Elisabetta CAMPODONI

Personal data

Birthday: june 18th 1990
Nationality: Italian
E-mail: elisabettacampodoni@gmail.com
PEC: elisabettacampodoni@pec.it

Current Position

February 2022 to present:

Research fellow at the Institute of Science and Technology for Ceramics - National Research Council of Italy (ISTEC-CNR) Prot. ISTEC-CNR N. 0000143 of 04.02.2022

The research theme is 'Biologically-inspired processes for the design and development of nanostructured and multifunctional biomaterials'

Address: Via Granarolo 64, 48018 - Faenza (RA) Italy
Phone (Office): + 39 0546 699 761
E-mail: elisabetta.campodoni@istec.cnr.it
Home page: www.istec.cnr.it

Education

November 2015 – October 2018

PhD student in Materials Science and Technology (XXXI cycle) at the University of Parma in collaboration with ISTEC-CNR of Faenza (prot. 101260 of 03.11.2015), Dr. Anna Tampieri's Biomaterials research group. Tutor Monica Sandri.

Development of the project entitled 'Design and Development of bio-hybrid multifunctional materials for the regenerative medicine'. **PhD thesis** defended on 15.03.2019.

November 2014

National qualification test for Professional Chemist (section A) at the University of Bologna.

July 2014

Master Degree in Industrial Chemistry, LM-71, University of Bologna (110/110). Thesis entitled "Synthesis and characterization of biocompatible nanosystems for drug delivery in the treatment of Alzheimer." Conducted at department of Industrial Chemistry 'Toso Montanari'.

July 2012

Bachelor degree in Chemistry of Materials and Ceramics Technologies, L-27, University of Bologna (106/110). Thesis entitled "Studies of molecular characterization within REACH regulation: literature research; 'in silico' methods QSAR; analytical methods" conducted at Eurocolor SPA, Castelbolognese.

Professional experience

June 2020 - February 2022: **Researcher** (T.D.) at the Institute of Science and Technology for Ceramics - National Research Council of Italy (ISTEC-CNR) prot. ISTEC-CNR N. 0001051 of 08.06.2020

June 2020 - February 2022: **Scientific Responsible** of the Laboratory of Synthesis of Biomaterials at ISTEC-CNR of Italy. Prot. ISTEC-CNR N. 0001068 of 09.06.2020.

November 2018 - May 2020: **Research fellow** at the Institute of Science and Technology for Ceramics - National Research Council of Italy (ISTEC-CNR) Prot. ISTEC-CNR N. 0002067 of 02.10.2018.

October 2018

Research stage at the Department of Biomedical Engineering, University of West Attica, Athens, Greece; it was within the European project H2020-MSCA-RISE-2014 "VIVOIMAG". The research theme was the development and characterization of bone implant made of hydroxyapatite (HA) mineralized on Type I Collagen fibers functionalized with magnetic nanoparticles (MNPs) to follow for the first time the integration and cell differentiation activity in bone tissue bioreactors in vitro and in grafts in vivo using existing non-invasive magnetic resonance imaging techniques (MRI).

March 2018 - April 2018

Research stage at the Institute de Catálisis y Petroleoquímica of the Consejo Superior de Investigaciones Científicas (ICP-CSIC), Madrid, Spain; it was within the European project H2020-MSCA-RISE-2014 "VIVOIMAG". The research theme was the development and characterization of bone implant made of hydroxyapatite (HA) mineralized on Type I Collagen fibers functionalized with magnetic nanoparticles (MNPs) to follow for the first time the integration and cell differentiation activity in bone tissue bioreactors in vitro and in grafts in vivo using existing non-invasive magnetic resonance imaging techniques (MRI).

June 2015 - October 2015

Research fellow at ISTEC-CNR in Faenza. The research theme is 'Design and development of bio-hybrid composites and multifunctional nanosystems for regenerative medicine and theranostic' in the research program SMILEY "Smart nanostructures devices hierarchically assembled by bio-mineralization processes ". Prot. ISTEC-CNR N. 0001355 del 29.05.2015.

