Abbreviated Curriculum Vitae

Conrado Aparicio, PhD, FAIMBE

cjaparicio@uic.es

I. Current Position and Contact Information

- ICREA Research Professor, Engineering Sciences
- Part-time Professor
  UPC, Department of Materials Science and Engineering
  Barcelona Tech, UPC-Technical University of Catalonia
- Associated Researcher, IBEC – Institute for Bioengineering of Catalonia
- Fellow, AIMBE-American Institute for Medical and Biological Engineering, Class of 2021

II. Education

Institution	Degree	Field	Year
BarcelonaTech-UPC, Spain	MScEng	Industrial Engineering (Materials)	1998
BarcelonaTech-UPC, Spain	PhD	Biomaterials/Biomedical Eng.	2005
Northwestern University	PostDoc	Regenerative Medicine	2007

III. Appointments

Universitat Internacional de Catalunya (UIC)

- **Vicerrector For Research, Innovation and Knowledge Transfer** **2023-2024**
- **IBEC-Institute for Bioengineering of Catalonia** **2022-Present**
  Associated researcher
- **Department of Odontology** **2022-2024**
  Full Professor with tenure
- **FBA-BIST-UIC Fellow** **2021-2024**

University of Minnesota (UMN)

- **Department of Restorative Sciences**
  Full Professor with tenure **2019 –2021**
- **Biomedical Engineering Graduate Program** **2017 - 2021**
  Affiliate Senior Member
- Department of Restorative Sciences
  Associate Professor with tenure 2014 – 2019
- **MDRCBB-Minnesota Dental Research Center for Biomaterials and Biomechanics**
  Deputy Director **2011 – 2021**
- **Oral Biology Graduate Program**
  Senior Faculty Member **2009 – 2021**
- **Institute for Engineering in Medicine**
  Member **2008 – 2021**
- MDRCBB
  Member 2008 – 2011
- Department of Restorative Sciences
  Associate Professor (tenure track) 2008 – 2014

BarcelonaTech-UPC

- **BarcelonaTech - UPC, Spain**
  Assistant Professor **2006-2008**
- **Research Centre in Biomedical Engineering**
  Member **2002-2008**
- BarcelonaTech - UPC, Spain

Junior lecturer 2000-2006

IV. Summary of Achievements

I have published over **150 peer-reviewed journal papers, 11 book chapters, and 2 books**, and have contributed +220 conference abstracts presented in research forums. **Last 5 years, I have published 49 papers and 3 book chapters.** I have published papers in high impact discipline journals, such as **Nature Materials, Biomaterials, Nanoscale, Acta Biomaterialia, ACS Applied Materials and Interfaces**, **Bioactive Materials**, ... I recently was invited to co-edit a book published by an Elsevier Imprint. **My h-index is 45 (Scopus)/51 (Google Scholar) as of March 3, 2023 with 9,000+ citations**.

I have been awarded over **$21M ($8.4M as PI/co-PI) in funding from the Spanish Ministry of Science, US agencies, corporations, non-profits, and internal university programs**. Many of these research grants involve inter-disciplinary collaborations between engineers, (micro)biologists, and dental/orthopedic/ cardiovascular clinicians.

I am **co-inventor of 7 patent applications** (2 to be allowed). One of the patents was licensed to a dental implant company and this technology was marketed in 2016 as ContactTi® bioactive surface for Klockner Vega Dental Implants.

I have been **invited** multiple times **to review grant proposals for national and international agencies (EU, US NIH, US DoD, etc.).** I have also been **invited to deliver keynote and plenary lectures at international (Europe, Asia, USA, North and South America) conferences and universities**.

I have also received several national and international research honors and awards. **I am a fellow of the AIMBE-American Institute of Biological and Medical Engineering (Class of 2021).** I have been recipient of the European Award for Basic Research in Dentistry. I was guest professor 2019-2021 at Nanchang University, China and in 2024 at the University of Campinas, Brazil. In 2019 **I was named Professor of the Year at the University of Minnesota School of Dentistry, the highest honor for a faculty member.**

Leadership and Service

I was vicerrector for Research Innovation and Knowledge Transfer at UIC during the course 2023-2024 where we launched multiple internal calls for promoting basic and translational research and internationzalization in our University.

I also was the **Deputy Director of the Minnesota Dental Research Center for Biomaterials and Biomechanics** for 11 years until I left the UMN.

Recently I have taken **leadership roles in groups of the International and American Associations for Dental Research (IADR and AADR), the European Society for Biomaterials (ESB) and the World Biomaterials Congress (WBC).**

I have been actively engaged in a wide range of services to my Department, School, and University as well as in discipline-related professional service. I have been elected senator at UMN for two terms.

Supervision of students and postdocs

I have taught to 1500+ students the topic of Dental Biomaterials Science in dental programs at Schools of Dentistry since 2008. I have also taught in advanced research programs, such as the Biomedical Engineering and the Dentistry program and in Engineering Programs at UPC, from 2000 to 2008. I was named the DDS and DT Didactic Faculty Member of the Year in 2013.

I have successfully supervised or I am currently supervising a total of 23 graduate students (14 of them PhD students), mentored 10 postdoctoral researchers, and multiple undergraduate students at UPC and UIC, Spain and pre-doctoral students at the UMN. These mentees have followed different career paths, from being assistant professors, investigators in research institutes, to work in industry, to be in clinical private practice after completing residencies. A notable number of my students received fellowships and awards from different training programs, research institutions and research conferences.

LINKS

https://orcid.org/0000-0003-2969-6067
https://scholar.google.co.uk/citations?user=gB3EvNQAAAAJ&hl=en
www.AparicioLab.com
@AparicioLab

V. Selected Honors, Awards, and Fellowships

Selected Honors

- 2024, **Visiting Professor, Brazilian Internationalization Program**, University of Campinas, Brazil
- 2023-2026, **treasurer/secretary, Implantology Group of the IADR**-International Association for Dental Research.
- 2021, **Fellow, AIMBE-American Institute for Medical and Biological Engineering** (fellows represent the top 2% of the medical and biological engineering community).
- **2021, External Leadership Committee member, NIH-NIDCR,** 1st Annual Progress Meeting of (2020-2023) NIDCR-NIST Interagency Research Program.
- 2020, Invitation to be Founding Editor of the journal ORAL (MDPI). Declined because of conflict.
- 2019-present, **Member, Scientific Committee of the Quebec Network of Bone and Oral Health Research**
- 2019-2021, **International Guest Professor at Nanchang University, China**
- **2015-2020, Group Chair, Dental Materials-Biological interactions, IADR- International Association for Dental Research**
- 2014-2019, **Visiting Professor at University of Bologna, Italy. Master's Program in Endodontics and PhD Program in Dentistry**,
- 2019, 2018, 2015, 2013 **International Advisory Board, European Society for Biomaterials**
- 2014-2015, 2017, **International Scientific Committee, World Bioceramics Symposium and Annual meeting, International Society for Ceramics in Medicine.**
- 2014-present, **Associate Editor, Member Editorial Board, IRBM-Innovation and Research in Biomedical Engineering**. **An Elsevier Journal.** Journal of the Alliance for engineering in Biology and Medicine and the BioMedical Engineering French Society.
- 2014, **International Advisory Board of the 26th European Conference on Biomaterials**
- 2010-2011, 2014, **Visiting Professor at Barcelona Tech-UPC, Master's Program in Materials Science**, Spanish Ministry of Sciences.
- 2008**, Visiting Professor at University of Porto, G.A.B.B.A. Graduate Program**.

