Weaver VM: Monitoring developmental force distributions in reconstituted embryonic epithelia. *Methods San Diego Calif* 2016, 94:101–113. (IF=3.503, Q2)
- Serra-Picamal X, Conte V, **Sunyer R**, Muñoz JJ, Trepap X: Chapter 17 - Mapping forces and kinematics during collective cell migration. In *Methods in Cell Biology*. Edited by Paluch EK. Academic Press; 2015:309–330. (IF=1.097, Q4)
- García* S, **Sunyer* R**, Olivares A, Noailly J, Atencia J, Trepap X: Generation of stable orthogonal gradients of chemical concentration and substrate stiffness in a microfluidic device. *Lab Chip* 2015, 15:2606–2614. (IF=5.586, Q1, D1)
- Elosegui-Artola A, Bazellières E, Allen MD, Andreu I, Oria R, **Sunyer R**, Gomm JJ, Marshall JF, Jones JL, Trepap X, et al.: Rigidity sensing and adaptation through regulation of integrin types. *Nat Mater* 2014, 13:631–637. (IF=36.425, Q1, D1)
- Roca-Cusachs P, **Sunyer R**, Trepap X: Mechanical guidance of cell migration: lessons from chemotaxis. *Curr Opin Cell Biol* 2013, 25:543–549. (IF=11.4, Q1, D1)
- Sunyer** R**, Jin AJ, Nossal R, Sackett DL: Fabrication of Hydrogels with Steep Stiffness Gradients for Studying Cell Mechanical Response. *PLoS ONE* 2012, 7:e46107. (IF=3.73, Q1)
- Sunyer R**, Trepap X, Fredberg JJ, Farré R, Navajas D: The temperature dependence of cell mechanics measured by atomic force microscopy. *Phys Biol* 2009, 6:025009. (IF=3.086, Q2)
- Sunyer R**, Ritort F, Farré R, Navajas D: Thermal activation and ATP dependence of the cytoskeleton remodeling dynamics. *Phys Rev E* 2009, 79:051920. (IF=2.4, Q1)
- Puig F, Gavara N, **Sunyer R**, Carreras A, Farré R, Navajas D: Stiffening and Contraction Induced by Dexamethasone in Alveolar Epithelial Cells. *Exp Mech* 2009, 49:47–55. (IF=1.542, Q1)
- Roca-Cusachs P, Alcaraz J, **Sunyer R**, Samitier J, Farré R, Navajas D: Micropatterning of Single Endothelial Cell Shape Reveals a Tight Coupling between Nuclear Volume in G1 and Proliferation. *Biophys J* 2008, 94:4984–4995. (IF=4.683, Q1)
- Gavara N, Roca-Cusachs P, **Sunyer R**, Farré R, Navajas D: Mapping Cell-Matrix Stresses during Stretch Reveals Inelastic Reorganization of the Cytoskeleton. *Biophys J* 2008, 95:464–471. (IF=4.683, Q1)
- Rico F, Roca-Cusachs P, **Sunyer R**, Farré R, Navajas D: Cell dynamic adhesion and elastic properties probed with cylindrical atomic force microscopy cantilever tips. *J Mol Recognit* 2007, 20:459–466. (IF=3.767, Q2)
- Roca-Cusachs P, Almendros I, **Sunyer R**, Gavara N, Farré R, Navajas D: Rheology of Passive and Adhesion-Activated Neutrophils Probed by Atomic Force Microscopy. *Biophys J* 2006, 91:3508–3518. (IF=4.683, Q1)
- Gavara N, **Sunyer R**, Roca-Cusachs P, Farré R, Rotger M, and Navajas D: Thrombin-induced contraction in alveolar epithelial cells probed by traction microscopy. *J Appl Physiol* 2006, 101:512–520. (IF=3.178, Q1)
- Elhajal M, Canals B, **Sunyer R**, Lacroix C: Ordering in the pyrochlore antiferromagnet due to Dzyaloshinsky-Moriya interactions. *Phys Rev B* 2005, 71:094420. (IF=3.475, Q1)