March 2015 - May 2015

Formative period after Master degree at Fin-Ceramica S.p.A in Faenza. The stage, carried out in collaboration with ISTEC-CNR, was based on the study of bioinspired process of biomineralization to develop hybrid composites formed by a mineral phase and a polymeric phase.

September 2013 - July 2014

Formative period during Master degree at Laboratory of Organic Chemistry in the department of Industrial Chemistry Toso Montanari at the University of Bologna.

The stage led by the Prof. Mauro Comes Franchini was based on the synthesis and the characterization of polymeric micelles for drug delivery containing drugs or metallic nanoparticles.

March 2012 - July 2012

Formative period at Eurocolor SPA in Castelbolognese. The stage was based on the regulation REACH and the quality control of the products.

Reviewer of the following international journal:

- ✓ BioMed Research International
- ✓ Acta Biomaterialia

- ✓ Advances in Materials Science and Engineering
- ✓ Stem cells international
- ✓ International Journal of Molecular Sciences
- ✓ Scientific report
- ✓ Nanomaterials

2015 to present:

Scientific operator of the research activity on the development of bioceramic and/or polymeric composites for Regenerative Medicine at the Department of Bioceramics and Bio-hybrid Composites of ISTEC-CNR in the following funded European and National Research Projects and R&D contracts:

1. Key personnel in the Project ProtecTHA "Filtri solari innovativi per una PROTEzione più sicura ed ecosostenibile: le titanio-apatiti (TiHAPol) come filtri fisici di raggi UV" Bando MiSE per il cofinanziamento di Proof of Concept (PoC) 2020. Programma CNR AMICO, programma di incentivo e sostegno alle attività di Applicazione, MIglioramento e COstruzione dei trovati brevettati. (2021-2022) Budget 74.000 €. Assegnazione Prot. CNR 0001103/2021 del 11/01/2021, Accettazione Prot. CNR-ISTEC N.0000009/2021 del 11/01/2021.
2. Key personnel in the Project financed from the bank Fondazione del Monte di Bologna e Ravenna. Title: Biomateriali antibiotici e nuovi dispositivi medici per "rapid infection mapping" e trattamento di lesioni cutanee cronicizzate. Partners: Alma Mater Studiorum Università di Bologna (Dipartimento di Chimica Ciamician e FaBit). (2020-2022) Total Budget 24.000 € Autorizzazione delega Dipartimento RS DSCTM 485 del 25/05/2020 Prot. CNR-ISTEC N. 0001030/2020 del 03/06/2020. Convenzione Prot. CNR-ISTEC N. 0000010/2021 del 11/01/2021.
3. Key personnel in the development of a new generation of (Heat and Moisture Exchange Diagnostic Filter) HMEf devices, inspired by the natural composition of our respiratory system, totally biodegradable and produced by waste from the food chain. The research activity of ISTEC-CNR is within the POR-FESR Project **MEDFil** *Filtri multifunzionali con elevate capacità di scambio di calore ed umidità (HMEf) e per l'identificazione precoce di infezioni delle vie respiratorie*. Cofinanced from Emilia-Romagna Region with European Fund for Regional Development "Bando per progetti di ricerca industriale strategica rivolti agli ambiti prioritari della Strategia di Specializzazione Intelligente, **PG/2018/631599**, **POR-FESR** 2014-2020, Asse 1, Azione 1.2.2, Ambito di specializzazione S3 - Industrie Della Salute E Del Benessere, Obiettivo strategico - Innovazione tecnologica al servizio della deospedalizzazione" (2019-2021) Total Budget: 1.117.125 €, ISTEC Budget: 575.000 €. Prot. ISTEC-CNR N. 0000483 of 26.02.2020.
4. Key personnel in the POR-FESR Project **Mat2Rep** *Biomateriali multifunzionali per l'autoriparazione di tessuti e organi.* Cofinanced from Emilia-Romagna Region with European Fund for Regional Development "Bando per progetti di ricerca industriale strategica rivolti agli ambiti prioritari della Strategia di Specializzazione Intelligente, **PG/2018/626605, POR-FESR** 2014-2020, Asse 1, Azione 1.2.2, Ambito di specializzazione S3 - Industrie Della Salute E Del Benessere, Obiettivo strategico - Sviluppo e testing di terapie e strumenti per il "self-repair" mediante dispositivi elettromedicali e medicali, biomateriali, derivati tissutali, farmaci e prodotti combinatori" (2019-2021) Total Budget: 1.117.015,00 €, ISTEC Budget: 84.000 €. . Prot. ISTEC-CNR N. 0000483 of 26.02.2020.
5. Key personnel in the synthesis and characterization of superparamagnetic iron-doped hydroxyapatite nanoparticles (FeHA-NPs) obtained through a neutralization process suitable to produce hydroxyapatite nanoparticles very similar to the mineral phase of human bones. They were involved in the **SCREENED** project with the role of entering cells making them magnetic and therefore remotely guidable within the thyroid model with a magnet. The research activity of ISTEC-CNR is within the European Project SCREENED-A multistage model of thyroid gland function for screening endocrine-disrupting chemicals. Project: H2020-SC1-2018-Single-Stage-RTD-RIA 825745 (2019-2023) Total budget: € 5 655 088,75. Prot. ISTEC-CNR N. 0000483 of 26.02.2020.