Selected Awards

- 2019, **2019 Professor of the Year Award**, University of Minnesota, School of Dentistry (this is the one-time highest recognition for research, teaching and service by a faculty member in our School).
- 2019, **Best paper of the Year Award. Basic Science.** University of Minnesota
- 2012, **Rapid Fire Poster Award at the 9th World Biomaterials Congress**
- 2009, **3M Non-tenured Faculty Award**, 3M Foundation
- 2007, **2004/2005 Best PhD Dissertation in Chemistry/Materials Science**. BarcelonaTech-UPC
- 2006, **City of Barcelona Award in Technological Research**, Barcelona City Hall
- 2005, **European Award in Basic Research in Odontology**, Vitaldent Foundation (with J. Gil)
- 2003, **2002 Best Paper of the Journal of Materials Science: Materials in Medicine**

Selected Awards to my students

- 2020, **IADR Joseph Lister New Investigator Award, Finalist** (Zhou Ye, Postdoctoral associate)
- 2020, **IADR Colgate Travel Award for Research on Prevention-Asian winner** (Ting Sang, visiting scholar)
- 2019, **IADR Lion Dental Research Award** (Dina Moussa, Postdoctoral associate)
- 2019, **IADR Heraeus Kulzer Travel Award-North America winner** (Nick Fischer, PhD Student)

- 2018, **IADR Colgate Travel Award for Research on Prevention-North America winner** (Dina Moussa, PhD Student)
- 2017, **IADR Implantology Research Group - Young Investigator Prize for Student Research in Basic Science** (Vasiliki Koidou, MS Student)
- 2017, **IADR Heraeus Kulzer Travel Award-North America winner** (Dina Moussa, PhD Student)
- 2015, **20012/2013 Best PhD Dissertation Award in Engineering.** BarcelonaTech-UPC (Pablo Sevilla, PhD student)
- 2013, **Heraeus IADR Travel Award-North America winner** (Xi Chen, PhD Student)
- 2005, **Best Poster Award at the 19th European Conference on Biomaterials** (Alexandra Michiardi, PhD Student)

Selected Fellowships

- 2006, **Post-doctoral Fulbright fellowship for Foreign Students**, US Department of State and Ministry of Education and Science of Spain (declined).
- 2006, **Post-doctoral fellowship NANOS2006**, Catalan Government
- 1998, **Fellowship meant to follow Ph. D. studies**, Spanish Ministry of Science

VI. Selected Committee Service

Professional Memberships

Association/Society	Role	Year(s) of Service
TMS – Testing Materials Society	• Member	2018-2021
ORS – Orthopedic Research Society	• **Member** • Reviewer for annual meeting	**2019-present**
International Society of Ceramics in Medicine	• Member • Member International Advisory Board	2014, 2019
Society for Biomaterials	• **Member**	**2012 – 2014, 2017-2022**
Surface in Biomaterials Foundation	• **Member**	**2012 – Present**
Academy of Dental Materials	• **Member**	**2011 – present**
Materials Research Society	• Member	2011 – 2013, 2018 - present
International Association for Dental Research	• Member • IADR/Heraeus Travel Award Committee, member (2014-2017) • Group Program Chair for Annual Session (2015, 2016, 2020) • Implantology group, Treasurer (2023-X)	**2009 – present**
American Association for Dental Research	• Member • Group Program Chair for Annual Session-Biocompatibility and Biologic Effects (2014, 2015) • AADR Fellowships Committee, Member (2018-2021)	**2009 – present**
Academy of Osseointegration	• Member	2009 – 2015
European Society for Biomaterials	• Member • Member International Advisory Board of Annual Meeting	1998 – 2010 **2022-Present**

	• Member Organizing Committee of Annual Meeting (2002)	
TERMIS	• Member	2005 - 2008
Iberian Society for Biomechanics and Biomaterials	• Member-at-large. Government Board • Annual Symposium (2008)	2005 - 2008

Selected Organization of Courses, Symposiums, Workshops and Conferences

- Advanced Bio-inspired Modifications of Biomaterial and Tissue Surfaces. Symposium at the WBC2020, 11th World Biomaterials Congress. Glasgow, UK, December 2020. Chair.
- Biomolecules as bioactive components of dental materials and implants. Symposium at the 2018 IADR Annual Meeting. London, UK, July 2018. Organizer and Chair.
- Towards an academic career in dentistry. The NIH-MRSP students' experience. Symposium at the 2014 AADR Annual Meeting. Charlotte, NC, March 2014. Organizer and Chair.
- World Biomaterials Congress. Symposium on Biomimetic Calcium Phosphate Based Materials for Hard Tissue Regeneration. New Challenges and Applications. Organizing Committee. Amsterdam 2008.
- World Young Scientist Forum on Biomaterials. Organizing Committee. Sidney, 2004.
- European Society for Biomaterials 2002. 17th European Congress on Biomaterials. Local Organizing Committee. Barcelona, 2002.

Institution	Role	Year(s) of Service
Universitat Internacional de Catalunya-UIC		
Strategic Research Areas ad hoc Committee	Chair	2024
Academic Doctoral Committee	Member	2022 – Present
University of Minnesota-UofMN		
Senate of the University of Minnesota	Member	2015 – 2021
Steering Committee. Graduate Program in Oral Biology. University of Minnesota School of Dentistry.	Member	2012 – 2015
School of Dentistry/UofMN		
Tenure guidelines revision	Member	2019-Present
Promotion and Tenure Committee	Member	2015-2016, 2021
Faculty Affairs Committee	Alternate Member	2016-Present
Research Committee	Member/ActingChair	2015-2018
Search Committee: MDRCBB Faculty Member	Member	2016-2017
Accreditation Self Study on Research Committee	Member	2011-2012
Strategic Research Planning Committee	Member	2010-2011

