CURRICULUM VITAE

M. Cristina L. Martins

Nationality:Portuguese

CONTACT

INEB - *Instituto de Engenharia Biomédica, Universidade do Porto* (http://www.ineb.up.pt/)
i3S- *Instituto de Investigação e Inovação em Saúde, Universidade do Porto* (http://www.i3s.up.pt/)

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ACADEMIC QUALIFICATIONS

2003: PhD in Engineering Sciences. Faculdade de Engenharia, Univ. Porto (FEUP), PT

1994: Post-Graduation in Oenology at *Escola Superior de Biotecnologia, Univ. Católica Portuguesa*, Porto, PT & Charles Sturt University, New South Wales, AU.

1989: Graduation in Food Engineering at *Escola Superior de Biotecnologia, Univ. Católica Portuguesa, Porto,* PT

PRESENT POSITIONS

Since Jan 2020:
- **Member of the Board of Directors of INEB**

Since 2019:
- **Principal Investigator,** INEB/i3S (*Instituto de Engenharia Biomédica / Instituto de Investigação e Inovação em Saúde, Univ. Porto*)

Since 2018:
- **Invited Assistant Professor**, *Instituto de Ciências Biomédicas Abel Salazar* (ICBAS), University of Porto

Since 2017:
- **Group Leader**, INEB/i3S: **BioEngineered Surfaces Group**
- Member of the i3S PhD Advisory Committee & Advanced Training Unit

AREA OF SCIENTIFIC ACTIVITY

- Surface modification of Biomaterials
- Antimicrobial coatings
- Blood contact biomaterials
- Interactions between proteins, bacteria, platelets and leukocytes with biomaterials designed at molecular level, namely self-assembled monolayers (SAMs) and biomedical polymers.

DOMAIN OF SPECIALIZATION

- SAMs of alkanethiols in gold;
- Surface immobilization of peptides/proteins and polysaccharides;
- Surface modification of polymers;
- Surface characterization techniques:
    - X-ray photoelectron spectroscopy (XPS),
    - Infrared spectroscopy,
    - Ellipsometry,
    - Contact angles measurements,
    - Atomic force microscopy (AFM),
    - Fluorescent microscopy,
    - Quartz crystal microbalance with dissipation – QCM-D
- Protein adsorption (radiolabelling of proteins/ellipsometry/QCM-D)
- Protein conformation (Infrared Spectroscopy)
- Platelet and leukocyte interactions with surfaces
- Bacterial adhesion to biomaterials
- Antimicrobial peptides

PRESENT RESEARCH INTERESTS

- Bioengineered strategies for gastric infection management
- Biomaterial coatings to prevent medical device infections (biofilm formation)
- Biomaterial coatings to increase the hemocompatibility of cardiovascular devices

MEMBERSHIP TO SOCIETIES

- European Society for Biomaterials (ESB)
- European Technology Platform on Nanomedicine (ETPN)

HONORS AND AWARDS

- **Fellow Biomaterials Science and Engineering (FBSE)** – nomination by the International Union of Societies for Biomaterials Science and Engineering (IUSBSE) – December 2020

Co-Authorship of awarded works

- NanoPyl: Lipid Nanoparticles for Massive Eradication of *Helicobacter pylori.* 1st prize on the "BIP - Business Ignition Programme 2020"; Banco Santander Portugal, Portugal; Universidade do Porto, Portugal (Team: Parreira P/ Chitas R/ Martins MCL)

- ANTIBIOCOAT project - Best innovation Project Award in the scope of the RESOLVE-Health Awards 2018 (Team: Costa F/ Martins MCL / Mota R/ Tamagnini P)

- ANTIBIOCOAT project - SRS Advogados AWARD in the scope of the I3S-Hovione Capital Health Innovation Prize (Team: Matos R, Costa F, Tamagnini P, Martins MCL (September 2017)

- One of the 6 high quality articles selected by the Acta Bioamaterialia Editor-in-Chief (2011) Costa F, Carvalho IF, Montelaro RC, Gomes P, Martins MCL. Covalent immobilization of antimicrobial peptides (AMPs) onto biomaterial surfaces. Acta Bioamaterialia. 2011; 7 (4): 1431-1440.

- Best Paper published in Journal of Materials Science-Materials in Medicine, in 2011. "Gonçalves IC, Martins MCL, Barbosa JN, Oliveira P, Barbosa MA, Ratner BD. Platelet and Leukocyte Adhesion to Albumin Binding Self-Assembled Monolayers. Journal of Materials Science: Materials in Medicine. 2011; 22:2053-2063. "

Prizes obtained by students under supervision:

- Best speed fire oral communication (Pedro Alves) at i3S PhDay | Brilliant PhDs, brighter future: Shaping Science together!. October 2023, i3S, Porto, Portugal

- Best oral communication (Pedro Alves) at the 5th international practical biofilm course and symposium. September 2023, University of Minho, Braga, Portugal

- Best oral communication (Pedro Alves) at the 33rd Conference of the European Society for Biomaterials (ESB 2023), September 2023, Davos, Switzerland

- Diana Fonseca - Federation of European Microbiological Societies (FEMS) Grant Support - EHMSG June 2023 participation

- Best oral communication (Pedro Alves); Pedro M. Alves, Diana R. Fonseca, Sílvia J. Bidarra, Cátia Teixeira, Cristina C. Barrias, Paula Gomes, M. Cristina L. Martins. Fast-forward on skin wound resolution with antimicrobial and pro-angiogenic peptides: is covalent conjugation to norbornene-chitosan nanoparticles worth it?. DCE 2023 - Doctoral Congress in Engineering, Porto, Portugal (15-16 June 2023)

- Best Poster Award (Diana Fonseca). A deadly hug: chitosan microspheres functionalized with MSI-78A antimicrobial peptide kill Helicobacter pylori. 33rd Workshop of the European Helicobacter and Microbiota Study Group (online), September 2020. Fonseca DR, Moura A, Seabra CL, Leiro V, Estevinho B, Teixeira C, Gomes P, Parreira P, Martins MCL.

- Best Oral Presentation Award (Pedro Alves). Reduction in viable surface-adhered bacteria promoted by efficient conjugation of antimicrobial peptide (Dhvar5) onto chitosan. EUGLOH Annual Student Research Conference 2020. September 28-30, 2020, Virtual congress. Alves, PM; Fagundes, N; Costa, F; Gomes, P; Martins, MCL.

- Best Poster Award (Fabíola Costa). Effect of surface immobilized N-acetylcysteine on bacteria and cell adhesion. 6th China-Europe Symposium on Biomaterials in Regenerative Medicine-CESB2017, May 21-24, 2017, Porto, Portugal. Costa F, Maia S, Gomes P, Martins MCL

- Best Poster Award (Fabíola Costa). Enhancement of chitosan antibacterial properties by antimicrobial peptide grafting. EUCHIS 2013 - International Conference of the European Chitin Society, May 5-8,2013 Porto, Portugal. Costa F, Maia S, Gomes P, Martins MCL

- Best Poster Award (Sidónio Freitas). Immobilization of thrombin inhibitors on self-assembled monolayers (SAMs): Effect on the adsorption and activity of thrombin. 22nd

European Conference on Biomaterials. September 07-11, 2009, Lausane, CH. Freitas SC, Barbosa MA, Martins MCL.

- Best Poster Award (Raquel Gonçalves). Development of Nanostructured Surfaces to Induce Apoptosis of Leukemic Cells, 9th Advanced Summer Course in Cell-Material Interactions, 16-20 June, 2008, Porto, Portugal. Goncalves R, Martins MCL, Almeida-Porada G, Barbosa MA.

- Best Oral presentation (Inês Gonçalves). Molecularly designed surfaces for albumin selective adsorption. European Society for Biomaterials Conference,11-15 September 2005, Sorrento, Italy. Gonçalves IC, Martins MCL, Barbosa MA, Naeemi E, Ratner BD.

- Prize "Pulido Valente Ciência 2006" (Inês Gonçalves) – best research work published in the area "Physics and Engineering – Applications to the study of disease and medical practice", whose first author is under 35 years old. The awarded paper was "Protein adsorption on 18-alkyl chains immobilized on hydroxyl-terminated self-assembled monolayers". Biomaterials 2005; 26: 3891-3899. Gonçalves IC, Martins MCL, Barbosa MA, Ratner BD.

ACADEMIC AND PROFESSIONAL EXPERIENCE

- 2017-2023: Scientific coordinator of i3S Biointerfaces and Nanotechnology (BN) Core Facility,
- 2018-2019: Member of the Executive Committee of INEB
- 2017-2019: Member of i3S Scientific Committee & Co-coordinator of Host Interaction and Response i3S Integrative Program
- 2005-2019: Assistant Investigator, INEB/i3S
- 2012-2017: Affiliated Professor, ICBAS (*Instituto Ciências Biomédicas Abel Salazar, Universidade Porto*)
- 2010-2013: Invited Assistant Professor, FEUP (*Faculdade de Engenharia da Universidade do Porto*
- 2004-2005: Post-Doctoral Investigator, INEB (FCT scholarship)
- 2003-2004: Researcher, INEB (with a contract from EPARIMED Project)
- 1998-1999: Visiting Scientist, Prof. Buddy Ratner's Lab (UWEB, University of Washington Engineered Biomaterials, Seattle, Washington, USA)
- Nov-1999: Visiting Scientist, Prof. Ji Jian's Lab (Department of Polymer Science, Zhejiang University, Hangzhou, China)
- 1996-2003: PhD Student, INEB/FEUP
- 1994-1996: Quality Control Manager, Cork industry (J.C. Ribeiro, Lda, Lourosa, Portugal)
- 1992-1994: Researcher, College of Biotechnology – Catholic University of Portugal, Porto, Portugal (PEDIP Scholarship - *Programa Estratégico de Dinamização e Modernização da Indústria Portuguesa*)
- 1990-1991: Quality Control Manager, Canning Industry (*Fábrica de Conservas Madrugada*, Lda - Póvoa de Varzim, Portugal)
- 1988-1989: Research trainee, Biotechnology company (Gist-Brocades, Delft, Netherland)

PARTICIPATION IN SCIENTIFIC PROJECTS

<u>As Project Leader:</u>

Ongoing:

- Jan 2021 – Jun 2026
  MOBILIsE: Molecular Bioengineering in health ERA Chair (HORIZON 2020), funded by the European Commission under the topic WIDESPREAD-06-2020 - ERA Chairs. Program H2020-EU.4.c. - Establishing ‚ERA Chairs'; Grant agreement ID: 951723: Coordination: INEB-INSTITUTO NACIONAL DE ENGENHARIA BIOMEDICA; 2,478K€. (https://mobilise.i3s.up.pt/)

Finished:

- March 2021 – June 2023
  Bio2Skin Advanced- Development of a new generation of adhesives with antiseptic, regenerative and adhesive proprieties to prevent and / or treat skin lesions caused by use of conventional medical adhesives. Project in co-promotion with the company BestHealth4U (FEDER—*Fundo Europeu de Desenvolvimento Regional* through NORTE 2020—*Programa Operacional Regional do Norte* - NORTE-01-0247-FEDER-047225); 125.8 K€

- July 2018 – Jun 2022
  AntINFECT- Bioengineered Advanced Therapies for Problematic Infected Wounds, funded by FEDER - *Fundo Europeu de Desenvolvimento Regional* through COMPETE 2020 - Operacional Programme for Competitiveness and Internationalisation (POCI)(POCI-01-0145-FEDER-031781)/ / PTDC/NAN-MAT/31781/2017; 240K€.
  Teams: INEB; REQUIMTE; *Universidade do Porto (Faculdade de Ciências; Departamento Física)*

- June 2016 – Dec 2019
  PYLORIBINDERS - *Helicobacter pylori* specific biomaterials for antibiotic-free treatment/diagnostic of gastric infection, funded by the Portuguese Foundation for Science and Technology (PTDC/CTM-BIO/4043/2014); 199K€.
  Teams: INEB; IPATIMUP; IFIMUP; UCIBIO@REQUIMTE; Institute Pasteur, Paris, France

- April 2014 – March 2016
  Biofunctional coatings for cardiovascular interventional devices, funded by Portugal-China Joint Innovation Centre for Advanced Materials (JICAM2013); 100K€.
  Portuguese Teams: INEB; IPATIMUP; Matera, Lda / Chinese Teams: Zhejiang University; Zhejiang Zylox Medical Device Co., LTD

- March 2012 – Aug 2015
  PYLORICIDAL - Engineered biomaterials with *Helicobacter* PYLORI bacteriCIDAL effect, funded by the Portuguese Foundation for Science and Technology (PTDC/CTM-BPC/121149/2010); 151K€.
  Teams: INEB; IPATIMUP; Institute Pasteur, Paris, France

- March 2010 – Aug 2013: Principal investigator of the INEB team.
  CHITOSAMP - CHITOSan-AntiMicrobial Peptide-based biomaterials for the treatment of osteomyelitis, funded by the Portuguese Foundation for Science and Technology (PTDC/CTM/101484/2008); 185K€.
  Teams: INEB; IBMC; Faculdade de Ciências UP (Coordinator Institution)

- March 2008 – August 2011
  GLYCOBACTER - A strategy for preventing H. pylori-associated gastric cancer based on

materials with specific receptors to the bacteria - from SAMs to Gly-R chitosan microsphere, funded by the Portuguese Foundation for Science and Technology (PTDC/CTM/65330/2006); 172 K€.
Teams: INEB; IPATIMUP; Faculdade de Ciências UP (FCUP)

<u>As Researcher</u>:

Ongoing:

- March 2023 – August 2024
  BIOGEN-Biofilm genetic regulation in the treatment of Chronic Wound Infection (Ref: 2022.04739.PTDC) (50 k€)

- June 2022 – June 2024
  NanoPyl® – A breakthrough approach for Helicobacter pylori control **-** CaixaResearch Validate 2022 , CI22-00115 (70 k€)

- March 2021 – Feb 2024
  FETBIO- Fetal-inspired hierarchical biomaterials for regeneration in a harsh microenvironment: the nucleus of the intervertebral disc (FETBIO) (PTDC/BTM-MAT/0438/2020)

Finished:

- Oct 2020 – Sept 2023
  Norte Regional Operational Program: Structured R&D&I Projects – Unorte.pt. HEALTH-UNORTE; NORTE-01-0145-FEDER-000039. Research Line 3: Immunology and Infection.

- March 2021 – Feb 2022
  NanoPyl: Lipid Nanoparticles for Massive Eradication of *Helicobacter pylori*
  BIP-Proof (Business Ignition Programme) Support program for the development of proof of concept of the University of Porto). 10K€.

- **July 2018 – December 2021**
  Nano4Film: Circumventing surgical removal of biofilms infected implants: a nano-based, selective and targeted approach, funded by FEDER - *Fundo Europeu de Desenvolvimento Regional* through COMPETE 2020 - Operacional Programme for Competitiveness and Internationalisation (POCI) (POCI-01-0145-FEDER-031444).

- **Oct 2017 – Sept 2021**
  mCBEEs - Advanced integrative solutions to Corrosion problems beyond micro–scale: towards long-term durability of miniaturized Biomedical, Electronic and Energy systems H2020-Marie Skłodowska-Curie actions - ITN 2017; No764977 (European Commission - H2020, Belgium). (https://www.mcbees.eu/)

- **May 2016- Dec 2019:**
  Structured Program on Bioengineered Therapies for Infectious Diseases and Tissue Regeneration. NORTE-01-0145-FEDER-000012 (PI of WP4)

- **January 2016 – December 2018**
  NewCat - New biomaterials to prevent infection associated with dialysis catheters, funded by the Portuguese Foundation for Science and Technology (PTDC/CTM-BIO/4033/2014).
  Teams: INEB; Faculdade de Engenharia, Universidade do Porto (Laboratório de Engenharia de Processos, Ambiente, Biotecnologia e Energia (LEPABE/FEUP)

- **January 2017 – January 2018**
  AntiBioCoat -Improving antimicrobial properties of catheters through biopolymer coating,

funded by RESOLVE Program funded by NORTE-01-0246-FEDER-000018
Teams: INEB/i3S; IBMC/i3S

- **June 2015 – May 2017**
  Design of an antiadhesive nanosurface on cp-Titanium: effect on bacterial adhesion and biofilm formation. CONADI 1527.
  Teams: INEB; Universidad Cooperativa de Colombia, Medelin, Colombia

- **June 2015 – May 2017**
  Self-assembled monolayer as a nanoengineering strategy to decrease bacterial adhesion and biofilm formation on stainless steel used in orthodontic appliances. CONADI 1514
  Teams: INEB; Universidad Cooperativa de Colombia, Medelin, Colombia

- **March 2014 – August 2015**
  SweetMic – Helicobacter pylori entrapment using "sweet" microsponges: a new alternative for gastric infection treatment, funded by the Portuguese Foundation for Science and Technology (Portuguese Foundation for Science and Technology) (EXPL/CTM-BIO/0762/2013).
  Teams: INEB; IPATIMUP

- **January 2013 – December 2015**
  "IB2 - Industrial Biological Biomaterials Doctorate", Marie Curie Initial Training Networks: European Industrial Doctorates, FP7-PEOPLE-2012-ITN (317052).

- **May 2011 – June 2013**
  NanoValor: Creation and Promotion of a Competitiveness Pole in Nanotechnology for the capitalization of R&D potential in the North of Portugal-Galicia Euroregion. Project co-funded by ERDF through the Operational Programme for Cross-border Cooperation Spain-Portugal 2007-2013 (POCTEP). Sub-contracted member

- **September 2009 – August 2013**
  Incorporation of inflammatory signals in the development of biomaterials for bone repair/regeneration: an integrated approach, funded by the Portuguese Foundation for Science and Technology (PTDC/SAU-BEB/099954/2008).

- **May 2005 - May 2008**
  PROTEIN - Immobilization of ligands to albumin and thrombin on self-assembled monolayers - influence on thrombus formation and inflammatory reactions, funded by the Portuguese Foundation for Science and Technology (POCTI/CTM/55644/2004).

- **2003-2004**
  EPARIMED - Development of a new bio-compatible material which can be able to bind heparin from blood of patients undergoing haemodialysis, supported by Agência de Inovação.

- **1997-2001**
  Blood Contact Materials and Tailoring of Biomaterials at Nanoscale: Applications in Bone Surgery and Haemotherapy, supported by Portugal-China Scientific Agreement.

- **1998-2000**
  CARE - Medical devices for collecting, processing and storing blood and blood constituents, supported by PEDIP program.

- **1990-1992**
  Effect of the interactions between yeast strains and the chemical composition of the grapes at the organoleptic properties of the wine, at Escola Superior de Biotecnologia – UCP; supported by PEDIP program.

SUPERVISION OF SCIENTIFIC WORKS

Visiting Scientist

Ongoing

- Nathan Jourdainne, MSc student (Master Chimie, XL Chem 2ème année) Université de ROUEN Normandie, France. Project: "*Elaboration of antibacterial biomaterial coatings*". (22 Jan2024 – 12 July2024).

Concluded:

- Marina Perpiñan Blasco, PhD student of Bioengineering Institute of Technology, in UIC Barcelona, Spain. Project: "Silica-based 3D printed therapeutic matrices that mimic bone regeneration processes". (4 Sept2023 - 4 Dec2023).
- Bruna Almeida Furquim de Camargo, PhD Student, *Faculdade de Ciências Farmacêuticas de Araraquara/FCFAR/UNESP*, Brasil. Project: "*Evaluation of bioadhesion in clinical isolates of Helicobacter pylori from lipid nanoparticles containing curcumin coated with chitosan and functionalized with CEACAM-1*." (28 Feb2023 – 27 Feb2024)
- Larissa Spósito, PhD Student, *Faculdade de Ciências Farmacêuticas de Araraquara/FCFAR/UNESP*, Brasil. Project: "Assessment of the activity of microparticles containing trans-resveratrol nanoparticles against clinical strains of Helicobacter pylori: an in vitro study" (4 March 2022 – 3 March2023)
- Natália de Araújo da Costa, MSc Student*, Universidade Estadual Paulista "Júlio de Mesquita Filho"*, Brasil; Project: Development of an antimicrobial titanium oxide porous coating for osseointegrable implants (21 Jun2019 – 4 Nov2019)
- Tejesvi Mysore Vishakante Gowda, PhD, Senior Research Fellow, University of Oulu, Finland. Project: Antimicrobial activity of an AMP immobilized on EG4 self-assembled monolayers (SAMs) (1st to 29th of Feb 2016)

Post-Doctoral Researchers (Junior Researchers)

Ongoing:

- Paula Parreira. Outsmarting bacterial infections: targeted nano/micro biomaterials to eradicate Helicobacter pylori infection. CEECIND/01210/2018 (Jan 2021-present)
- Claudia Monteiro. Antimicrobial coatings based on chitosan-antimicrobial peptides for the prevention of bone implant-associated infection. FCT: SFRH/BPD/79439/2011 (Nov2011-present).