6. Key personnel in the development of bone implant made of hydroxyapatite (HA) mineralized on Type I Collagen fibers functionalized with magnetic nanoparticles (MNPs) to follow for the first time the integration and cell differentiation activity in bone tissue bioreactors in vitro and in grafts in vivo using existing non-invasive magnetic resonance imaging techniques (MRI). The research activity of ISTEC-CNR is within the European project VIVOIMAG. Project: H2020-MSCA-RISE-2014 "**VIVOIMAG**" 645757 (2015-2019). Total budget: € 472 500. Prot. ISTEC-CNR N. 0000483 of 26.02.2020.
7. Key personnel in the synthesis and characterization of nanomaterials such as ions-doped hydroxyapatite alone and biomineralized on different polymeric matrix that represent real world needs of industry, regulators and further stakeholders working in the field of biomaterials ranging from TRL 4 and 9. The research activity of ISTEC-CNR in within the European Project **BIORIMA**: Biomaterial Risk Management. Prot. ISTEC-CNR N. 0002537 of 03.12.2018.
   Project: H2002-NMBP-2016-2017 760928 (2017-2021), Institute of occupational medicine Project Coordinator. Total budget: 7.999.981 €.
8. Key personnel of the development of inventive long lasting make-up and sun-care products of new generation based on bio-polymers and apatitic phases in the R&D Contract of ISTEC-CNR with **INTERCOS S.p.A**. (2016-2018) Prot. ISTEC – CNR N. 0003158 del 24.10.2016. (Budget: EUR 100.000).
9. Key personnel of the development and characterization of innovative bio-hybrid bio-mimetic scaffold, for bone and osteochondral regeneration in the R&D Contract of ISTEC-CNR with Finceramica S.p.A. (CO-2017-16) Prot. ISTEC – CNR N. 0003649 del 07.10.2017 (Total Budget: EUR 80.000).
10. Key personnel of the design and development of polymeric nanocomposites, involving cellulose nanofibrils as biocompatible reinforcing phase, for tissue regeneration in the research activity of ISTEC-CNR of **NorCel**: The Norwegian Nanocellulose Technology Platform. Research Council of Norway. Prot. ISTEC-CNR N. 0002536 of 03.12.2018.
    Contr.Nr.228147/O70 (2013-2018) Coordinator: Syverud K. PFI Norwegian Institute. Total budget: 3.035.000 €. ISTEC Budget: 85.500 €.
11. Responsible of the development of biomineralization processes performed on different polymeric phases for application in EHS and Regenerative Medicine in the research activity of ISTEC-CNR in the European Project **SMILEY**: Smart Nano-structured Devices Hierarchically Assembled by Mineralization Processes. Prot. ISTEC-CNR N. 0002544 of 04.12.2018
    Project: NMP.2012.1.4-2 FP7-CP-FP 310637 (2013-2015), ISTEC-CNR Project Coord. Total budget: 3.996.000 €. ISTEC Budget: 1.417.360 €.