VII. Funding

Last 3 years

2023-2026	**Bioinspired Materials and Interfaces to Prevent Infection of Transepithelial Implants**	**PID2022-137496OB-I00 / Spanish Ministry of Science and Innovation**	**225,000€**	**Co-PI**
2023-2026	**SCOI-Study and Control of Oral Infections (GRE group)**	**AGAUR-GRE**	**36,000€**	**PI**
2020-2024	**Bioinspired Acellular Strategies to Optimize the Skin-Implant Interface of OI Devices**	**PRORP-ARA/ Department of Defense**	**$750,000**	**PI**
2020 -2021	**Easy wearable devices based on cationic biopolymer membranes for point-of-care collecting/**	**CTSI-ODAT, UMN**	**$137,000**	**PI**

	self-sampling high loads of viral particles			
2021-2026	Development of a new generation of dental restorative materials - II	3M	$1,800,000	Co-I
Selected Past Funding				
2016-2021	**R01DE026117 – A novel peptide enhanced class-V dental restorative system with a 3-tier fortification**	**NIH-NIDCR-RO1**	**$1,119,271**	**PI**
2019-2021	**Stem Cell / Scaffold applications in Musculoskeletal Translation**	**IEM Group Program - UMN**	**$120,000**	**Co-PI**
2019-2021	**Development and optimization of plasma treatments for dental implants**	**Mozo Grau Dental Implants**	**$180,000**	**PI**
2019-2022	R01 DE027043 - Probabilistic multifactorial lifetime assessment for resin-based composite restorations	NIH-R01	$1,410,805	Co-I
2017-2022	**Optimizing Skin-Implant Interface of Osseointegrated Device**	**DoD-USA_NMRC**	**$2,499,220 ($652,840)**	**PI of subcontract**
2017-2022	R90/T90-Minnesota Craniofacial Research Training Program	NIH-NIDCR	$2,744,766	Co-Chair
2014-2017	GL13K antimicrobial peptide coatings	CTSI -Translational Grant Program	$50,000	PI
2013-2015	Quality assessment of surface treatments for dental implants	Mozo Grau Dental Implants	$150,000	PI
2011-2012	Antimicrobial-peptide coatings for dental and orthopedic applications GIA#22858	Grant-in-Aid of Research – OVPR/UMN	$33,253	PI
2011-2016	Interactions Between Oral Biofilms and Dental Resin Composites	5 R01 DE021366 04 NIH-NIDCR	$1,507,450	Co-I
2010-2014	Electrochemical resistance of new nitride treatments for orthodontic wires	Ormco Inc.	$200,000	PI
2011-2015	Development of a new generation of dental adhesives	3M	$1,500,000	Co-I
2010-2011	Novel surfaces for bone repair. A multifactorial approach GIA#21546	Grant-in-Aid of Research – OVPR/UMN	$33,911	PI
2009-2011	Biofunctional Peptide-Based Coatings on Dental Implants	3M Foundation	$45,000	PI
2008-2009	Surface treatments on orthodontic implants to prevent osseintegration	Ormco	$50,000	Co-I
2008-2010	Biofunctionalized Metallic Surfaces for Tissue Repair and Regeneration.	Ministry of Science & Technology. Spain	245,000 €	Co-PI
2005-2008	Development of New Porous Materials for Bone Regeneration: 'In vivo' and 'In silice' Studies.	Ministry of Education and Science. Spain	280,000 €	Co-I

VIII. **Selected Invited Presentations** (out of a total of 109 presentations: 56 international, 14 US national, 15 regional, and 24 local)

International

1. **2nd International Forum on Next-Generation Biomaterials of Biomaterials for Dental Medicine.** Hong Kong, China, June 2024. Invited talk: "Bioinspired surfaces to prevent transepithelial implant infections".
2. **WBC 2024-12th World Biomaterials Congress. Symposium on 'Biomimetic surface design for implantable devices'.** Daegu, Korea, May 2024. Invited talk:" Bioinspired solutions at surfaces and interfaces to prevent transepithelial implant infections"
3. **7th EURO BioMAT. May 2023. Weimar, Germany.** Plenary lecture: "Bioinspired solutions at surfaces and interfaces to prevent transepithelial implant infections".
4. **The Academy of Dental Materials 2022 Meeting. September-October 2022. Athens, Greece.** Plenary Speaker: "Peptides and bioinstructive polymers on surfaces for prevention of oral infections".
5. **Bioceramics 32 – 32nd Annual Meeting of the International Society for Ceramics in Medicine. September 2022. Venice Mestre, Italy.** Keynote Speaker: "Bioinspired mineralization of biopolymers for hard tissue repair and regeneration".
6. **2021 IADR/AADR/CADR - 98th General Session and Exhibition. Symposium: "Biomaterial-Biofilm Interfacial Modeling: Current Challenges and Call for Action" Boston, MA.** July 2021. Invited speaker: 'Assessing antimicrobial dental materials. Challenges and Opportunities'.
7. **TMS 2020 – 149th Annual Meeting & Exhibition of TMS-The Minerals Metal & Materials Society**. Bio-nano Interfaces and Engineering Applications Symposium. San Diego, CA. February 2020. Invited talk: 'Bioinspired mineralization of natural polymers for biomedical applications'.
8. **Annual Conference of Jiangxi Stomatology Association.** Plenary Speaker: Bioactive Materials: Past and Present and…. Future? Nanchang, China. October 2019.
9. **2019 IADR/AADR/CADR - 97th General Session and Exhibition. Symposium: Engineering Strategies to Amplify Osseointegration and Prevent Peri-implantitis. Vancouver, Canada.** June 2019. Invited speaker: 'Antimicrobial and Amphipathic Oligopeptides as Coatings for Dental Implants'.
10. **2018 IADR/AADR/CADR General Session and Exhibition. Symposium: Biomolecules as Bioactive Components of Dental Materials and Implants. London, UK.** July 2018. Invited Speaker: 'Antimicrobial and Hydrophobic Oligopeptide Coatings and Interfaces'.
11. **TMS 2018 – 147th Annual Meeting & Exhibition of TMS-The Minerals Metal & Materials Society**. Bio-nano Interfaces and Engineering Applications Symposium. Bio-Nano Interfaces II Session. Phoenix, AZ. March 2018. Invited talk: 'Oligopeptides and Recombinamers at Surfaces and Interfaces to Address Oral Infections'.
12. **Shanghai Jiao Tong University School of Medicine, Xin Hua Hospital, Shanghai, China.** December 2017. Invited lecture: 'Oligopeptide and recombinamers at dental biomaterial surfaces and interfaces'.
13. **Guanghua School of Stomatology-Sun Yat-Sen University. Guangzhou, China.** December 2017. Invited Lecture: 'Intrafibrillar Mineralization of Elastin-like Recombinant Polymers'.
14. **The 12th Pacific Rim Conference on Ceramics and Glass Technology.** Symposium 31: Advances in Bioceramics: Biomineralization and Bioinspired Materials. May 2017. Invited Speaker: 'Biomimetic mineralized elastin-like scaffolds and surfaces for biomedical applications'.
15. **2017 IADR/AADR/CADR General Session and Exhibition. Symposium: Self-assembled nanostructures that guide mineralization. San Francisco, CA.** March 2017. Invited Speaker: 'Self-Assembly and Intrafibrillar Mineralization of Elastin-Like Recombinamers'.
16. **1st International Meeting on the Advanced Applications of Natural Biomaterials. Medellin, Colombia**. September 2016. Invited Speaker: 'Naturally-Derived and Naturally-Inspired Biomaterials for Dental Applications'.