Concluded (hired by projects):

- Luisa Fialho. Bio2Skin Advanced-(NORTE-01-0247-FEDER-047225); (Nov2022- Jun2023).
- João Albuquerque Costa. Bio2Skin Advanced-(NORTE-01-0247-FEDER-047225); (Dec 2021-Jun2022).
- Ana Margarida Pereira. Bio2Skin Advanced-(NORTE-01-0247-FEDER-047225); (July 2021-November 2021).
- João Albuquerque Costa. Bioengineered Advanced Therapies for Problematic Infected Wounds. Project AntINFECT: POCI-01-0145-FEDER-031781/ PTDC/NAN-MAT/31781/2017) (Feb 2021-Dec2021).

- Fabíola Moutinho. In situ resorbable Antimicrobial Peptides (AMP)-gel coating for orthopaedic infection prevention. CEECIND/01921/2017 (March2019-March2022).
- Paula Parreira. Development of antibiotic-free biomateriais for the erradication of Helicobacter pylori infection. Project: NORTE-01-0145-FEDER-000012 (Sept2017-March2019) PTDC/NAN-MAT/31781/2017 (March 2019-Jan2020)
- Fabíola Moutinho. Development of antimicrobial coatings. Project: NORTE-01-0145-FEDER-000012, (May2016-Oct 2018) PTDC/NAN-MAT/31781/2017 (Oct2018-March2019).
- Catarina Seabra. *Helicobacter pylori* specific biomaterials for antibiotic-free treatment of gastric infection: Nanofitins® (NF) immobilization onto gold nanoparticles (AuNP). Project: PYLORIBINDERS PTDC/CTM-BIO/4043/2014 (Sept2017-Nov2018).
- Helena Felgueiras. Biofunctional Coatings for Cardiovascular Interventional Devices. Project JICAM2013 (Oct2014-March2016).
- Joana Gomes. Engineered biomaterials with Helicobacter PYLORI bacteriCIDAL effect: Antimicrobial peptides chitosan microspheres (AMPs-ChMic). Project: PTDC/CTM-BPC/121149/2010 (Febr-Dec2013).
- Inês Castro Gonçalves. Glycosylation of mucoadhesive microspheres to eliminate *Helicobacter pylori* gastric colonization. FCT Fellow (Jan2010-May2013).

PhD Students

Ongoing (4):

- **Ana Filipa Campos**. Hybrid hydrogel based on antimicrobial peptide-grafted nanoparticles to treat infected diabetic foot ulcer. Doctoral Programme in Biomedical Sciences, ICBAS, Portugal. FCT Fellow (Jan 2024-present). Supervisor: Claudia Monteiro (i3S); Co-supervisors: Cristina Martins (i3S); Eugenia Carvalho (Centro de Neurociências e Biologia Celular, Universidade de Coimbra) & Sandra Van Vlierberghe (Faculty of Sciences- University of Gent, Belgium)
- **Ana Sofia Ferreira Leite de Pinho.** Bactericidal nano-decoys: an attractive approach to fight Helicobacter pylori. Doctoral Programme in Biomedical Sciences, ICBAS, Portugal. FCT Fellow (Jan 2023-present). Supervisor: Paula Parreira; Co-supervisor: Cristina Martins; Anette Mullertz (University of Copenhagen)
- **Natália Costa.** Covalent immobilization of antimicrobial peptides (AMPs) onto porous titanium oxide surfaces: a new strategy to fight infections and its impact on osteogenic and degradation properties of dental implants. Doctoral program under regime of cotutelle between *Universidade do Porto* (PhD in Biomedical Engineering – PRODEB) and Universidade Estadual Paulista "Júlio de Mesquita Filho" (PhD in Materials Science and Technology). PhD Grant: FAPESP – *Fundação de Amparo à Pesquisa do Estado de São Paulo* (#2020/10125-9 and #2021/11461-5). CAPES/PROEX – *Fundação Coordenação de Aperfeiçoamento de Pessoal de Nível Superior/Programa de Excelência Acadêmica* (#88887.600413/2021-00)(March2021-present). Supervisors: Paulo Noronha Lisboa Filho & Cristina Martins; Co-supervisor: Claudia Monteiro (i3S)
- **Rute Malarranha Chitas**. On the trail of drug free nanostructured lipid carriers selective interaction with *Helicobacter pylori*. Doctoral Programme in Molecular and Cellular Biotechnology Applied to Health Sciences (BiotechHealth); ICBAS/ Faculty of Pharmacy UP; Portugal. (Jan2019- thesis delivery May2024). Supervisor: Cristina Martins; Co-supervisor: Paula Parreira (i3S) & Cláudia Nunes (REQUIMTE)

Concluded (12):

- Pedro Miguel Pinto Basto Alves. BioHeal – Bioactivatable modular dressing for chronic infected wounds. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (Dec2019-May2024). Supervisor: Cristina Martins; Co-supervisor: Paula Gomes (FCUP); Cristina Barrias (i3S)
- Bruna Filipa Viera Costa. Antimicrobial and resorbable gel as a versatile implant coating to prevent infections in orthopaedic implants. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (Dec2019-May2024). Supervisor: Cristina Martins; Co-supervisor: Claudia Monteiro (i3S); Guillermo Martinez De Tejada De Garaizabal (Univ Navarra)
- Diana Patrícia Ribeiro Fonseca. Targeted nanoparticles made by "one-pot" photo-conjugated microfluidics for gastric infection management. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (Dec2019-Jan2024) Supervisor: Cristina Martins; Co-supervisor: Paulo Freitas (INL); Paula Parreira (i3S)
- Ana Rita Oliveira Macedo Pinto. *Staphylococcus aureus* implant-associated biofilms: Development of a novel nanoparticle-based drug delivery system. Doctoral Programme in Molecular and Cellular Biotechnology Applied to Health Sciences (BiotechHealth); ICBAS/ Faculty of Pharmacy UP; Portugal. FCT Fellow (Jan2018-Feb82022). Supervisor: Salette Reis (UFUP/REQUIMTE); Co-supervisor: Cristina Martins
- Andreia Trindade Pereira. Graphene based materials for blood contacting devices. Graduate Program in Areas of Basic and Applied Biology – GABBA, ICBAS, Portugal (Oct2016-2020). Supervisor: Inês Gonçalves (i3S); Co-supervisor: Cristina Martins
- Mariana Alves Barbosa. CLAMP – CLick chemistry as a tool to create AntiMicrobial Peptide based materials. Co-supervisor. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (Sep2013-April2018). Supervisor: Paula Gomes; Co-supervisor: Cristina Martins
- Maura Cimino. Effect of industrial GMP human plasma derived supplement on hMSC behavior. "IB2 - Industrial Biological Biomaterials Doctorate", Marie Curie Initial Training Networks: European Industrial Doctorates, FP7-PEOPLE-2012-ITN (317052) Doctoral Programme in Biomedical Engineering, FEUP, Portugal (2012-2017). Supervisor: Cristina Martins; Co-supervisor: Cristina Barrias; Francisco Belda
- Catarina Seabra. Lipid-based Nanostrategies to fight *Helicobacter pylori* gastric infection. Doctoral Programme in Biomedical Sciences, ICBAS, Portugal. FCT Fellow (2013-2017). Supervisor: Cristina Martins; Co-supervisor: Inês Gonçalves; Celso Reis
- Fabíola Costa Moutinho. Surface-immobilized Antimicrobial Peptides (AMPs) for prevention of implant-related osteomyelitis. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (2010-2015). Supervisor: Cristina Martins;
- Paula Parreira. Engineering surfaces to enhance *Helicobacter pylori* specific binding. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (2007-2013). Supervisor: Cristina Martins; Co-supervisor: Celso Reis
- Sidónio Freitas. Molecular design of surfaces towards more effective anticoagulation strategies for blood-contacting medical devices. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (2006-2012). Supervisor: Cristina Martins; Co-supervisor: Mário Barbosa
- Inês Gonçalves. Molecularly engineered materials for selective albumin binding to reduce the risk of thrombus formation. Doctoral Programme in Biomedical Engineering, FEUP, Portugal. FCT Fellow (2003-2009). Supervisor: Mário Barbosa; Co-supervisor: Cristina Martins

MSc Students (22)

Concluded:

- Ines Isabel Oliveira Cruz. Developing an antimicrobial coating to prevent vascular grafts infections. Master in Biomedical Engineering, University of Minho, Portugal (July2022-Dec23). Supervisor: Claudia Monteiro; Co-supervisor: Cristina Martins
- Marcela Jorge Mendes. Sinergia entre Transportadores Lipídicos Nanoestruturados e antibióticos de 1ºlinha para o controlo de *Helicobacter pylori*. Instituto Politecnico do Porto, Escola Superior de Tecnologia da Saúde do Porto (Out22-Nov23). Supervisor: Paula Parreira; Co-supervisor: Maria Manuela Amorim (P.Porto) / Cristina Martins
- Maria Carolina Antunes Matias. Temperature Sensitive Nanoparticles for Antimicrobial Peptide Controlled Release. Master in Bioengineering (Molecular Bioengineering), ICBAS/FEUP, Portugal (Feb2023-Oct2023). Supervisor: Cristina Martins; Co-supervisor: Ruben Pereira/Claudia Monteiro
- Inês Batista. Development of innovative systems for the treatment of infected wounds. MSc in Biomedical Engineering, FEUP, Portugal (Feb2020-Oct2022). Supervisor: André Pereira (IFIMUP/FCUP); Co-supervisor: Cristina Martins
- Francisco Alves Pereira Rodrigues. Unravelling the Mechanism of Action of Antimicrobial Peptides when Conjugated to Nanoparticles. MSc in Biomedical Engineering, FEUP, Portugal (Feb2020-Sept 2022). Supervisor: Claudia Monteiro; Co-supervisors: Claudia Pinho (LAQV, REQUIMTE); Cristina Martins
- Ana Manuela Sá Guimarães. Developing an antimicrobial coating to prevent abdominal aortic graft infections (AGIs). Integrated Master in Bioengineering, ICBAS/FEUP, Portugal (Feb2021-Oct2021). Supervisor: Cristina Martins; Co-supervisor: Fabíola Costa
- Sandra Cristina Silva Moreira Gomes. Improving Nanostructured Lipid Carriers activity against Helicobacter pylori: development of pH-responsive systems for gastric settings. Integrated Master in Bioengineering, ICBAS/FEUP, Portugal (Feb2020-Oct2021). Supervisor: Paula Parreira; Co-supervisor: Cristina Martins
- António Miguel Valente Braz Sepúlveda Ramôa. Antimicrobial Nanoparticles to Fight Bacterial Wound Infections. Integrated Master in Bioengineering, ICBAS/FEUP, Portugal (Feb2020-Oct2021). Supervisor: Claudia Monteiro; Co-supervisor: Cristina Martins
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- Jessica Ferreira Amorim. "SAAP 148 antimicrobial and osteoimmunomodulatory activity in solution and in PLGA coatings" Integrated Master in Bioengineering, ICBAS/FEUP, Portugal & Amsterdam University Medical Centers /Academic Medical Center of University of Amsterdam, Netherlands (Feb2019-Oct2020). Supervisor: Sebastian A. J. Zaat; Co-supervisor: Cristina Martins
- Ana Moura. Antibiotic free nano/microparticles to fight *Helicobacter pylori*. MSc in Biomedical Engineering, FEUP, Portugal (Sept2017-Sept2018). Supervisor: Cristina Martins; Co-supervisor: Paula Parreira
- Francisca Marques. Interaction of chitosan microspheres with human gastrointestinal microbiota. MSc in Biomedical Engineering, FEUP, Portugal (Sept2017- Sept2018). Supervisor: Inês Gonçalves; Co-supervisor: Cristina Martins
- Hélia Fernandes. Development of antimicrobial coatings based on antimicrobial peptides. Integrated Master in Bioengineering, ICBAS/FEUP, Portugal (Sept2016-Sept2017); Supervisor: Claudia Monteiro; Co-supervisor: Cristina Martins