2015 to present:

- Training and support to the scientific activity of B.Sc., M.Sc. and Ph.D. students at ISTEC-CNR: Co-relator of **1 B.Sc. thesis** at the University of Bologna, Faculty of Biomedical Engineering. Co-relator of **1 M.Sc. thesis** at the University of Parma, Faculty of Biotechnology. Co-relator of **4 PhD thesis** at the University of Parma, Faculty of Chemistry
- Dissemination to children and students during institute open days. Prot. ISTEC-CNR N. 0001144 of 17.05.2018.
- Yearly seminar for Ph.D. students in Chemistry: "smart nature-inspired bioceramics and hybrid composites for regenerative medicine", general topic: "Processes and applications of ceramics", University of Bologna, Faculty of Industrial Chemistry, 2019.

2015 to present:

Supporting in the writing of research product at ISTEC-CNR:

- Italian patent n. 102017000022625. Sandri Monica, Sprio Simone, Tampieri Anna. "Filtro per lo scambio di calore e umidità per applicazione in campo medicale e procedimento per la sua produzione." Registration date: 28/02/2017.
- Italian patent n. 102016000023614. Sandri Monica, Sprio Simone, Tampieri Anna. "Filtro solare fisico costituito da idrossiapatite sostituita in una matrice organica." Registration date: 07/03/2016.

From November 2020:

Commission member for candidates' selection for fellowships:

- Within fellowship call CNR-ISTEC n° 073.20.03.12 of 13.10.2020. Prot. ISTEC-CNR N. 0002246 of 04.11.2020.
- Within fellowship call CNR-ISTEC n° 073.20.02.16 of 21.12.2020. Prot. ISTEC-CNR N. 0000038 of 14.01.2021.

Technical reports

- Technical report RT2012/04 Prot. ISTEC-CNR N. 0000076 of 19.01.2021 within R&D contract with GreenBone Ortho Srl (CO-2019/07). Campodoni Elisabetta, Sprio Simone. "Ottenimento di profili di rilascio di vancomicina".
- Technical report Prot. ISTEC-CNR N. 0002003 of 02.10.2019 within R&D contract with GreenBone Ortho Srl (CO-2018/10). Campodoni Elisabetta, Sprio Simone. "Studi di rilascio di farmaco (vancomicina) da scaffolds Greenbone".
- Technical report Prot. ISTEC-CNR N. 0002231 of 26.10.2018 within R&D contract with INTERCOS SpA (CO-2016/16). Campodoni Elisabetta, Sandri Monica. "Messa a punto di materiali ceramici utili per geometrie e dimensioni come "filler opachi" nelle formulazioni cosmetiche".
- Technical report within R&D contract with Finceramica SpA (CO-2017/16). Sandri Monica, Sprio Simone, Montesi Monica, Panseri Silvia, Campodoni Elisabetta, Gardini Davide, Preti Lorenzo. "Formulazione e caratterizzazione di materiali innovativi ceramici ed ibridi per l'ambito biomedicale".

Research Skills

1. Expertise on Material Science: synthesis methodologies and characterization to investigate biomimetic materials such as 3D scaffolds, hydrogel or beads for tissue regeneration. In particular, to observe the relation between micro- nano- structural properties and material application. 5 years of experience in the development of biocompatible and biomimetic materials formed by polymeric phase and, possibly, mineral phase. These are crosslinked to improve the stability and to create 3D porous scaffolds for tissue engineering and regenerative medicine. Development of polymeric and hybrid nanobeads for drug delivery and cancer therapy, in particular the hybrid nanobeads are paramagnetic thanks to a hydroxyapatite partially substituted. Development of polymeric porous filters with several applications from heat and moisture exchange to water purification.
2. Recent activities are focused on:

- development of bio-hybrid composites based on natural polymers (collagen, gelatin, alginate, chitosan, natural cellulosic fibers, fatty acids), mineralized with nanostructured biomimetic apatites developed following biologically inspired processes to obtain 3D structures or beads;
- development of polymeric functionalized scaffolds, obtained through blending processes, for the regeneration of not mineralized tissue like cardiac tissue, tendon, ligament, cartilage;

- development of 3D structures suitable as HMEf devices fully biodegradable and low cost obtained starting form waste material by green processes;
- development of intrinsically superparamagnetic iron doped hydroxyapatite mineralized on different polymeric matrices suitable for applications in tissue regeneration, nanomedicine and theranostic (imaging with MRI, hyperthermia therapy);
- development of doped-hydroxyapatite for application in cosmetic field: SPF booster in sunscreen lotions, raw materials for male-up formulations.