17. **Faculty of Dentistry Seminar series. McGill University, Montreal, Canada**. October 2015. Invited lecture: 'Antimicrobial peptide coatings for preventing peri-implantitis and other biomolecular-based surface modifications'.
18. **School of Dentistry-University of Bologna, Italy.** Invited lecture: Bioinspired multiactive materials for dental applications. Bologna, Italy, October 2014.
19. **Yucatan Center for Scientific Research, Merida, Mexico.** April 2014. Invited Lectures: Metals and Alloys in Biomedical Applications. Metals for Cardiovascular Stents; Biofunctionalization of Metals for improving hemocompatibility and other biomedical properties.
20. **Annual Meeting of the Association for Dental Sciences of the Republic of China (ADS-ROC)**. Taipei, Taiwan, December 2013. Invited Speaker. Bio-inspired coatings with bone regenerating and antimicrobial properties for dental applications.
21. **School of Dentistry-National Taiwan University. Taipei, Taiwan.** December 2013. Invited Lecture: Bio-inspired coatings with antimicrobial properties for dental applications.
22. ESB 2013 - **25th European Conference on Biomaterials**. European Society for Biomaterials. Madrid, Spain, September 8-13, 2013. Keynote Speaker. Bioinspired Multiactive Coatings for Dental and Orthopedic Applications.
23. **2013 European Dental Materials Conference**. Birmingham, UK, August 29-30, 2013. Invited Speaker. Interactions between Oral Biofilms and Dental Composites.
24. Hybrid Inorganic-Biological Materials Symposium. **Materials Research Society 2013 Spring Meeting.** San Francisco, CA, April 2013. Invited Speaker. Biomimetic calcium phosphate/biomolecule hybrid coatings and scaffolds for hard tissue regeneration. State Key Laboratory of Oral Diseases, Sichuan University. Invited lecture. Bioengineers at the School of Dentistry-UMN. Chengdu, China, June 2012.
25. **BioInterface 2010.** Keynote Lecture in Session for Advance in Surface Analysis and Surface Characterization. Surfaces in Biomaterials Foundation and Institute of Bioengineering and Biosciences-Georgia Tech, Atlanta, GA, October 2010. Contac Angles at the Macro- and Micro-Level for Assessing Wettability and Surface Free Energy of Dental Biomaterials.
26. **National Institute of Biomedical Engineering. University of Porto**, Porto, Portugal, May 2008. Synthetic approaches to regeneration.
27. **International Workshop. Mechanical Properties of Advanced Materials. Recent Insights.** Fuenteheridos, Spain, June 2006. Invited Speaker. Low Elastic Modulus Biomaterials.

National

28. NIDCR Clinical Case Conference. Bethesda, MD. February 2021. Invited speaker: Bioinspired Biomaterials and Interfaces for Applications in Dentistry. The case of dental implants and osseointegrated implants for amputees.
29. **2018 Materials Engineering Fall Symposium Series. Northeastern University**. November 2018. Invited Lecture: Oligopeptides and Recombinamers for Dental and Orthopedic Applications: Biomimetic mineralization of elastin-like recombinamers.
30. **2017 Biomedical Engineering Seminar Series at Purdue University, Lafayette, IN.** April 2017. Invited Lecture: Oligopeptides and Recombinamers for Dental and Orthopedic Applications: Biomimetic mineralization of elastin-like recombinamers.
31. **Regenerative Sciences Seminar Series at College of Dentistry of University of Illinois at Chicago**. February 2017. Invited lecture: Oligopeptides and Recombinamers for Dental Applications: GL13K at Surfaces and Interfaces to Address Oral Infectious Diseases.
32. **45th Annual Meeting & Exhibition of the AADR and 40th Annual meeting of the CADR, Los Angeles, CA.** March 2016. Keynote lecture for Dental Biomaterials, Biocompatibility: 'Using oligopeptides and recombinamers to improve performance of dental biomaterials'.
33. **Symposium of the Graduate Program of Biophysics at Ohio State University, Columbus, OH**. December 2015. Invited lecture: 'Biomimetic mineralization of elastin-like recombinamers'.

34. **Deptment of Inorganic and Bioinorganic Chemistry. Universidad Complutense de Madrid, Madrid, Spain**, October 2005. Surface treatments on titanium for dental implants.

IX. Collaboration with companies (Most relevant funding is included in list of funding)

UIC Barcelona – School of Dentistry
Arradiance, Ticare

***MDRCBB-Minnesota Research Center for Biomaterials and Biomechanics*, UMN**
Mozo-Grau Dental Implants, Sybron Dental Technologies. Ormco, 3M-ESPE, General Mills, SOADCO, Mondelez International, OssDesign, Arradiance, N2-Biomedical.

***Research Center in Biomedical Engineering*, UPC**
BarcelonaTech-UPC.: Vitaldent, Vall d'Hebron Hospital, CH-Werfen/Hospital Group (including Technological Due Diligence), Klockner, S.L., M.P.A. – Materias Primas Abrasivas, SOADCO.

X. Patents

1. US Patent. "Adhesive for osseointegrated percutaneous devices". C. Aparicio, I. Mutreja. US2021-17/495,648. 2020. Pending.
2. US Patent. "Peptides, hydrogel compositions and methods of use thereof". S.U. Gorr, C. Aparicio, Z. Ye. US20210147496A1. 2020. Pending
3. US Patent. "Hydrophobic dental surfaces". C. Aparicio, A. Fok, D. Moussa, B. Holmes, W.H. Douglas. Patent No. US11,147,746. 2017 (issued 10/19/2021)
4. US Patent. "Non surgical techniques for restoring tooth enamel". Y. Li, A. Fok, C. Aparicio. U.S. Patent No. 10,709,733. 2017 (issued 07/14/2020).
5. International PCT– WO2011/036326/ES2387115 "Novel recombinant proteinic polymers and method for bioactivating surfaces with said polymers". C. Aparicio with J.A. Planell, E. Salvagni, F.J. Gil, J.C. Rodriguez-Cabello, J. Arias, A. Ribeiro, A. Girotti, M. Alonso. 2009 (issued 07/14/2011).
6. Spanish– Patent no: ES2288399. "Nuevo tratamiento combinado para la mejora de la fijación implante/hueso: obtención de superficies rugosas de titanato en implantes de titanio". (Translation: "New combined treatment for the improvement of implant/bone fixation: obtaining rough titanium surfaces for titanium implants.") C. Aparicio with F.J. Gil M.P. Ginebra, J.A. Planell. 2006 (issued 01/12/2008)
    a. **Licensed to SOADCO, S.L. (Andorra) – March 2008; Marketed - September 2016**
7. Spanish patent - Patent no: ES2251312. "Nuevo tratamiento de oxidación en aleaciones de NiTi parala disminución de la liberación de iones y la mejora de la biocompatibilidad". (Translation: "New oxidation treatment for obtaining NiTi-alloys with a Ni-free and more biocompatible surface") C. Aparicio with A. Michiardi, J.A. Planell, F.J. Gil. 2004 (issued 07/01/2007)

XI. Selected Publications (Full list can be found at https://orcid.org/0000-0003-2969-6067)

Books

1. Biomineralization and Biomaterials. Fundamentals and Applications. Eds, C. Aparicio, M.P. Ginebra. Woodhead Publishing. Inc. – Elsevier (2017). ISBN: 978-1-78242-338-6.
2. (In Spanish) F.J. Gil, C.Aparicio, J.M. Manero, D. Rodríguez, A. Andrés, J.M. Arandes, J.A. Planell. *Aleaciones ligeras [Light alloys],* 2001, Edicions UPC. Colección Politext. ISBN: 84-8301-480-7. Barcelona