SERVICE TO THE PROFESSION AND TO INSTITUTIONS

Reviewer for the journals: *Nature Communications*, *EMBO Journal*, *Langmuir*, *Review of Scientific Instruments*, *Cell Biochemistry and Biophysics (CBB)*, *Biomechanics and Modeling in Mechanobiology (BMM)*

Grant reviewer for the **Spanish Agency of Investigation (AEI)** and the **Polish National Science Centre (NCN)**

TEACHING AND MENTORING

Teaching positions

- 2018-current Part-time Lecturer, Department of Biomedicine, School of Medicine, University of Barcelona
- 2003-2006 Teaching duties during my Ph.D.

Summary of my teaching experience

Underscored text highlights the courses in which I have developed materials.

** denotes that I adapted my materials to COVID-19 restriction demands (online videos, virtual tutorships, online exams)

Degree	Course	Language	Position	Materials taught	Course Credits	Hours Taught/year	Years Taught
<u>Medicine</u>	<u>General** Biophysics</u>	<u>Catalan/Spanish</u>	<u>Teacher</u>	<u>Theory & problems</u>	<u>6</u>	<u>30</u>	<u>2019- present</u>
<u>Biomedical Engineering</u>	<u>Biophysics**</u>	<u>English</u>	<u>Teacher</u>	<u>Theory, problems & lab sessions</u>	<u>6</u>	<u>30</u>	<u>2018- present</u>
Medicine	General Biophysics	Catalan/Spanish	Teacher	Lab sessions	6	34-68h	2003- 2006
Biology	Physics for Biologists	Catalan/Spanish	Teacher	Problems	6	20h	2003- 2005

Teaching responsibilities

- 2020-2021 Biomedical Engineering, Medical School, University of Barcelona. Course: Biophysics. Theory, Problems and Laboratory sessions. 30h of classes and 20h tutorships
- 2020-2021 Medicine, Medical School, University of Barcelona. Course: Medical Biophysics. Theory, Problems and Laboratory sessions. 30h of classes and 20h tutorships
- 2019-2020 Biomedical Engineering, Medical School, University of Barcelona. Course: Biophysics. Theory, Problems and Laboratory sessions. 30h of classes and 20h tutorships
- 2005-2006 Medicine, Medical School, University of Barcelona. Course: Biophysics. Laboratory sessions. 68h of classes
- 2005-2005 Medicine, Medical School, University of Barcelona. Course: Biophysics. Laboratory sessions. 34h of classes
- 2003-2004 Medicine, Medical School, University of Barcelona. Course: Biophysics. Laboratory sessions.

34h of classes

- 2004-2005 Biology, Faculty of Biology, University of Barcelona. Course: Physics for Biologists. Problems 20h
- 2003-2004 Biology, Faculty of Biology, University of Barcelona. Course: Physics for Biologists. Problems 20h

UNIVERSITY ACCREDITATIONS

Accreditation as Lecturer (“Acreditació professor Lector”) AQU (Agència per la Qualitat Universitària a Catalunya), 2016

Accreditation as Associate professor (“Acreditació Recerca”) AQU (Agència per la Qualitat Universitària a Catalunya), 2016

ADDITIONAL TEACHING ACTIVITIES

Jury member in the evaluation of:

- Ongoing Ph.D. theses, Doctoral Program in Biomedicine
- Ph.D. defense (University of Barcelona)

DEVELOPMENT OF TEACHING MATERIALS

Since 2018 I developed teaching materials for the subjects Biophysics and General Biophysics for the degrees of Biomedical Engineering and Medicine, respectively. These materials include:

- PowerPoint presentations with new didactic approaches featuring applied examples that resonate to student’s interests and experiences
- Video lectures for the most difficult parts of my teaching
- Design of flipped class approaches during problem resolution sessions

During COVID-19 pandemic, I developed more than 40 videos to cover my classes (Biomedical Engineering & Medicine). A survey at the end of the course showed that:

- 87% of the Biomedical Engineering students qualified my COVID-19 classes either “Very Good” or “Excellent” with comments such as:

“A very clear and detailed explanation, very similar to what we had in class but with the benefit you can pause the video and listen to it again if you need to.”