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- Diana Oliveira. Coatings based on antimicrobial peptides for prevention of bone implant associated infections. MSc in Biomedical Engineering, FEUP, Portugal (Feb2015-Out2016). Supervisor: Claudia Monteiro; Co-supervisor: Cristina Martins
- Vanessa Graça. Antimicrobial Peptides against *Helicobacter pylori*. MSc in Biomedical Engineering, FEUP, Portugal (Feb2011-Oct2013). Supervisor: Cristina Martins; Co-supervisor: Inês Gonçalves
- Catarina Baptista. Blood compatibility of albumin-binding poly(2-hydroxyethyl methacrylate). MSc in Biomedical Engineering, FEUP, Portugal (2009-2011). Supervisor: Cristina Martins; Co-supervisor: Mário Barbosa, Inês Gonçalves
- Frederico Nogueira. Ultrathin films as a plateform to study Helicobacter pylori adhesion to chitosan. MSc in Biomedical Engineering, FEUP, Portugal (2009-2011). Supervisor: Cristina Martins; Co-supervisor: Inês Gonçalves
- João Galante. Development of Notch Signaling Biomaterials as a tool to control stem cell behavior. Master in biomedical engineering, IST, Lisboa, Portugal (March-Nov2010). Supervisor: Raquel Gonçalves; Co-supervisor: Cristina Martins
- Rui Azevedo. Application of ellipsometry to study the interactions between proteins and surface thin films. Co-supervisor, MSc in Biomedical Engineering, FEUP, Portugal (2005-2008). Supervisor: Mário Barbosa; Co-supervisor: Cristina Martins
- Sofia Rodrigues. Effect of surface chemical modification on hydrophilicity, protein adsorption and platelet adhesion. MSc in Biomedical Engineering, FEUP, Portugal (2003–2005). Supervisor: Mário Barbosa; Co-supervisor: Cristina Martins

Research Training

Concluded:

- Pedro Miguel Alves: Bioengineered Advanced Therapies for Problematic Infected Wounds. INEB Project: AntINFECT POCI-01-0145-FEDER-031781(Nov2018-Nov2019).
- Diana Fonseca. Antibiotic Free Nano/Microparticles to Fight *Helicobacter pylori*. INEB Project: PYLORIBINDERS PTDC/CTM-BIO/4043/2014 (Feb2019-Nov2019).
- Ricardo Emanuel Silva Carvalho:Engineered biomaterials with *Helicobacter pylori* bactericidal effect: Antimicrobial peptides immobilized on Chitosan Micro/Nanoparticles. INEB Project: PTDC/CTM-BPC/121149/2010 (June2014-Nov2015).
- Vanessa Graça. Engineered biomaterials with Helicobacter pylori bactericidal effect: Antimicrobial peptides immobilized on self assembled monolayers (AMPs-SAMs). INEB Project: PTDC/CTM-BPC/121149/2010 (Febr2014-Agoust2014).
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Thesis

- Martins MCL. Interaction between Blood Proteins and Surfaces: Self-Assembled Monolayers (SAMs) and Biomedical Polymers. PhD Thesis. Faculdade de Engenharia da Universidade do Porto (FEUP), Porto, 2003

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Patents:

9– Fialho L, Pinho AS, Monteiro C, Martins MCL, Ferreira S, Oliveira N. Bio2Skin Advanced – A new generation of medical adhesives with antiseptic and regenerative properties (PPP 20232005105559 / priority date: 30.06.2023)

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6- Martins MCL, Parreira P, Chitas R, Albumin interaction with Helicobacter spp. (PPP 20222004283212 / priority date: 07.12.2022)

5- Martins MCL, Pereira R, Parreira P, Ferreira L, Rai A, Pereira M, CHOLESTEROL/ETHYLENE GLYCOL GOLD NANOPARTICULES FOR TREATMENT OF HELICOBACTER PYLORI INFECTION ((PPP 20222004188852 / priority date: 11.11.2022)

4- Martins MCL, Costa F, Guimarães M, D'Oria M, Di Bella S, Lagatolla C. ANTIMICROBIAL COATING TO PREVENT ABDOMINAL AORTIC GRAFT INFECTIONS (PPP/ priority date: 24.09.2021)

3- Rita Matos, Fabiola Costa, Paula Tamagnini and Martins MCL. USES OF CYANOBACTERIUM EXTRACELLULAR POLYMER, COMPOSITIONS, COATED SURFACES OR ARTICLES. (PCT/IB2019/051904 priority date: 08.03.2018)

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1- Martins MCL, Gonçalves IC, Gomes P, Oliveira JR, Reis AC, Magalhães A. Microspheres for treating helicobacter pylori infections. WO 2013164652 A3 (2013-11-07)

COMMUNICATIONS

Oral Communications by Invitation

International conferences:

1. Bioengineered biomaterial coatings based on antimicrobial peptides to fight bacterial infections. 8th China-Europe Symposium on Biomaterials in Regenerative Medicine (CESB 2024). September 15 – 18, 2024 in Nuremberg, Germany (Keynote)

2. The potential utility of chitosan micro/nanoparticles in the treatment of gastric infection. 37th Workshop of the European Helicobacter and Microbiota Study Group (EHMSG 2024). September 12 – 14, 2024 in Porto, Portugal (Keynote)

3. Multifunctional biomaterials for blood contacting and cardiovascular applications (SP-T06-0214) at 12th World Biomaterials Congress (WBC 2024). May 26th to 31st, 2024

in Daegu, Republic of Korea (Keynote Speaker in the Symposium Multifunctional biomaterials for blood contacting and cardiovascular applications (SP-T06-0214)

4. Impact of surface conjugation on the bactericidal activity of antimicrobial peptides. 17th Iberian Peptide Meeting. February 5 - 7, 2020, Madrid, Spain (Keynote)

5. AntiMicrobial Peptide (AMP)-chitosan coatings to avoid biomaterials-associated infection: influence of AMP characteristics and immobilization strategy. Advanced Materials and Surfaces for Tissue Replacement and Regeneration in Health, at the XVII Brazilian MRS Meeting, 16-20 September, 2018, Natal-RN, Brazil. (Keynote)

6. Biofunctional coatings for cardiovascular interventional devices. The 3nd Sino-Portugal Advanced Materials Innovation Forum, 14-15 June 2018, Hangzhou, China (Invited Speaker)

7. Biomaterial Coatings to Fight Infection. India-Portugal Bilateral Workshop on 'Tissue Engineering' School of Medical Science and Technology, Indian Institute of Technology (IIT) 22-24 Feb 2018; Kharagpur, India. (Invited Speaker)

8. Biomaterial Coatings for cardiovascular interventional devices. The 2nd Sino-Portuguese Advanced Materials Innovation Forum. 12 July, 2016, Univ. Aveiro, PT.

9. NanoBiomaterials to control infection and thrombus formation Portugal-China Biomaterials Seminar. 11 April, 2015, Hangzhou, China (Keynote).

10. Anti-thrombogenic and anti-infective biomaterial coatings. The 1st Sino-Portugal Advanced Materials Innovation Forum 30 March, 2014, Hangzhou, China.

11. Anti-infective coatings based on covalent immobilization of antimicrobial peptides (AMPs). XIV Iberian Peptide (EPI) Meeting. 4-6 February, 2014, Bilbao, Spain.

12. Self-Assembled Monolayers (SAMs). 10th Advanced Summer Course in Cell-Materials Interactions: Self-assembly: from nature to clinics. / Biological Applications of Self-Assembled Monolayers. 10th Advanced Summer Course in Cell-Materials Interactions: Self-assembly: from nature to clinics. Porto. June 22-26, 2009. Porto, PT. (Invited Speaker)

13. The role of protein adsorption in the cells/biomaterials interactions. Atelier de Formation 194 (Inserm) Tissue engineering: study of the interfaces cell/tissue/material. 27-29 May, 2009. Saint-Raphael, France. (Invited Speaker)

14. Cell-biomaterial interactions at the nanoscale: how does the cell see the surface? Symposium "Nanotechnology in Medicine: Diagnosis and Therapy"; 12-13 November 2007, Vigo, Spain

15. Strategies to increase the haemocompatibility of biomaterials, 5th Advanced Course in Cell-Material Interactions, 5-9 July, 2004, Portugal. (Invited Speaker)
16.

National Conferences /Courses:

18. LUSOciência Gouveia 2024. Agosto 1-3, 2024, Gouveia, Portugal.

17. Antimicrobial Coatings to Prevent Biomaterials-Associated Infection. V Semana de *Bioengenharia, IST- Instituto Superior Tecnico*, March 18-22, 2019, Lisboa Portugal.

16. Bioengineered Strategies to fight gastric infection. June 7, 2018, Cancer Seminars. i3S-Instituto de investigação e Inovação em Saude, Porto, Portugal

15. Aplicação da nanotecnologia no tratamento específico da infecção por Helicobacter pylori. Conferências em Oncobiologia 2018, 15 May, 2018, Faculdade Farmácia U. Porto, Porto, PT.

14. Nanostructured Biomaterials to Fight Infection. i3S-Instituto de investigação e Inovação em Saude, December 6, 2016, Porto, Portugal

13. Development of biomaterials for the treatment of Helicobacter pylori gastric infection. Bionanosystems for pharmaceutical and cosmetic applications. 23 June, 2016, U. Minho, PT

12. A Surface to attach to… II Semana de Bioengenharia, IST- Instituto Superior Tecnico, March 4, 2016, Lisboa Portugal.

11. Bioengineered biomaterials to fight Helicobacter pylori infection and prevent gastric cancer. Nano World Cancer Day, February 2, 2016; INL - International Iberian Nanotechnology Laboratory, Braga, Portugal

10. Bioengineered Surfaces to Fight Gastric Infection. 4º Encontro de Biotecnologia Microbiana e Farmacêutica. 29 April, 2015, Faculdade Farmácia Universidade do Porto, Porto, P

9. Mesa redonda: O segredo do Sucesso Profissional. Jornadas de Biotecnologia. March 25-26, 2015, Escola Superior de Biotecnologia. Universidade Católica Portuguesa, Porto, Portugal.