Selected Book Chapters (out of a total of 11)

3. I. Mutreja, Z. Ye, C. Aparicio. Cellular Responses to Titanium and Titanium Alloys. In Handbook of Biomaterials Biocompatibility; ed. M. Mozafari (2020) Woodhead Publishing, Inc. - Elsevier. ISBN 9780081029671. pp. 423-452.
4. X. Chen, Y. Li, C. Aparicio. Biofunctional *Coatings for Dental Implants*. In *Thin Films and Coatings in Biology. Biological and Medical Physics -Biomedical Engineering Series*; eds. S. Nazarpour, M. Chaker. (2013) Springer-Verlag. ISBN 978-94-007-2592-8. pp 105-143.
5. C. Aparicio, Y. Maazouz, D. Yang. *Measuring wettability of biosurfaces at the microscale.* In *Nanotechnology in Regenerative Medicine: Methods and Protocols*. Methods in Molecular Biology Vol. 811; eds. M. Navarro, J.A. Planell (2012) Humana Press, Springer-Verlag. ISBN 978-1-61779-387-5. pp. 163-177.
6. E. Fernández, F.J. Gil, C. Aparicio, M. Nilsson, S. Sarda, D. Rodríguez, M.P. Ginebra, J.M. Manero, M. Navarro, J. Casals, J.A. Planell. *Materials in Dental Implantology.* In *Dental Biomechanics*; ed. A. Natali (2003) Taylor and Francis, London. ISBN 0-41-5306663. pp 69-89.
7. M. Ontañón, C. Aparicio, M.P. Ginebra, J.A. Planell. *Structure and Mechanical Properties of Bone*. In *Structural Biological Materials*; ed. M. Elices (2000) Pergamon-Elsevier, New York. ISBN 0-08-0434169. pp. 31-72.

50 Selected Peer-Reviewed Papers (out of a total of 125 papers)
Last 5 years 2019-2024 (out of 51 papers)

1. J. Dai, N.G. Fischer, J.R. Rahimi, H. Wang, C. Hu, W. Chen, Y. Lin, T. Sang, H.P. Chew, L. Kong, C. Aparicio*, Zhou Ye*, S. Huang*. Interpenetrating Nanofibrillar Membrane of Self-assembled Collagen and Antimicrobial Peptides for Enhanced Bone Regeneration. International Journal of Biological Macromolecules (2024) 267:131480 ***(IF: 7.700, Q1)***.
2. N.G. Fischer, C. Aparicio*. Junctional epithelium and hemidesmosomes: Tape and rivets for solving the “percutaneous device dilemma”. Bioactive Materials (2022) 18:178-98. ***(IF: 16.440, Q1)***
3. Z. Ye*, T. Sang, K. Li, N.G. Fischer, I. Mutreja, C. Echeverría, D. Kumar, Z.Tang, C. Aparicio*. Hybrid Nanocoatings of Self-assembled Organic-Inorganic Amphiphiles for Prevention of Implant Infections. Acta Biomaterialia (2022) 140:338-49. ***(IF: 10.663, Q1)***
4. S.K. Boda, C. Aparicio. Dual Keratinocyte-Attachment and Anti-inflammatory Coatings for Soft Tissue Sealing Around Transmucosal Implants. Biomaterials Science (2022) 10 665-677. ***(IF: 6.843, Q1)***
5. N.G. Fischer, A.C. Kobe, J. He, J.A. Pizareck, D.A. De Jong, C. Aparicio*. Tapping Basement Membrane Motifs: Oral Junctional Epithelium for Surface-mediated Soft Tissue Attachment to Prevent Failure of Percutaneous Devices. Acta Biomaterialia (2022) 141:70-88. ***(IF: 10.663, Q1)***
6. I. Mutreja, D. Kumar, K. Hogan, E. Campbell, K. Mansky, C. Aparicio*. Strontium- and peptide-modified silicate nanostructures for dual osteogenic and antimicrobial activity. Biomaterials Advances, former Materials Science and Engineering C (2022) 135:212735 ***(IF: 8.457, Q1)***
7. Z. Ye, X. Zhu, I. Mutreja, S.K. Boda, N.G. Fischer, A. Zhang, C. Liu, Y. Qi, C. Aparicio*. Biomimetic mineralized hybrid scaffolds with antimicrobial peptides for hard tissues. Bioactive Materials (2021) 6:2250-2260. ***(IF: 8.724, Q1)***
8. N.G. Fischer, C. Aparicio*. The salivary pellicle on dental biomaterials. Colloids and Surfaces B: Biointerfaces (2021) 200:111270. ***(IF: 4.389, Q1)***
   Selected for issue COVER
9. S.K. Boda*, N.G. Fischer, Z. Ye, C. Aparicio*. Dual Oral Tissue Adhesive Nanofiber Membranes for pH-Responsive Delivery of Antimicrobial Peptides. Biomacromolecules (2020) 21:4945-496. ***(IF: 6.092, Q1)***
10. Z. Ye, A. Kobe, T. Sang, C. Aparicio*. Unraveling dominant surface physicochemistry to build antimicrobial peptide coatings with supramolecular amphiphiles. Nanoscale (2020) 12:20767 - 20775. ***(IF: 6.895, Q1)***
11. S. Acosta, Z. Ye, C. Aparicio*. J.C. Rodriguez-Cabello. Dual Self-Assembled Nanostructures from Intrinsically Disordered Protein Polymers with LCST Behavior and Antimicrobial Peptides. Biomacromolecules (2020) 21:4043−4052. ***(IF: 6.092, Q1)***
    Selected for issue COVER
12. N.G. Fischer, E. Münchow, C. Tamerler, M. Bottino, C. Aparicio*. Harnessing Biomolecules for Bioinspired Dental Biomaterials. Journal of Materials Chemistry B (2020) 8:8713—8747. ***(IF: 5.344, Q1)***