“The video lectures made it seem like being in a regular university class”

“Clarity explaining difficult to understand concepts”

“It was very useful having extra videos to understand better the lesson. As a personal opinion, without the videos, I would not have been able to understand deeply chapters 4-, so it has been a helpful tool.”

- 92% of the Medicine students qualified my COVID-19 classes either “Very Good” or “Excellent” with comments such as:

“The everyday examples helped to better understand the course contents while helping to keep the attention on the video.”

“The videos were of adequate length (neither too long to be boring nor too short to watch more than one per session), they were also very dynamic (with very visual examples and schemes) and understandable (the teacher always tried to explain everything

slowly but without excessive slowness, and always trying not to take for granted things not explicitly explained during the course).”

“Good videos, good computer support with drawings and diagrams, the teacher maintains correct, pleasant and understandable communication”

“All content is taught quickly and concisely, with the possibility of simply expressing doubts to the teacher”

SUPERVISION OF MASTER AND PH.D. THESIS

- Master thesis: Micropatterning of stiffness gradient polyacrylamide gels. Student: Carlos Ureña, Excellent qualification obtained
- Ongoing co-supervision of a Ph.D. thesis under the project “Cell mechanosensing through cadherin complexes”. Student: Macià Pallarés
- Ongoing co-supervision of a Ph.D. thesis under the project “Mechanotransduction of Collective Haptotaxis”. Student: Isabela Fortunato

AWARDS AND FELLOWSHIPS

Spanish Government Ramon y Cajal Tenure Track Fellowship (September 2020)

Government of Catalonia postdoctoral fellowship (Beatriu de Pinós modalitat A) (July 2010-July 2012)

NIH Postdoctoral Fellowship (January 2010-June 2010)

Government of Catalonia Ph.D. fellowship (Beca FI) (2004-2008)

Government of Catalonia Travel Award (Beca BE) for the candidate’s work at Fredberg Lab, Harvard University Fellowship to collaborate with university departments. Ministerio de Ciencia y tecnología (2004)

First Class Honors Fellowship (Spanish University Access Test)

LANGUAGES

Catalan and Spanish (native languages)

English. TOFL. Negotiation level. TOEFL iBT, 2009). More than 3 years of experience working in US institutions

INVITED TALKS AND SEMINARS

Sunyer, R. “*Collective Durotaxis Emerges from Long-Range Force Transmission*”. 6th International Symposium Interface Biology of Implants (IBI). Rostock (Germany). 8/5/2019

Sunyer, R. “*Durotaxis of Cancer Associated Fibroblasts*”. CIBER-BBN 2018 Annual Conference. Valladolid (Spain). 12/11/2018

Sunyer, R. “*Collective Durotaxis Emerges from Long-Range Force Transmission*”. 9th International Conference of Engineering Chemical Complexity. Vilanova i la Geltrú (Spain). 19/05/2017

Sunyer, R; Conte V; Escribano J; García-Aznar J.M.; Muñoz J.J.; Roca-Cusachs P.; X Trepat. “*Collective Durotaxis Emerges from Long-Range Force Transmission*”. American Association of Cell Biology (ASCB) meeting. San Diego (USA). 12/12/2015

R. Sunyer. “*Contribution of active processes to cytoskeleton dynamics*”. Institute Curie. Invited by Cécile Sykes. 25/6/2009

R. Sunyer. “*Cell Mechanics: Experimental results and theoretical models*”. Faculty of Physics, University of Barcelona, Barcelona. Invited by Felix Ritort. 21/03/2006