3. Expertise on several techniques useful for Chemical-Physic-Morphological characterization of the developed materials such as XRD, FT-IR, ICP, UV-VIS, TG-DSC, SEM-FEG, ESEM-EDS, DMTA, DLS, magnetic susceptibility.
4. Preliminary knowledge on biobusiness obtained during the Comprehensive advanced program on BioEntrepreneurship "Biobusiness" in Lugano, 12-16.11.2018

Membership

Since 2016: Member of the Italian Ceramic Society

Since 2016: Member of the Italian Society of Biomaterials

Since 2017: Member of the European Society of Biomaterials

Awards and other

2018

Winner of a **scholarship** to participate to "Comprehensive advanced program on BioEntrepreneurship "Biobusiness" in Lugano, 12-16.11.2018

2017

Winner of the **SIB Travel Grant** for the ESB2017 Conference (Athen) with a presentation entitled *"Bio-hybrid matrix-based aligned 3D porous dentin-like scaffold"* Campodoni E, Dozio S. M, Panseri S, Montesi M, Tampieri A and Sandri M.

2016

Winner of the **SIB** Competition 2016 for the **Best oral presentation** entitle "*Gelatin/Nanocellulose Polymeric Blends to Develop 3D Scaffolds for Tissue Regeneration"* Campodoni E, Ramìrez-Rodriguez GB, Elsabahy ARSM, Heggset EB, Mustafa K, Syverud K, Tampieri A, Sandri M.

Publications

Author of more than 25 peer-reviewed papers published on international journals: **H-index = 13, i-10 index = 13, total citations > 290** [source: Scopus].
Author of 3 Book Chapters in the field of biomaterials for Bone Regeneration

Submitted:

1. Campodoni E, Montanari M, Artusi C, Bassi G, Furlani F, Montesi M, Panseri S, Sandri M, Tampieri A. *Calcium-Based Biomineralization: A Smart Approach for the Design of Novel Multifunctional Hybrid Materials*. **Journal of Composites Science.** 2021; 5(10):278.
2. Mulazzi M, Campodoni E, Bassi G, Montesi M, Panseri S, Bonvicini F, Gentilomi GA, Tampieri A, Sandri M. *Medicated Hydroxyapatite/Collagen Hybrid Scaffolds for Bone Regeneration and Local Antimicrobial Therapy to Prevent Bone Infections*. **Pharmaceutics**. 2021; 13(7):1090. **IF 6.321**