Selected for issue COVER

13. D.G. Moussa, C. Aparicio*. Targeting the Plaque Microbiome with Peptides at Tooth- restoration Interfaces. PLOS One (2020) 15(7): e0235283. ***(IF: 2.740, Q1)***
14. M. Toledano-Osorio, R. Osorio, F.S. Aguilera, A L Medina-Castillo, M Toledano*, E. Osorio, S. Acosta, R. Chen, C. Aparicio. Polymeric nanoparticles protect the resin-dentin bonded interface from cariogenic biofilm degradation. Acta Biomaterialia (2020) 111:316-326. ***(IF: 7.242, Q1)***
15. S. Acosta, A. Ibáñez-Fonseca, C. Aparicio*, J.C. Rodriguez-Cabello*. Hybrid antibiofilm coatings based on antimicrobial peptides and genetically engineered polypeptides for preventing implant-associated infections. Biomaterials Science (2020) 8:2866-2877. ***(IF: 6.183, Q1)***
16. A. Zhang, R. Chen, W. Aregawi, Y. He, S. Wang, C. Aparicio, J. Rudney, H.P. Chew, A. Fok*. Development and Calibration of Biochemical Models for Testing Dental Restorations. Acta Biomaterialia (2020) Acta Biomaterialia 109: 132–141. ***(IF: 7.242, Q1)***
17. Y. Qi, Z. Cheng, Z. Ye, H. Zhu*, C. Aparicio*. Bio-Inspired Mineralization with Hydroxyapatite and Hierarchical Natural Aligned Nanofibrillar Cellulose. ACS Applied Materials and Interfaces (2019) 11(31):27598-27604. ***(IF: 8.758, Q1)***
18. D.G. Moussa, J.A. Kirihara, Zhou Ye, N.G. Fischer, J. Khot, B.A. Witthuhn, C. Aparicio*. Dentin Priming with Amphipathic Antimicrobial Peptides. Journal of Dental Research (2019) 98(10):1112-1121. ***(IF: 4.914, Q1)***
19. Z. Ye, X. Zhu, S. Acosta, D. Kumar, T. Sang, C. Aparicio*. Self-assembly dynamics and Antimicrobial Activity of all L- and D-enantiomers of a Designer Peptide. Nanoscale (2019), 11: 266-275. ***(IF: 6.895, Q1)***
20. Yun, J. Wu, C. Aparicio, J. Tsoi, Y. Wang, A. Fok. Enzyme-Mediated Mineralization of TiO_2 Nanotubes on Titanium Surface. Crystal Growth & Design (2019) 19:7112-7121. ***(IF: 4.089, Q1)***
21. Z. Cheng, Z. Ye, A. Natan, Y. Ma, H. Li, Y. Chen, L. Wan, C. Aparicio*, H. Zhu*. Bone-inspired Mineralization with Highly Aligned Cellulose Nanofibers as Template. ACS Applied Materials and Interfaces (2019) 11, 42486−42495. ***(IF: 8.758, Q1)***
22. S. Acosta, L. Quintanilla, M. Alonso, C. Aparicio*, J.C. Rodríguez-Cabello*. Recombinant AMP/polypeptide nanocoatings with synergistic anti-microbial properties for bacterial strains of medical relevance. ACS Biomaterials Science and Engineering (2019) 594:708-4716. ***(IF: 4.152, Q1)***
23. J. Souza, M. B. Sordi, M9. Kanazawa, S. Ravindran, B. Henriques, F. Silva, C. Aparicio, L. Cooper. Nano-scale modification of titanium implant surfaces to enhance osseointegration. Acta Biomaterialia (2019) 94:112-131. ***(IF: 7.242, Q1)***
24. D.G. Moussa, A. Fok, C. Aparicio*. Hydrophobic and Antimicrobial Dentin: A Peptide-based 2-tier Protective System for Dental Resin Composite Restorations. Acta Biomaterialia (2019) 88:251-265. ***(IF: 7.242, Q1)***

Other Papers (Out of 67 papers)

25. Y. Qi, Z. Ye, A. Fok, B.N. Holmes, M. Espanol, M.P. Ginebra, C. Aparicio*. Effects of Molecular Weight and Concentration of Poly(Acrylic Acid) on Biomimetic Mineralization of Collagen. ACS Biomaterials Science and Engineering (2018) 4, 2758-2766. ***(IF: 4.152, Q1)***
26. V.P. Koidou, P.P. Argyris, E.P. Skoe, J. Mota Siqueira, X. Chen, L. Zhang, J.E. Hinrichs, M. Costalonga, C. Aparicio*. Peptide Coatings to Improve Peri-implant Mucosal Seal. Biomaterials Science (2018) 6, 1936 – 1945. ***(IF: 6.183, Q1)***
27. Y. Li*, J.C. Rodriguez-Cabello, C. Aparicio*. Intrafibrilar Mineralization of Self-Assembled Elastin-Like Recombinamer Fibrils. ACS Applied Materials and Interfaces (2017) 9(7):5838–46. ***(IF: 8.758, Q1)***
28. G. Kotsakis*, C. Lan, J. Barbosa, K. Lill, R. Chen, J. Rudney, C. Aparicio*. Antimicrobial agents used in the treatment of peri-implantitis alter the physicochemistry and cytocompatibility of titanium surfaces. Journal of Periodontology (2016) 87:809-819. ***(IF: 3.742, Q1)***
29. Y. Li, X. Chen, A. Fok, J.C. Rodriguez-Cabello, C. Aparicio*. Biomimetic Mineralization of Recombinamer-Based Hydrogels toward Control Morphologies and High Mineral Density. ACS Applied Materials and Interfaces (2015) 7(46):25784–25792. ***(IF: 8.758, Q1)***
30. K.V. Holmberg, M. Abdolhosseini, X. Chen, Y. Li, S.-U. Gorr, C. Aparicio*. Bio-inspired Antimicrobial Peptide Coating for Dental Implants. Acta Biomaterialia (2013) 9(9): 8224-31. ***(IF: 7.242, Q1)***
31. X. Chen, P. Sevilla, C. Aparicio*. *Surface biofunctionalization by covalent co-immobilization of oligopeptides.* Colloids and Surfaces B: Biointerfaces. (2013) 107:189-97. ***(IF: 4.389, Q1)***