8. Bioengineered surfaces to fight infection. i3S, 4th Annual Meeting. 30-31 October 2014, Póvoa de Varzim, PORTUGAL

7. Engineering surfaces to modulate biological responses. Nanotechnology and Nanomedicine course. INL - International Iberian Nanotechnology Laboratory. October 17-21, 2011, Braga, Portugal

6. BioEngineered Surfaces for Specific Biological Responses. XI Jornadas de Biologia Aplicada. April 2010, Braga, Portugal.

5. Interacções Biológicas com Superfícies Nanoestruturadas. Encontro Ciência em Portugal; Ciência 2008, 2- 4 de Julho, 2008, Fundação Calouste Gulbenkian, Lisboa, PT

4. Nanostructured Surfaces: From Blood Contact Materials to Helicobacter pylori. "Workshop on Infection" -IBMC.INEB.IPATIMUP joint Workshops. February 8th, 2008 – IPATIMUP.

3. NanoEngineered Surfaces for Biomedical Applications. Seminários de Nanobiotecnologia (MIT-Portugal). 7th December 2007, Instituto Superior Técnico, Lisboa, Portugal.

2. Martins MCL. NanoEngineering that lives. Seminários - Curso de Bioengenharia, 27th November 2007, Escola Superior de Biotecnologia (UCP), Porto, Portugal.

1. "Interacções entre proteínas do sangue e superfícies modelo" (Interactions between blood proteins and model surfaces), Jornadas ICEMS 2004 – Materiais e Tecnologias para Aplicações Biomédicas, 18-19 October 2004, IST, Lisboa, Portugal.

Oral Communications

72. Chitas R, Seabra CL, Nunes C, Parreira P, Martins MCL, Nanostructured lipid carriers (NLC) against Helicobacter pylori: A nano approach to fight a big problem. 3rd BioIberoamerica 2022 (Braga, Portugal). April 2022

71. Fonseca DR, Moura A, Seabra CL, Gomes S, Oliveira M, Reis RL, Leiro V, Estevinho B, Teixeira C, Gomes P, Parreira P, Martins MCL. Pexiganan-A grafted chitosan microparticles & Helicobacter pylori: a bitter love story. 31st Conference of the European Society for Biomaterials (Online). September 2021

70. Alves PM, Pereira RF, Costa B, Tassi N, Teixeira C, Leiro V, GomeS P, Costa F, Martins MCL. The quest for survival in the highly proteolytic environment of a skin chronic wound: a case for efficient antimicrobial peptide conjugation. 31st Conference of the European Society for Biomaterials (Online). September 2021

69. Pinto, R.; Monteiro, C; Costa Lima, SA.; Casal, S; Van Dijck, P; Martins, M. C L.; Nunes, C; Reis, S. Breaking the barrier: N-acetyl-cysteine- loaded nanoparticles as a strategy to disrupt bacterial biofilms. 31st Conference of the European Society for Biomaterials (Online). September 2021

68. Ramôa A; Moreira L; Teixeira C; Leiro V; Gomes P; Neves J; Martins, M.C.L.; Monteiro, C. AMP-PLGA nanoparticles to fight bacterial wound infections. XII Symposium on Bioengineering. March 2021.

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66. Gomes S; Chitas R; Nunes C, Oliveira JM.; Martins, MC.; Parreira P. Improving Nanostructured Lipid Carriers activity against Helicobacter pylori: development of pH-responsive systems for gastric settings. 14.º Encontro de Jovens Investigadores da U.PORTO (IJUP2021). May 2021

65. Fonseca DR, Moura A, Seabra CL, Leiro V, Estevinho B, Teixeira C, Gomes P, Parreira P, Martins MCL. The bittersweet symphony of Pexiganan-A grafted chitosan microparticles & Helicobacter pylori. ANNIC- Applied Nanotechnology and Nanoscience International Conference (online) March 2021.

64. Chitas R, Seabra CL, Nunes C, Parreira P, Martins MCL. Fighting Helicobacter pylori with drug-free nanostructured lipid carriers (NLC). ANNIC- Applied Nanotechnology and Nanoscience International Conference (online) March 2021.

63. Pereira AT, Henriques PC, Costa P, Martins MCL, Magalhães FD, Gonçalves IC. Graphene oxide-reinforced poly(2-hydroxyethyl methacrylate) hydrogels with extreme stiffness and high-strength, Advanced Materials Conference (online) December 2020.

62. Fonseca DR, Moura A, Seabra CL, Leiro V, Estevinho B, Teixeira C, Gomes P, Parreira P, Martins MCL. Antibiotic-Free Chitosan Microparticles for Helicobacter pylori infection management. 11th World Biomaterials Conference (online), December 2020.

61. Fonseca DR, Moura A, Seabra CL, Leiro V, Estevinho B, Teixeira C, Gomes P, Parreira P, Martins MCL. Fatal attraction: chitosan microspheres decorated with MSI-78A kill *Helicobacter pylori*. NanoPT 2020, (online) October 2020.

60. Alves PM, Fagundes N, Costa F, Gomes P, Martins MCL. Reduction in viable surface-adhered bacteria promoted by efficient conjugation of antimicrobial peptide (Dhvar5) onto chitosan. EUGLOH Annual Student Research Conference 2020. September 28-30, 2020, Virtual congress

59. Parreira P, Monteiro C, Graça V, Gomes J, Maia S, Gomes P, Gonçalves IC, Martins MCL. Surface Grafted MSI-78A antimicrobial peptide has high potential for gastric infection management. BioNano Innovation 20202 (online). June 6th, 2020

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57. Seabra CL, Parreira P, Pinho C, Reis S, Martins MCL. NanoPyl: smart and "friendly" antibiotic-free lipid nanoparticles for gastric infection management. NanoMed Europe (Nanomedicine; European Technology Platform on Nanomedicine – ETPN Association) ; June 17-19, 2019 Braga, PT

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40. Monteiro C, Fernandes F, Pinheiro M, Maia M, Seabra C, Ferreira da Silva F, Costa F, Reis S, Gomes P, Martins MCL. Antimicrobial properties of short membrane-active peptides derived from MSI-78. CESB 2015 – 5th China-Europe Symposium on Biomaterials in Regenerative Medicine. April 7-10, 2015 Hangzhou, China.

39. Santos SG, Almeida CR, Oliveira MI, Torres AL, Maciel J, Lamghari M, Neves N, Barbosa JN, Vasconcelos DP, Martins MCL, Goncalves RM, Barbosa MA. Fibrinogen-modified chitosan as an immunomodulatory biomaterial. CESB 2015 – 5th China-Europe Symposium on Biomaterials in Regenerative Medicine. April 7-10, 2015 Hangzhou, China

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35. Costa F, Maia S, Gomes J, Gomes P, Martins MCL.Characterization of hLF1-11 immobilization onto chitosan ultrathin films, and its effects on antimicrobial activity. ICAR – International Conference on Antimicrobial Research, 1-3 October 2014, Madrid, Spain

34. Gonçalves IG, Costa AMS, Magalhães A, Reis CA, Martins MCL. Nanoengineered biomaterials to fight gastric infection: exploring the glycan-adhesin specific interaction. 26th European Conference on Biomaterials, 31st August – 3rd September 2014. Liverpool, UK

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32. Gonçalves IC, Oliveira J, Fernandes M, Magalhães A, Reis CA, Gomes P, Martins MCL. How sugars can make chitosan microspheres H. pylori specific. 25th European Conference on Biomaterials – September 8th – 12th, 2013, Madrid, Spain

31. Costa F, Maia S, Gomes P, Martins MCL. Immobilization of an Antimicrobial Peptide – Dhvar5 – for the development of an antibacterial coating. 25th European Conference on Biomaterials – September 8th – 12th, 2013, Madrid, Spain

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28. Costa F., Maia S., Gomes P. and Martins M.C.L. Tethering of a synthetic antimicrobial peptide for the development of an antimicrobial coating. II International Conference on Antimicrobial Research (ICAR 2012), November 21-23, 2012, Lisboa, Portugal.

27. Parreira P, Magalhães A, Reis CA, Leckband D, Martins MCL. Bioengineered surfaces designed to promote *Helicobacter pylori* adhesion via adhesin-carbohydrate specific recognition. II International Conference on Antimicrobial Research (ICAR 2012), November 21-23, 2012, Lisboa, Portugal.

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86. Costa B, Mota R, Parreira P, Martins MCL, Tamagnini P & Costa F. A new strategy to prevent catheter-associated urinary tract infections using a cyanobacterial extracellular polymer based coating. 11th European Workshop on the Biology of Cyanobacteria, 7-9 Sept 2020

85. Fonseca DR, Moura A, Seabra CL, Leiro V, Estevinho B, Teixeira C, Gomes P, Parreira P, Martins MCL. A deadly hug: chitosan microspheres functionalized with MSI-78A antimicrobial peptide kill Helicobacter pylori. 33rd Workshop of the European Helicobacter and Microbiota Study Group (online), September 2020. E-poster

84. Chitas R, Seabra CL, Nunes C, Parreira P, Martins MCL. Counteracting Helicobacter pylori using drug-free nanostructured lipid carriers (NLC). 33rd Workshop of the European Helicobacter and Microbiota Study Group (online), September 2020. E-poster

83. Costa B, Mota R, Parreira P, Martins MCL, Tamagnini P & Costa F. A new strategy to fight catheter associated urinary tract infections using a natural polymer-based coating. 2nd

Portuguese Symposium on Research and Innovations in Urology, 2019, 11th November, Porto Business School, Porto, Portugal

82. Costa B, Mota R, Parreira P, Martins MCL, Tamagnini P & Costa F Broad-spectrum anti-adhesive coating based on a natural marine polymer, 30th Annual Conference of the European Society for Biomaterials, 2019, 9-13th September, Dresden, Germany

81. Costa B, Mota R, Parreira P, Martins MCL, Tamagnini P & Costa F. Natural Broad-Spectrum Anti-adhesive Coating. IV Encontro de Biotecnologia Medicinal, 2019, 17th May, Porto Portugal

80. Monteiro C, Costa F, Pirttilä AM, Tejesvi MV, Martins MCL. Antimicrobial activity of a *de novo* designed AMP derived from crowberry endophyte after surface covalent immobilization. IMAP 2019, 9th International Meeting on Antimicrobial Peptides, Utrecht University, August 28 – 30, 2019

79. P. Parreira, C. Monteiro, V. Graça, J. Gomes, P. Gomes, IC Gonçalves and MCL Martins Nanostructured surfaces with high bactericidal effect against Helicobacter pylori. 29th Annual Conference of the European Society for Biomaterials (ESB 2018), September 9-13, 2018, Maastricht, Netherlands.