3. Ruffini A, Sandri M, Dapporto M, Campodoni E, Tampieri A, Sprio S. *Nature-Inspired Unconventional Approaches to Develop 3D Bioceramic Scaffolds with Enhanced Regenerative Ability*. **Biomedicines**. 2021; 9(8):916. **IF 6.081**
4. Parente R, Possetti V, Schiavone ML, Campodoni E, Menale C, Loppini M, Doni A, Bottazzi B, Mantovani A, Sandri M, Tampieri A, Sobacchi C, Inforzato A. *3D Cocultures of Osteoblasts and Staphylococcus aureus on Biomimetic Bone Scaffolds as a Tool to Investigate the Host–Pathogen Interface in Osteomyelitis*. **Pathogens**. 2021; 10(7):837. **IF 3.492**
5. Campodoni E, Velez M, Fragogeorgi E, Morales I, de la Presa P, Stanicki D, Dozio SM, Xanthopoulos S, Bouziotis P, Dermisiadou E, Rouchota M, Loudos G, Marín P, Laurent S, Boutry S, Panseri S, Montesi M, Tampieri A, Sandri M. (2021) *Magnetic and radio-labeled bio-hybrid scaffolds to promote and track in vivo the progress of bone regeneration.* **Biomaterials Science**, 2021, 9(22), pp. 7575–7590. **IF 6.843**
6. Borella G, Da Ros A, Borile G, Porcù E, Tregnago C, Benetton M, Marchetti A, Bisio V, Montini B, Michielotto B, Cani A, Leszl A, Campodoni E, Sandri M, Montesi M, Bresolin S, Cairo S, Buldini B, Locatelli F, Pigazzi M. *Targeting mesenchymal stromal cells plasticity to reroute acute myeloid leukemia course*. **Blood**. 2021, 138(7), pp. 557–570. **IF 17.794**
7. Bassi G, Panseri S, Dozio SM, Sandri M, Campodoni E, Dapporto M, Sprio S, Tampieri A, Montesi M. (2020) *Scaffold-based 3D cellular models mimicking the heterogeneity of osteosarcoma stem cell niche.* **Scientific Report,** 10.1,1-12. **IF 3.998**
8. Helgeland E, Rashad A, Campodoni E, Pedersen T, Sandri M, Rosén A, Mustafa K. (2020) Dual-crosslinked 3D printed gelatin scaffolds with potential for temporomandibular joint cartilage regeneration. **Biomedical materials IF 3.174**
9. Tampieri A, Sprio S, Sandri M, Campodoni E, Ruffini A, Mengozzi L, Panseri S. (2020) *Unconventional, Nature-Inspired Approaches to Develop Bioceramics for Regenerative Medicine*. **Reference Module in Materials Science and Materials Engineering.**
10. Campodoni E, Montanari M, Dozio S.M, Heggset E.B, Panseri S, Montesi M, Tampieri A, Syverud K, Sandri M. (2020) *Blending Gelatin and Cellulose Nanofibrils: Biocomposites with Tunable Degradability and Mechanical Behavior*. **Nanomaterials**, *10*, 1219. **IF 4.034**
11. Dellaquila A, Campodoni E, Tampieri A, Sandri M, *Design and Optimization of Hybrid Scaffolds for Osteochondral Regeneration by Factorial Design*. **Frontiers in Bioengineering and Biotechnology**. 8, 743. **IF 3.644**
12. Campodoni E., Dozio SM, Panseri S, Montesi M, Tampieri A, Sandri M. (2020) *Mimicking natural microenvironments: Design of 3D-aligned hybrid scaffold for dentin regeneration*. **Frontiers in Bioengineering and Biotechnology**. 8, 836. **IF 3.644**
13. Kovtun A, Campodoni E, Favaretto L, Zambianchi M, Salatino A, Amalfitano S, Navacchia ML, Casentini B, Sandri M, Palermo V, Melucci M (2020). *Multifunctional graphene oxide/biopolymer composite aerogels for microcontaminants removal from drinking water*. **Chemosphere.** 259:127501 **IF 5.34**
14. Carlström I E, Rashad A, Campodoni E, Sandri M, Syverud K, Bolstad A I, Mustafa K. (2020). *Cross-Linked Gelatin-Nanocellulose Scaffolds for Bone Tissue Engineering*. **Materials Letters**, 127326. **IF 3.019**
15. Tampieri A, Sandri M, Iafisco M, Panseri S, Montesi M, Adamiano A, Dapporto M, Campodoni E, Dozio SM, Degli Esposti L, Sprio S. (2019) Nanotechnological approach and bio-inspired materials to face degenerative diseases in aging. **Aging clinical and experimental research**, 1-17