32. T. Sargeant, C. Aparicio, J. Goldberger, H. Cui, S.I. Stupp*. *Mineralization of Peptide Amphiphiles Nanofibers and its Effect on Differentiation of Human Mesenchymal Stem Cells*. Acta Biomaterialia (2012) 8(7):2456-2465. ***(IF: 7.242, Q1)***
33. Y. Li, C. Aparicio*. *Visualizing the subfibrillar structure of mineralized collagen fibrils: A model of the ultrastructure of bone.* PLOS ONE (2013) 8(9): e76782. ***(IF: 2.740, Q1)***
34. Y. Li, T.T. Thula, S. Jee, S.L. Perkins, C. Aparicio, E.P.Douglas, L.B. Gower*. *Biomimetic Mineralization of Woven Bone-Like Nanocomposites: Role of Collagen Cross-Links.* Biomacromolecules (2012) 13:49-59. ***(IF: 6.092, Q1)***
35. C. Aparicio*, A. Padros, F.J. Gil. *In vivo evaluation of Micro-Rough and Bioactive Titanium Dental Implants using Histometry and Pull-Out Tests.* Journal of the Mechanical Behavior of Biomedical Materials (2011) 4:1672-1682. ***(IF: 3.372 Q2)***
36. C. Aparicio*, D. Rodriguez, F.J. Gil. *Variation of roughness and adhesion strength of deposited apatite layers on titanium dental implants.* Materials Science and Engineering C: Materials for Biological Applications (2011) 31:320-324. ***(IF: 5.880, Q1)***
37. S. Zhang, M. Greenfield, A. Mata, L. Palmer, R, Bitton, J.R. Mantei, C. Aparicio, M. Olvera, S.I. Stupp*. *A Self-Assembling Pathway to Aligned Monodomain Gels*. Nature Materials (2010) 9:595-601. ***(IF: 38.663, Q1)***
38. M. Pegueroles, C. Aparicio*, M. Bosio, E. Engel, F.J. Gil, J.A. Planell, G. Altankov*. *Spatial Organization of Osteoblast Fibronectin-Matrix on Titanium Surface – Effects ofRoughness, Chemical Heterogeneity, and Surface Free Energy.* Acta Biomaterialia (2010) 6, 291-301. ***(IF: 7.242, Q1)***
39. *A.* Mata, Y. Biao, K. Henrikson, C. Aparicio, R. Satcher, S .Stock, S.I. Stupp*. *Bone regeneration mediated by biomimetic mineralization of a nanofiber matrix.* Biomaterials (2010) 31:6004-6012. ***(IF: 10.317, Q1)***
40. A. Mata, L. Hsu, R. Capito, C. Aparicio, K. Henrikson, S.I. Stupp*. *Micro-patterning of Bioactive Self-Assembling Gels*. (2009) Soft Matter 5:1228–1236. ***(IF: 3.140, Q1)***
41. M. Pegueroles, J.A. Planell, F.J. Gil, C. Aparicio*. *The influence of blasting and sterilization on static and time-related wettability and surface-energy properties of titanium surfaces*. Surfaces and Coatings Technology. (2008) 202:3470-3479. ***(IF: 3.784, Q1)***
42. A. Michiardi, E. Engel, C. Aparicio*, J.A. Planell, F.J. Gil*. *Oxidized NiTi surfaces enhance differentiation of osteoblast-like cells.* (2008) Journal of Biomedical Materials Research Part A. 85A:108-114. ***(IF: 3.371, Q1)***
43. C. Aparicio*, J.M. Manero, F. Conde, M. Pegueroles, J.A. Planell, M. Vallet-Regí, F.J. Gil. *Acceleration of apatite nucleation on microrough bioactive titanium for bone-replacing implants*. Journal of Biomedical Materials Research Part A (2007) 82A:521-529. ***(IF: 3.371, Q2)***
44. A. Michiardi, C. Aparicio*, B. Ratner, J.A. Planell, F.J. Gil.*The influence of surface energy on competitive protein adsorption on oxidized NiTi surfaces*. Biomaterials (2007) 28: 586-594. ***(IF: 10.317, Q1)***
45. P. Sevilla, C. Aparicio, J.A. Planell, F.J. Gil*. *Comparison of the mechanical properties between tantalum and nickel-titanium foams implant materials for bone ingrowth applications.* Journal of Alloys and Compounds (2007) 439:67-73. ***(IF: 4.650, Q1)***
46. A. Michiardi, C. Aparicio, J.A. Planell, F.J. Gil*. *New oxidation treatment of NiTi shape memory alloys to obtain Ni-free surfaces and improve biocompatibility*. Journal of Biomedical Materials Research Part B: Applied Biomaterials (2006) 77B:249-256. ***(IF: 2.831, Q2)***
47. M. Navarro, C. Aparicio, M. Charles-Harris, M.P. Ginebra, E.Engel, J.A. Planell*. *Development of a biodegradable composite scaffold for bone tissue engineering: physico-chemical, topographical, mechanical, degradation and biological properties*. Advances in Polymer Sciences (2006) 200:209-231. ***(IF: 2.677, Q2)***
48. C. Aparicio*, F.J. Gil, C. Fonseca, M. Barbosa, J.A. Planell. *Corrosion Behaviour of Commercially Pure Titanium Shot Blasted with Different Materials and Sizes of Shot Particles for Dental Implant Applications.* Biomaterials (2003) 24(2):263-273. ***(IF: 10.317, Q1)***
49. C. Aparicio, E. Engel, F.J. Gil*, J.A. Planell*. *Human-osteoblast proliferation and differentiation on grit-blasted and bioactive titanium for dental applications.* Journal of Materials Science Materials in Medicine (2002) 13:1105-1111. ***This paper was awarded the best paper of the year by the European Society for Biomaterials.***

50. M.P. Ginebra*, L. Albuixech, E. Fernández-Barragán, C. Aparicio, F.J. Gil, J. San Román, B. Vázquez, J.A. Planell. *Mechanical performance of acrylic bone cements containing different radiopacifying agents*. Biomaterials (2002) 23(8):1873-1882. ***(IF: 10.317, Q1)***

Conference Publications and Abstracts

224 abstracts presented as co-author in Materials Science, Biomaterials, Dentistry, Orthopedics, and other research forums. More than half of the listed abstracts submitted to research conferences, meetings, and symposiums were accepted as oral presentations. The rest were accepted as poster presentations.

XII. Service as a referee

Referee for grants (Most relevant activities, last 5 years)

- HORIZON-MSCA-2022-PF. 2022, European Commission, Belgium, December 2021.
- HE-MSCA-DN-2021. 2021-2022, European Commission, Belgium, January 2022
- HORIZON-MSCA-2021-PF. 2021-2022, European Commission, Belgium, December 2021.
- 2022. NSF EBMS UNS D Panel-Tissue Engineering and Organoids. US National Science Foundation. Reviewer ad-hoc. June, 2022.
- 2021. R35 ZDEE1 JK (09) SOAR Award. Reviewer ad-hoc. NIH-National Institutes of Health. November 2021.
- H2020-ERC-2019-ADG, Advanced Research Grants (ADG) 2019-2020, European Commission.
- 2020. Surgical Sciences, Bioimaging and Bioenginering (SBIB). Academic-Industrial Partnerships (PAR) Study Section. National Institutes of Health. USA.
- H2020 2020, Marie Sklodowska-Curie Work Programme-IF program. 2020-2021, European Commission, Belgium, October 2020.
- Discovery Grants Program – Natural Sciences and Engineering Research Council of Canada (NSREC), Canada, December 2019.
- Discovery Grants Program – Natural Sciences and Engineering Research Council of Canada (NSREC), Canada, December 2018.
- H2020, Marie Sklodowska-Curie Work Programme 2017-2018, European Commission, Belgium, March 2018.
- 2018. Special Grants Review Committee (DSR). NIH-National Institutes of Health. USA.
- Barts Charity Grants, London, UK. December 2017.

Catalan Agencies

- 2010-2019. AGAUR-Generalitat de Catalunya: Programs, PRODUCTE, LLAVOR, SGR- Support to Research Groups, TECS1 and TECS2 – TECNIOSPRING, PRODI – Industrial graduate programs, BE – Fellowship for stays at international institutions. Modalities A and B, Beatriu de Pinos International Fellowships, Technological Research and Development Grants for Work Community of the Pyrinees. AGAUR-Generalitat de Catalunya, Spain, ARCS-DGR 2011 – Research Meeting Grants. AGAUR-Generalitat de Catalunya, Spain. August 201, ACUP-Funding for Research Grants (RecerCaixa).
- 2009, 2010 AIDIT-Generalitat de Catalunya.