78. Costa F, Sousa DA, Parreira P, Lamghari M, Gomes P, Martins MCL. Surface immobilized N-acetyl cysteine avoids bacteria adhesion without preventing cell adhesion and proliferation. 29th Annual Conference of the European Society for Biomaterials (ESB 2018), September 9-13, 2018, Maastricht, Netherlands.

77. Lopes D, Pinto RM, Lima S, Sarmento S, Martins MCL, Nunes C, Reis S. Amoxicillin-loaded lipid nanoparticles: towards a therapeutic approach for *Helicobacter pylori* infections. NanoBio&Med2017, November 22-24, 2017, Barcelona, Spain.

76. Cruz IF, Costa MT, Parreira P, Pereira C, Martins MCL, Pereira AM. Chitosan-coated magnetic nanoparticles as a tool to fight *Helicobacter pylori.* 2017 E-MRS Fall Meeting; Warsaw University of Technology, Poland; September 18-21, 2017

75. Barbosa M, Monteiro C, Costa F, Martins MCL, Gomes P. Tethering of Dhvar5 onto a clickable chitosan derivative for the synthesis of antimicrobial peptide-based coatings. 28th Annual Conference of the European Society for Biomaterials (ESB 2017), September 4-8, Athens, Greece (Rapid-Fire)

74. Parreira P, Monteiro C, Graça V, Gomes J, Gomes P, Gonçalves IG, Martins MCL. Immobilization of an antimicrobial peptide with antibacterial effect against Helicobacter pylori. 6th China-Europe Symposium on Biomaterials in Regenerative Medicine-CESB2017, May 21-24, Porto, Portugal

73. Barbosa M, Monteiro C, Costa F, Martins MCL, Gomes P. Unravelling the azide-alkyne "click" chemistry concept: a promising strategy for the development of antimicrobial peptide-based coatings. 6th China-Europe Symposium on Biomaterials in Regenerative Medicine-CESB2017, May 21-24, Porto, Portugal

72. Pereira AT, Bergmeister H, Grasl C, Martins MCL, Magalhães FD, Gonçalves IC. Composites of Polymers/carbon nano-fillers for blood contact applications. 6th China-Europe Symposium on Biomaterials in Regenerative Medicine-CESB2017, May 21-24, Porto, Portugal

71. Monteiro C, Oliveira D, Vale N, Gomes P, Martins MCL. Antimicrobial coating based on MSI-78 (4-20) immobilization on chitosan films. 6th China-Europe Symposium on Biomaterials in Regenerative Medicine-CESB2017, May 21-24, Porto, Portugal

70. Costa F, Sousa DM, Lamghari M, Gomes P, Martins MCL. Effect of surface immobilized N-acetylcysteine on bacteria and cell adhesion. 6th China-Europe Symposium on Biomaterials in Regenerative Medicine-CESB2017, May 21-24, Porto, Portugal.

69. Andreia T. Pereira, Patrícia C. Henriques, Artur M. Pinto, M. Cristina L. Martins, Fernão D. Magalhães, Inês C. Gonçalves. Polymers loaded with carbon nano-fillers for blood contact applications. Graphene, Barcelona, Spain (March 28-31, 2017).

68. Andreia T. Pereira, Helga Bergmeister, Christian Grasl, M. Cristina L. Martins, Fernão D. Magalhães, Inês C. Gonçalves. Carbon nano-fillers loaded polymers for blood contact applications. II Jornadas Nacionais de Caracterização de Materiais. Aveiro, Portugal (Jan 24-26, 2017);

67. Seabra CL, Nunes C, Gomez-Lazaro, Correia M, Machado JC, Gonçalves IC, Reis CA, Reis S, Martins MCL. Effect of docosahexaenoic acid loaded nanoparticles on the growth of Helicobacter pylori *in vitro*. BioImaging 2016 – 5th International Symposium in Applied Bioimaging: Disease in Focus. October 26-28, 2016, Porto, Portugal.

66. Henriques PC, Costa LM, Seabra C, Junqueira-Neto S, Carvalho R, Antunes B, Magalhães A, Reis C, Gartner F, Touati E, Gomes J, Martins MCL, Gonçalves IC. Bacteria-binding microspheres to fight Helicobacter pylori gastric infection. BioImaging 2016 – 5th International Symposium in Applied Bioimaging: Disease in Focus. October 26-28, 2016, Porto, Portugal

65. Seabra CL, Nunes C, Reis CA, Gonçalves IC, Reis S, Martins MCL. Anti-Helicobacter pylori activity of lipid nanoparticles loaded with an omega-3 polyunsaturated fatty acid. XXIXth International Workshop on Helicobacter & Microbiota in Inflammation and Cancer. Sept 15 – 17, 2016, Magdeburg, Germany

64. Henriques PC, Costa LM, Seabra C, Junqueira-Neto S, Carvalho R, Antunes B, Magalhães A, Reis C, Gartner F, Touati E, Gomes J, Martins MCL, Gonçalves IC. Bacteria-binding microspheres to fight Helicobacter pylori gastric infection. XXIXth International Workshop on Helicobacter & Microbiota in Inflammation and Cancer. Sept 15 – 17, 2016, Magdeburg, Germany

63. Oliveira D, Vale N, Gomes P, Martins MCL, Monteiro C. MSI-78 (4-20) immobilization on chitosan ultrathin films and its antimicrobial properties. 6th Thesingle Biofilm Conference, Sept 12-13, 2016, Thesinge, Groningen, The Netherlands

62. Costa F, Barbosa M, Gomes P, Martins MCL. Antimicrobial peptide (Dhvar5) covalent immobilization parameters influence antimicrobial activity of the coating. 34th European Peptide Symposium and the 8th International Peptide Symposium September 4-9, 2016, Leipzig, Germany.

61. Oliveira D, Vale N, Gomes P, Martins MCL, Monteiro C. Antimicrobial coating based on MSI-78 (4-20) immobilization on chitosan ultrathin films. 34th European Peptide Symposium and the 8th International Peptide Symposium September 4-9, 2016, Leipzig, Germany.

60. Querido M, Rai A, Felgueiras AP, Ferreira L, Martins MCL. Influence of Cecropin-Melittin antimicrobial coating in platelet adhesion/activation to biomaterials. VI International Conference on Antimicrobial Research (ICAR 2016), 29 June-1 July, 2016, Torremolinos-Malaga, Spain.

59. Costa F, Sousa DM, Lamghari M, Gomes P, Martins MCL. N-acetyl cysteine-functionalized coating avoids bacteria adhesion and biofilm formation. 10th World Congress of Biomaterials, May 17-22, 2016, Montréal, Canada

58. Querido MM, Rai A, Felgueiras HP, Ferreira L, Martins MCL. "Influence of Cecropin-Melittin antimicrobial coating in platelet adhesion/activation to biomaterials." 7th Symposium on Bioengineering- Faculdade de Engenharia da Universidade do Porto, 23 - 24 April, 2016, Porto-Portugal.

57. Monteiro C, Fernandes F, Pinheiro M, Maia M, Seabra C, Ferreira da Silva F, Costa F, Reis S, Gomes P, Martins MCL. A 17-mer membrane-active MSI-78 derivative with improved selectivity towards bacterial cells. 27th European Conference on Biomaterials, 30th August – 3rd September 2015, Krakow, Poland.

56. Cimino M, Bauman E, Gonçalves RM, Belda F, Barrias CC, Martins MCL. Human Mesenchymal Stem Cells expansion under xeno-free conditions for regenerative therapies. 27th European Conference on Biomaterials, 30th August – 3rd September 2015, Krakow, Poland.

55. Costa F, Maia S, Gomes P, Martins MCL. Dhvar5 Antimicrobial Peptide Immobilization for the development of an antibacterial coating. AO Research Institute Davos - Implant Infection - The eCM XVI Congress. June 24-26, 2015, Davos, Switzerland.

54. Freitas SC, Maia S, Figueiredo AC, Gomes P, Pereira PJB, Barbosa MA, Martins MCL. Creating albumin-binding nanostructured surfaces using a thrombin-inhibiting peptide. 26th European Conference on Biomaterials, 31st August – 3rd September 2014, Liverpool, UK.

53. Monteiro C, Fernandes F, Pinheiro M, Maia M, Seabra C, Ferreira da Silva F, Costa F, Reis S, Gomes P, Martins MCL. Antimicrobial properties of membrane-active dodecapeptides derived from MSI-78. Interrogations at the Interface – The self-renewal differentiation interface – Advanced Summer School 2014, 30th June – 3rd July, Barcelona, Spain.

52. Gonçalves IG, Costa AMS, Magalhães A, Reis CA, Martins MCL. Exploring the glycan-adhesin specific interaction to treat Helicobacter pylori gastric infection. GLYCO-T- 9th International Symposium on Glycosyltransferases, 18-21 June 2014, Porto, Portugal.

51. Nogueira F, Gonçalves IC, Martins MCL. *Helicobacter pylori* interaction with mucoadhesive films under gastric conditions. EUROPEAN HELICOBACTER STUDY GROUP - XXVIth International Workshop September 12 – 14, 2013, Madrid, Spain.

50. Gonçalves IC, Fernandes M, Magalhães A, Rodrigues IV, Reis CA, Martins MCL. *Helicobacter pylori*-binding biomaterials as alternative treatment for gastric infection. EUROPEAN HELICOBACTER STUDY GROUP - XXVIth International Workshop. September 12–14, 2013, Madrid, Spain.

49. Nogueira F, Gonçalves IC, Martins MCL. Effect of gastric environment on *Helicobacter pylori* adhesion to chitosan. 25th European Conference on Biomaterials – September 8th – 12th, 2013, Madrid, Spain.

48. Costa F, Maia S, Gomes P, Martins MCL Enhancement of chitosan antibacterial properties by antimicrobial peptide grafting. EUCHIS 2013 - International Conference of the European Chitin Society, May 5-8,2013 Porto, Portugal.

47. Nogueira F, Gonçalves IC, Martins MCL. Effect of Acidic pH on *Helicobacter pylori* Adhesion to Chitosan Films. EUCHIS 2013 - International Conference of the European Chitin Society, May 5-8,2013 Porto, Portugal.

46. Costa F, Maia S, Gomes P, Martins MCL. hLF1-11 synthesis and immobilization onto chitosan thin films to create antimicrobial coatings. 32nd European Peptide Symposium (32EPS 2012), September 2-7, 2012. Athens, Greece.