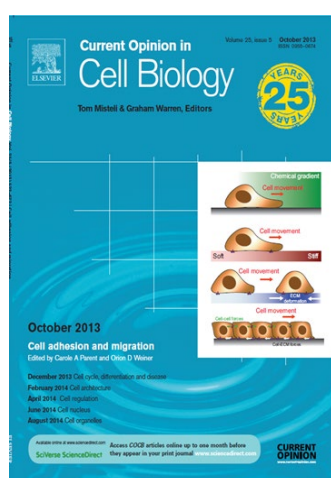
CONGRESSES

1. Sunyer, R. 6th International Symposium Interface Biology of Implants (IBI). Rostock (Germany). 8/5/2019 (Oral)
2. Sunyer, R. CIBER-BBN 2018 Annual Conference. Valladolid (Spain). 12/11/2018 (Oral)
3. Sunyer, R; Conte V; Escribano J; García-Aznar J.M.; Muñoz J.J.; Roca-Cusachs P.; X Trepatal. 9th International Conference of Engineering Chemical Complexity. Vilanova i la Geltrú (Spain). 19/05/2017 (Oral)
4. Sunyer, R; Roca-Cusachs P.; X Trepatal. American Association of Cell Biology (ASCB) meeting. San Francisco (USA). 03/12/2016 (poster)
5. Escribano, J; Sunyer, R; Roca-Cusachs, P; Trepatal, X; García-Aznar. American Association of Cell Biology (ASCB) meeting. San Francisco (USA). 03/12/2016 (Poster)
6. Muncie, JM; Przybyla, L; Lakins, J; Sunyer, R; Trepatal, X; Weaver, VM. American Association of Cell Biology (ASCB) meeting. San Francisco (USA). 03/12/2016 (Oral)
7. Sunyer, R; Conte, V; Escribano, J; Elosegui-Artola, A; Labernardie, A; Valon, L; Navajas, D; JM; Muñoz, JJ; Roca-Cusachs, P; Trepatal, X. 9th Symposium on Bioengineering for Active Ageing. Barcelona, (Spain). 29/06/2016 (Oral)
8. Rodríguez-Franco,P; Brugués, A; Conte, V; Sunyer, R; Trepatal, X. 8th IBEC Symposium (Bioengineering for Regenerative Therapies). Barcelona (Spain). 30/09/2015 (Poster)
9. Sunyer, R; Conte V; Escribano J; García-Aznar J.M.; Muñoz J.J.; Roca-Cusachs P.; X Trepatal. American Association of Cell Biology (ASCB) meeting. San Diego (USA). 12/12/2015 (Oral)
10. Rodríguez-Franco P; Brugués, A; Güell, G; Sunyer, R; Conte, V.; X Trepatal. American Association of Cell Biology (ASCB) meeting. San Diego (USA). 12/12/2015 (Poster)
11. S Garcia; R Sunyer; J Atencia; X Trepatal. American Association of Cell Biology (ASCB) meeting. Philadelphia (USA). 06/12/2014 (Poster)
12. Sunyer R, Jin, A, Sackett, DL and Nossal R. Biophysical Society Meeting, San Diego, CA (USA). (24/2/2012) (Poster)
13. Sunyer R, Ritort F, Farré F and Navajas D. XXIV *Trobades Científiques de la Mediterrània*. Maó, Spain. 6/10/2008. (Oral)
14. Sunyer R, Ritort F and Navajas D. *2nd European Meeting on Cell Mechanics*, Barcelona, (Spain) 26/9/2007. (Oral)
15. Sunyer R, Ritort F and Navajas D. *1st International Meeting on AFM in Life Sciences and Medicine*. Barcelona, (Spain). 5/10/2007 (Poster)
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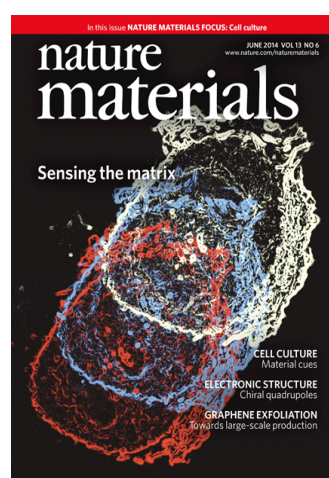
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