Referee for journals

Nature Materials, Nature Communications, ACS Nano, Biomaterials, Acta Biomaterialia, ACS Applied Materials & Interfaces, Nanoscale, Advanced Healthcare Materials, Dental Materials, Journal of Dental Research, Tissue Engineering-Part A, Tissue Engineering-Part B, Journal of Biomedical Materials Research-Part A, Journal of Biomedical Materials Research-Part B, Journal of Materials Science: Materials in Medicine, Journal of Tissue Engineering and Regenerative Medicine, Journal of Biomaterials

Applications, Biomedical Materials, Biofabrication, Journal of Dentistry, Journal of Oral Microbiology, Journal of Orthopedic Research, Materials Science and Engineering C: Materials for Biological Applications, Colloids and Surfaces B:Biointerfaces, Nanomedicine: Nanotechnology, Biology, and Medicine, PLOS ONE, Scientific Reports, Journal of Materials Science, Surface and Coatings Technology, Chemical Communications, Journal of Materials Chemistry, Soft Matter, Journal of the Royal Society – Interface,RSC Advances, CrystEngComm, Matrix Biology, Biomacromolecules, Materials & Design, Materials Letters, JACS-Journal of the American Ceramic Society, …

XIII. Student Advising or Mentoring

Host of Visiting Professors and Scholars at UMN and UIC Barcelona

- 13 visiting professors and 23 graduate students
- China, Spain, Italy, Xile, Mexico, Brazil, Germany, France

Post-Doctoral Associates (current institution)

- Daniel Moreno (UIC Barcelona), Dhiraj Kumar (UMN, USA), Sunil Boda (ITT Indore, India), Isha Mutreja (UMN, USA), Zhou Ye (Hong Kong Univ., USA), Anqi Zhang (General Electric, USA), Dina Moussa (Univ. Saskatchewan, Canada), Fahad Kadwai (NIH, USA), Yuping Li (Zest Dental, USA), Eric Jensen (UMN, USA), Emiliano Salvagni (Univ. Minho, Portugal).

Graduate Students (current institution)

- Matilde Roquette (UIC, Spain), Ramón Pons (UIC, Spain), Irene Mallor (UIC, Spain), Marta Teule (UIC, Spain), Nick Fisher (UMN, USA), Ting Sang (Nanchang Univ., China), David Aguilar (CICY, Mexico), Dina Moussa (Univ. Saskatchewan, Canada), Caixia Lan (Private Practice, USA), Carola Carrera (3M Corporation, USA), Xi Chen (Private Practice, USA), Pablo Sevilla (Salesians College of Sarria, Spain), Marta Pegueroles (UPC, Spain), Alexandra Michiardi (other unrelated professional activities).

MS Students

- John Pizareck (Army, USA), Michail Rastopoulos (University of Thessaloniki, Greece), Ahmed Youssef (private practice, USA) Ariana Weissend (private practice, USA), Vasiliki Koidou (University of Thessaloniki, Greece), Rebecca Schnitt (private practice, USA), George Kotsakis (Rutgers University, USA), Jeevan Govindarahjulu (NIH, USA), Eric Beckman (private practice, USA).

Graduate Student Committees

- **PhD (25):** 6 Chair, 10 member, 9 external reviewer in USA, Canada, Mexico, Spain
- **MS (18):** 4 Chair, 14 member in USA, Spain, Colombia

Undergraduate Students

- 7 MS projects supervised at UIC
- 43 Undergrad Research at UMN as Summer students, volunteers, or research training
- 23 MS projects supervised at UPC
- 43 Capstone projects supervised at UPC

XIV. Teaching Activities

Didactic Year	Course, Title, & No.	Role
2022-2024	**Dental Materials**	Lecturer
2022-2024	**Advanced Dental Materials**	Lecturer
2021-2024	**Adhesion in Dentistry**	Lecturer
2016-2021	**OBIO8027 Biomaterials in Regenerative Dentistry**	Course-director, Lecturer
2019-2021	**DDS6411 Biomaterials Science I**	Course-director, Lecturer

2019-2021	**DDS6412 Biomaterials Science II**	Course-director, Lecturer
2019-221	**DT5410 Biomaterials Science**	Course-director, Lecturer
2009 - 2018	**DDS6411 Dental Biomaterials**	Course-director, Lecturer
2010 - 2018	**DT 3410/5410 Applied Dental Biomaterials**	Course-director, Lecturer
2008, 2009	DDS5351/2 Introduction to Dental Biomaterials	3 lectures/year
2011 - 2014	**OBIO 8027 Structural and Biological Aspects of Dental Biomaterials**	Course director, Lecturer
2014 - present	**DENT 7411 Dental Biomaterials in Prosthodontics**	Course director, Lecturer
2011-2015	Dental Biomaterials for PASS students	Course director, Lecturer
2018	ENDO 8321/3 Endodontic Topics	Invited lecturer
2014	OTHO 8121 Orthodontic Seminar	Invited lecturer
2009-Present	BMEn 5001 Advanced Biomaterials	Invited lecturer
2012-Present	DENT 8101 Implantology	Invited lecturer
2009-2011	Bison Microventure for Engineering. A New Generation of Dental Implants. NDSU-North Dakota State University.	Guest Teacher
2010-2011	**New Materials for Regenerative Medicine.**	Invited Professor, Lecturer
2004-present	Bioengineering	4 lectures/year
2006, 2008	Materials Science and Engineering	Invited lecture Coatings on metals
2003-2006, 2008	Ortho-podiatry	2 invited lectures
2000	Conservation of New Cultural Objects	3 invited lectures
2000-2008	**Biomedical Implants**	Course director, Lecturer
2000-2008	**Surface Engineering**	Course director, Lecturer
2000-2008	**Fundamentals on Materials Science**	Lecturer and lab teaching
2000-2002	Metallic Materials Technology	Lab teacher
1995-1997	Materials Laboratory	Lab assistant
2000-2006	Fundamentals on Materials Conformation	Course Director, Lecturer

Curriculum Development

- **DDS 6411**. Biomaterials Science I. DDS Program. School of Dentistry. University of Minnesota.
- **DDS 6412**. Biomaterials Science II. DDS Program. School of Dentistry. University of Minnesota.
- **DT 5410**. Biomaterials Science. DT Program. School of Dentistry. University of Minnesota.
- **OBIO 8027 Regenerative Materials in Dentistry.** Oral Biology Program. School of Dentistry.
- **DENT 7411 Dental Biomaterials in Prosthodontics.** Advance Program in Prosthodontics. SoD-UMN.
- **Dental Biomaterials for PASS Students**
- **OBIO 8027** Structural and Biological Aspects of Dental Biomaterials. Oral Biology Graduate
- **DDS 6411**. Dental Biomaterials. DDS Program. School of Dentistry. University of Minnesota.
- **DT3410/5410**. Dental Biomaterials. DDS Program. School of Dentistry. University of Minnesota. - **New Materials for Regenerative Medicine. Bionanotechnology and Biomimetics Meeting Medicine.** Master in Materials Science and Engineering. School of Engineering. BarcelonaTech-UPC. Spain. Invited Course Director, 2010.
- **Biomedical Implants**. School of Technological Industrial Engineering at Barcelona. BarcelonaTech-UPC. 2000-2008.
- **Surface Engineering**. School of Technological Industrial Engineering at Barcelona. BarcelonaTech-UPC. 2000-2008.