45. Costa F, Maia S, Gomes P, Martins MCL. hLF1-11 synthesis and immobilization onto chitosan thin films to create antimicrobial coatings. 22nd International Symposium on Medicinal Chemistry(EFMC-ISMC 2012) September 2 - 6, 2012, Berlin, Germany.

44. Freitas SC, Cereija TB, Figueiredo AC, Osório H, Pereira PJB, Barbosa MA, Martins MCL. Bioengineered surfaces with a natural direct thrombin inhibitor to improve biomaterials hemocompatibility. 9th World Biomaterials Congress (9th WBC) June 1-5, 2012. Chengdu, China.

43. Gonçalves IC, Parreira P, Oliveira JR, Fernandes M, Magalhães A, Reis CA, Gomes P, Leckband D, Martins MCL. Engineered biomaterials to prevent/treat gastric infection. International Forum of Biomedical Materials: Nanobiomaterials for Tissue Regeneration. May 29 – Jun 1, 2012, Hangzhou, China.

42. Sperling C, Baptista CP, Gonçalves IC, Martins MCL Fischer M, Sperling C, Werner C, Barbosa MB, Ratner BD. Blood contacting albumin adsorbing materials with improved hemocompatibility. Congress of the GTH, "Society of Thrombosis and Haemostasis Research", February 1-4, 2012, St. Gallen, Switzerland.

41. Costa F, Maia S, Gomes P, Martins MCL. Covalent immobilization of Human Lactoferrin-derived peptide (hLF1-11) for the development of an antimicrobial surface. 24th European Conference on Biomaterials – September 4-9th, 2011, Dublin.

40. Parreira P, Magalhães A, Reis CA, Leckband D, Martins MCL. Engineering surfaces to trigger *Helicobacter pylori* adhesion. EuroNanoForum. May 30th -June 1st. 2011. Budapest, Hungary.

39. Fischer M, Baptista CP, Gonçalves IC, Ratner BD, Sperling C, Werner C, Martins MCL, Barbosa MB. Immobilization of octadecyl chains improves the hemocompatibility of poly (2-hydroxyethyl methacrylate). Symposium hemocompatibility of Biomaterials – State of the knowledge and new developments. Dresden, Germany, 2011

38. Parreira P, Magalhaes A, Reis CA, Leckband D, Martins MCL. Immobilization of specific receptors for *Helicobacter pylori* using model surfaces. 23rd European Conference on Biomaterials. September 11-15, 2010, Tampere, Finland.

37. Maciel J, Martins MCL, Barbosa MA. The stability of EG4 self-assembled monolayers in cell culture media. 22nd European Conference on Biomaterials. September 07-11, 2009, Lausane, CH.

36. Freitas SC, Barbosa MA, Martins MCL. Immobilization of thrombin inhibitors on self-assembled monolayers (SAMs): Effect on the adsorption and activity of thrombin. 22nd European Conference on Biomaterials. September 07-11, 2009, Lausane, CH.

35. Parreira P, Magalhes A, Reis CA, Leckband D, Martins MCL. *Helicobacter pylori* adhesion to gold and to model surfaces with different surface chemistry. 22nd European Conference on Biomaterials. September 07-11, 2009, Lausane, CH.

34. Parreira P, Reis CA, Magalhes A, Leckband D, Martins MCL. Immobilization of a specific receptor for *Helicobacter pylori* using model surfaces. XXIInd International Workshop of the European Helicobacter Study Group. September 17 – 19, 2009; Porto.

33. Oliveira JR, Martins MCL, Gomes P. Selective O-alkynylation of chitosan: towards "clickable" cationic chitosans. 8th International Meeting of the Portuguese Carbohydrate Group. 6-10th September, Braga, Portugal.

32. Gonçalves IG, Martins MCL, Barbosa MA, Ratner BD. Platelet and Leukocyte Adhesion to Albumin Binding Self-Assembled Monolayers. 10th Advanced Summer Course in Cell-

Materials Interactions: Self-assembly: from nature to clinics. Porto. June 22-26, 2009. Porto, Portugal.

31. Parreira P, Reis C, Leckband D, Martins MCL. Immobilization of a *Helicobacter pylori* binding receptor onto nanostructured surfaces. 10th Advanced Summer Course in Cell-Materials Interactions: Self-assembly: from nature to clinics. Porto. June 22-26, 2009. Porto, Portugal.

30. Freitas SC, Pereira PJB, Barbosa MA, Martins MCL. Immobilization of a natural thrombin inhibitor on self-assembled monolayers (SAMs). 10th Advanced Summer Course in Cell-Materials Interactions: Self-assembly: from nature to clinics. Porto. June 22-26, 2009. Porto, Portugal.

29. Goncalves R, Martins MCL, Almeida-Porada G, Barbosa MA. Jagged-1 Nanostructured Surfaces are able to induce Apoptosis and Macrophage Differentiation of Leukemic Cells. Notch and Cancer, 5-8 October, 2008, Athens - Greece.

28. Parreira P, Reis CA, Magalhães A, Leckband D, Martins MCL. *Helicobacter pylori* adhesion to gold, hydrophilic and hydrophobic self-assembled monolayers (SAMs). XXIst International Workshop on Helicobacter and related bacteria in chronic digestive inflammation and gastric cancer. 18-20 September 2008. Riga, Letónia.

27. Goncalves, R, Martins, MCL, Almeida-Porada, G, Barbos, MA, "Development of Nanostructured Surfaces to Induce Apoptosis of Leukemic Cells", 5º Simpósio Imuno-Hematologia, Porto,3-4 July, 2008, Porto, Portugal.

26. Martins MCL, Ochoa-Mendes V, Barbosa JN, Curtin SA, Ratner BD and Barbosa MA. Effect of an immobilized heparin-binding peptide on blood deheparinization. 5º Simpósio Imuno-Hematologia, Porto,3-4 July, 2008, Porto, Portugal.

25. Goncalves, R, Martins, MCL, Almeida-Porada, G, Barbosa, MA, "Development of Nanostructured Surfaces to Induce Apoptosis of Leukemic Cells", 9th Advanced Summer Course in Cell-Material Interactions, 16-20 June, 2008, Porto, Portugal.

24. Martins MCL, Ochoa-Mendes V, Barbosa JN, Curtin SA, Ratner BD and Barbosa MA. Molecularly Designed Surfaces for Blood Deheparinization: Effect on the Adhesion of Human Leukocytes. 9th Advanced Summer Course in Cell-Material Interactions, 16-20 June, 2008, Porto, Portugal.

23. Freitas SC, Barbosa MA and Martins MCL. Immobilization of thrombin inhibitors on self-assembled monolayers (SAMs). 9th Advanced Summer Course in Cell-Material Interactions, 16-20 June, 2008, Porto, Portugal.

22. Maciel J, Martins MCL, Barbosa MA. Stability of self-assembled monolayers through time. 9th Advanced Summer Course in Cell-Material Interactions, 16-20 June, 2008, Porto, Portugal.

21. Parreira P, Reis CA, Magalhães A, Leckband D, Martins MCL. Kinetics of *Helicobacter pylori* Adhesion to Gold and EG4-SAMs. 9th Advanced Summer Course in Cell-Material Interactions, 16-20 June, 2008, Porto, Portugal.

20. Goncalves, R, Martins MCL, Almeida-Porada G, Barbosa MA, "Functionalization of Self-Assembled Monolayers with the repeated unit of Notch ligands", 8th World Biomaterials Congress, 28th May - 2nd June 2008, Amsterdam, The Netherlands.

19. Martins MCL, Curtin S, Freitas S, Salgueiro P, Ratner BD, Barbosa MA. Immobilization of poly(lysine, leucine) on EG4-terminated SAMs: Effect of peptide concentration on blood

deheparinization. 8th World Biomaterials Congress, 28th May - 2nd June, 2008, Amsterdam, The Netherlands.

18. Freitas SC, Barbosa MA and Martins M.C.L Immobilization of thrombin inhibitors on self-assembled monolayers (SAMs). 8th World Biomaterials Congress, 28th May - 2nd June, 2008, Amsterdam, The Netherlands.

17. Gonçalves IC, Martins MCL, Ratner BD and Barbosa MA. Influence of Plasma Proteins in Leukocyte Adhesion to Self-Assembled Monolayers. 8th World Biomaterials Congress, 28th May - 2nd June, 2008, Amsterdam, The Netherlands.

16. Maciel J, Martins MCL and Barbosa MA. The influence of cell culture media in the stability of self-assembled monolayers. 8th World Biomaterials Congress, 28th May - 2nd June, 2008, Amsterdam, The Netherlands.

15. Azevedo R, Martins MCL and Barbosa MA. Static and dynamic protein adsorption on SAMs. 21st European Conference on Biomaterials, 09-13th September 2007, Brighton, UK.

14. Gonçalves IC, Martins MCL, Barbosa MA, Naeemi E, Ratner BD. Modulation of platelet adhesion and activation by selective adsorption of proteins to self-assembled monolayers. BioSurf VII. August 2007, Zurich, Switzerland.

13. Martins MCL,Curtin SA, Freitas SC, Salgueiro P, Ratner BD, Barbosa MA. Engineering surfaces for blood deheparinization using an heparin-binding peptide. BioSurf VII. August 2007, Zurich, Switzerland.

12. Salgueiro P, Barbosa MA, Martins MCL. Competitive adsorption studies of heparin and blood proteins on self-assembled monolayers (SAMs). 8th Advanced Summer Course in Cell-Materials Interactions: Inflammation in tissue repair and regeneration,June 2007, Porto, Portugal.

11. Freitas SC, Barbosa MA, Martins MCL. Immobilization of thrombin inhibitors on self-assembled monolayers (SAMs. 8th Advanced Summer Course in Cell-Materials Interactions: Inflammation in tissue repair and regeneration, June 2007, Porto, Portugal.

10. Gonçalves R, Martins MCL, Almeida-Porada G, Barbosa MA. Influence of the surface on leukemic cell behavior: preliminary work. 8th Advanced Summer Course in Cell-Materials Interactions: Inflammation in tissue repair and regeneration, June 2007, Porto, Portugal.

9. Salgueiro P, Barbosa MA, Martins MCL. Molecularly designed surfaces for selective heparin adsorption. II Encontro Nacional de Pós-Graduação em Ciências Biológicas, June 2007, Porto, Portugal.

8. Barbosa JN, Martins MCL, Freitas SF, Águas AP and Barbosa MA. Adhesion of Human Leukocytes on Mixtures of Hydroxyl- and Methyl-Terminated Self-Assembled Monolayers: Effect of Blood Protein Adsorption 20th European Conference on Biomaterials, September 27th – October 1st, 2006, Nantes - France.

7. Barrias CC, Martins MCL, Bidarra S, Almeida-Porada G, Barbosa MA, Granja PL. Mixed self-assembled monolayers as substrates for the culture of human mesenchymal stem cells. 20th European Conference on Biomaterials, September 27th – October 1st, 2006, Nantes - France.

6. Gonçalves IC, Martins MCL, Barbosa MA, Naeemi E, Ratner BD. Albumin selective and reversible adsorption to EG4-C18 SAM. 6th Advanced Course in Cell-Material Interactions at Molcular Level, 20-24 June, 2005, Portugal.

5. Cordeiro AL, Gonçalves IC, Martins MCL, Barbosa MA. Protein adsorption on polyelectrolyte multilayers. 6th Advanced Course in Cell-Material Interactions at Molcular Level, 20-24 June, 2005, Portugal.

4. Rodrigues S, Martins MCL, Barbosa M. Fibrinogen adsorption and platelet adhesion onto mixtures of methyl and hydroxyl terminated self-assembled monolayers. European Society for Biomaterials Conference,11-15 September 2005, Sorrento, Italy.

3. Serro AP, Colaço R, Brogueira P, Martins MC, Saramago B. Influence of albumin adsorption on the tribology of UHMWPE against counterfaces of alumina and Co28Cr6Mo. European Society for Biomaterials Conference,11-15 September 2005, Sorrento, Italy.

2. Martins MCL, Ratner BD and Barbosa MA. "Protein Adsorption on Mixtures of Hydroxyl- and Methyl-Terminated Alkanethiol Self-Assembled Monolayers", 17th European Conference on Biomaterials, September 2002, Barcelona, Spain.

1. Martins MCL, Wang D, Ji J, Feng L and Barbosa MA. "Cibacron Blue immobilisation onto HEA and HEMA surfaces in order to increase albumin adsorption", 5th Portuguese Conference on Biomedical Engineering (BioEng´ 2000), May 2000, Coimbra, Portugal.

EDUCATIONAL ACTIVITIES (LECTURER IN UNDERGRADUATE AND POST-GRADUATE PROGRAMS)

Since 2009*:* Integrated Master in Bioengineering at ICBAS (*Instituto de Ciências Biomédicas Abel Salazar, UPorto) and FEUP (Faculdade de Engenharia, UPorto).*
Courses:
- Molecular Biointerfaces, ICBAS (since 2013)
- Nanotechnology in Health, ICBAS (2013-2015)
- Nanomedicine, FEUP (2010-2013*)
- Nanostructured Materials, ICBAS (2009-2013*)

**restructuring of the course*

Since 2013: Advanced Experimental Techniques Course at BiotechHealth - International Doctoral Program in Molecular and Cellular Biotechnology Applied to Health Sciences, *ICBAS, UPorto*.

Since 2009: GABBA: Tissue Engineering module (*Instituto de Biologia Molecular e Celular (IBMC), UPort*o)

OTHER SCIENTIFIC ACTIVITIES

ADVANCED TRAINING (selected)

- EMBO Laboratory Management Course: Research Leadership for Group Leaders 3-6 Apr 2017, Heidelberg-Germany

Member of the Evaluation Panels

- French Foundation for Medical Research (FRM - Fondation pour la Recherche Médicale) for Projects in Regenerative Medicine (2021/2022)
- Portuguese Foundation for Science and Technology (FCT) for projects in the scope of transnational researcher mobility - since 2017
- Portuguese Foundation for Science and Technology (FCT) for PhD and Post-Doc scholarship

attribution in the area of: i) Nanotecnologia (2014); ii) Bioengenharia e Biotecnologia (2013); iii) Ciências da Saúde (2011, 2012)

Referee

Referee of several journals in biomedical engineering area: Acta Biomaterialia/Biomaterials; Journal of Biomedical Materials Research A; Journal of Materials Science: Materials in Medicine; Journal of the Royal Society Interface; Langmuir; Biomatter; Colloids and Surfaces B: Biointerfaces; Drug Delivery

Member of Juries:

PhD Thesis:

- Oct 2023: Tiago Miguel Castro Costa; Antimicrobial flexible coating material for the car sharing segment of the automotive industry. Doutoramento em Ciências da Saúde Escola de Medicina da Universidade do Minho.
- May 2023: Francisca Oliveira Mesquita Diniz; Innovative Nanoparticles for Targeted Therapy Delivery in Gastrointestinal Cancer*.* Programa Doutoral em Ciências Biomédicas; Instituto de Ciências Biomédicas Abel Salazar; *Universidade do Porto (ICBAS-UP).*
- April 2023: Pedro Jorge da Silva Carneiro; Electrochemical immunosensors for detection of neurodegenerative diseases biomarkers*.* Doutoramento em Engenharia química e Biológica*; Faculdade de Engenharia, Universidade do Porto (FEUP).*
- February 2020: Marta Alexandra Rodrigues Casanova; Surface biofunctionalization of polycaprolactone fibrous meshes for skeletal and neural tissue advanced therapies. *Programa Doutoral em Engenharia de Tecidos, Medicina Regenerativa e Células Estaminais; Universidade do Minho (UM).*
- December 2017: Ana Adelaide Direito Sadio; Delivery of siRNAs directed to CDX2: a strategy to revert gastric intestinal metaplasia. *Programa Doutoral em Medicina e Oncologia Molecular; Faculdade de Medicina, Universidade do Porto (FMUP).*
- October 2017: Carla Marina Pereira Gomes; Functionalized nanoparticles for targeted gene delivery to the nervous system. *Programa Doutoral em Engenharia Biomédica, Faculdade de Engenharia, Universidade do Porto (FEUP).*
- July 2015: Joana Isabel da Costa Antunes; Poly(γ-glutamic acid) (γ-PGA) and γ-PGA/chitosan polyelectrolyte complexes for cartilage regeneration. *Programa Doutoral em Engenharia Biomédica, Faculdade de Engenharia, Universidade do Porto (FEUP).*
- February 2015: Daniela Sofia Dias Ferreira; Molecularly designed self-assembling matrices for applications in regenerative medicine. *Programa Doutoral em Engenharia de Tecidos, Medicina Regenerativa e Células Estaminais; Universidade do Minho (UM).*
- December 2014: Alexandre Filipe Leitão; Development of vascular grafts of bacterial cellulose"; *Programa Doutoral em Engenharia Biomédica; Universidade do Minho (UM).*
- December 2013: Catarina de Almeida Custódio; Immobilization of biomolecules into biodegradable polymeric based substrates for selective recruitment and adhesion of cells for tissue engineering applications; Programa Doutoral em Engenharia de Tecidos, Medicina Regenerativa e Células Estaminais; Universidade do Minho (UM).
- April 2012: Joana Maciel Soares; Design of novel bone regenerative therapeutic strategies based on macrophage released factores: from model surfaces to an in vivo delivery system; *Programa Doutoral em Engenharia Biomédica, Faculdade de Engenharia, Universidade do Porto (FEUP).*
- December 2008: Sofia de Medina Aires Martins; Development of quantitative microparticle-based assays for DNA hybridization; PhD in Biotechnology*; Instituto Superior Técnico;*

Universidade de Lisboa (ISTL)

- May 2007: Susana Sousa Mendes de Freitas; Albumin and fibronectin adsorption and osteoblast adhesion on titanium oxides; PhD in *Engenharia Metalurgica e de Materiais; Faculdade de Engenharia, Universidade do Porto (FEUP).*

MSc Thesis:

- October 2020: Pedro Costa. Nanoplatforms role in bacterial infections: design and development of new delivery systems and membrane mimetic models. Integrated Master in Bioengineering (Specialization in Molecular Biotechnology); ICBAS, *Universidade do Porto.*
- October 2017: Marta Pereira Pinheiro: Studies of interphase formation between biomolecules and metal and oxide surfaces in aqueous environment. Integrated Master in Bioengineering, *Faculdade de Engenharia, Universidade do Porto (FEUP).*
- January 2013: Mariana Moreira Barbosa; "Controlled release of tethered peptides from alginate hydrogels via enzymatic linker degradation"; *MSc em Engenharia Biomédica; Universidade Católica Portuguesa – Escola Superior de Biotecnologia, Porto*

Organization of Scientific Meetings

- Atomic Force Microscopy applied to Life Sciences | 3rd Ed. **25-27 October 2023** | i3S – instituto de Investigação e Inovação em Saude, Universidade do Porto, Porto, PT, Co-chair
- Bio2SkinAdvanced webinar: Benefits of the new generation of adhesives on the treatment of wounds" (20 Jun 2023)
- MOBILIsE Launch event: Molecular Bioengineering: Challenges in Industrial and Clinical Translation (27-Jan 2023) / i3S – Instituto de Investigação e Inovação em Saúde; Porto, Portugal (Chair)
- 31st Conference of the European Society for Biomaterials in Porto, Portugal, September 5-9, 2021. Co-Chair (https://esb2021.org/)
- Course Atomic Force Microscopy applied to Life Sciences | 2nd Ed. 6-8 November 2019 | i3S – instituto de Investigação e Inovação em Saude, Universidade do Porto, Porto, PT, Co-chair
- 6th China-Europe Symposium on Biomaterials in Regenerative Medicine – CESB2017, May 21-24, 2017, Porto, Portugal - Symposium Co-Chair
- Engineered Surfaces for Protein-Biomaterial Interactions – Module on the Marie Curie project IB2; 7-18 2013; Porto (Coordinator of the Training Program).
- 10th Advanced Course on Cell-Materials Interactions. Self-Assembly: from Nature to Clinics; 22-26 June 2009; Porto, Portugal – Organizing Committee;
- 9th Advanced Course on Cell-Materials Interactions. Bioinspired Matrices for Tissue Regeneration; 16-20 June 2008; Porto, Portugal – Organizing Committee;
- 8th Advanced Course on Cell-Materials Interactions. Inflammation in Tissue Repair and regeneration; 18-22 June 2007; Porto, Portugal – Organizing Committee & Coordinator of the Topic B of Lab Session (Effect of Surface Chemistry on Human Leukocyte Adhesion);
- 7th Advanced Course on Cell-Materials Interactions. Regenerative Medicine; 19-23 June 2006; Porto, Portugal – Organizing Committee;
- 6th Advanced Course on Cell-Materials Interactions at Molecular Level; 20-24 June 2005; Porto, Portugal –Scientist in Charge;

- 5th Advanced Course on Cell-Materials Interactions. 5-9 July 2004; Porto, Portugal – Organizing Committee;

Others:

2003-2006: INEB coordinator of the program: Science in Summer Holidays (Ocupação Científica de Jovens nas Férias);

1998: Program of instruction in "Principles of Radiation Protection" at University of Washington, Seattle, USA

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