16. Dellaquila A, Greco G, Campodoni E, Mazzocchi M, Mazzolai B, Tampieri A, Pugno NM, Sandri M. (2019). *Optimized production of a high-performance hybrid biomaterial: biomineralized spider silk for bone tissue engineering.* **Journal of Applied Polymer Science**. **IF 2.188**
17. Dozio SM, Montesi M, Campodoni E, Sandri M, Piattelli A, Tampieri A, Panseri S. (2019) *Differences in osteogenic induction of human mesenchymal stem cells between a tailored 3D hybrid scaffold and a 2D standard culture.* **Journal of Materials Science: Materials in Medicine**. 30.12: 136. **IF 2.467**
18. Bortolomai I, Sandri M, Draghici E, Fontana E, Campodoni E, Marcovecchio GE, Ferrua F, Perani L, Spinelli A, Canu T, Di Tomaso T, Sergi Sergi L, Esposito A, Lombardo A, Naldini L, Tampieri A, Hollander GA, Villa A and Bosticardo M. (2019) *Gene Modification and Three-Dimensional Scaffolds as Novel Tools to Allow the Use of Postnatal Thymic Epithelial Cells for Thymus Regeneration Approaches.* **Stem Cells Translational Medicine**. **IF 4.929.**
19. Sprio S, Campodoni E, Sandri M, Preti L, Keppler T, Mueller F, Pugno N, Tampieri A. (2018) *Graded multifunctional hybrid scaffold with superparamagnetic ability for periodontal regeneration.* **International Journal of Molecular Sciences**. 19.11 (2018): 3604. **IF 3.687**
20. Rashad A, Syverud K, Campodoni E, Suliman S, Mustafa K, Mustafa M, Sandri M, Pedersen T. (2018) Inflammatory Responses and Host Tissue Reactions to Wood-Based Nanocellulose Scaffolds. **Materials science and Engineering: C - In Press IF 5.08**
21. Campodoni E, Heggset EB, Elsabahy R.S.M A, Ramírez-Rodríguez GB, Mustafa B.E. K, Syverud K, Tampieri A, Sandri M. (2018) *Polymeric 3D scaffolds for tissue regeneration: evaluation of biopolymer nanocomposite reinforced with cellulose nanofibrils.* **Material science and Engineering: C**: 94 (2019): 867-878. **IF 5.08**
22. Menale C, Campodoni E, Palagano E, Mantero S, Erreni M, Inforzato A, Fontana E, Schena F, Van't Hof R, Sandri M, Tampieri A, Villa A, Sobacchi C. (2018) *MSC-seeded biomimetic scaffolds as factory of soluble RANKL in Rankl-deficient osteopetrosis*. **STEM CELLS Translational Medicine**. 10.1002/sctm.18-0085 **IF 4.929**
23. Krishnakumar G S, Gostynska N, Dapporto M, Campodoni E, Montesi M, Panseri S, Tampieri A, Kon E, Marcacci M, Sprio S, Sandri M. (2017). *Evaluation of different crosslinking agents on hybrid biomimetic collagen-hydroxyapatite composites for regenerative medicine.* **International Journal of Biological Macromolecules,** 106 (2018): 739-748. **IF: 3.671**
24. Gostynska N, Krishnakumar G S, Campodoni E, Panseri S, Montesi M, Sprio S, Kon E, Marcacci M, Tampieri A, Sandri M. (2017). *3D porous collagen scaffolds reinforced by glycation with ribose for tissue engineering application.* **Biomedical Material,** 12.5 (2017): 055002. **IF: 2.46**
25. Krishnakumar G S, Gostynska N, Campodoni E, Dapporto M, Montesi M, Panseri S, Tampieri A, Kon E, Marcacci M, Sprio S, Sandri M. (2017). *Ribose mediated crosslinking of collagen-hydroxyapatite hybrid scaffolds for bone tissue regeneration using biomimetic strategies;* **Materials Science and Engineering: C**, 77, 594–605. **IF 4.164**
26. Sprio S, Sandri M, Iafisco M, Panseri S, Adamiano A, Montesi M, Campodoni E, Tampieri A. (2016). *Bio-inspired assembling/mineralization process as a flexible approach to develop new smart scaffolds for the regeneration of complex anatomical region;* **Journal of the European Ceramic Society,** *36*(12), 2857-2867. **IF: 2.93**

27. Campodoni E, Adamiano A, Dozio S. M, Panseri S, Montesi M, Sprio S, Tampieri A. & Sandri M. (2016). *Development of innovative hybrid and intrinsically magnetic nanobeads as a drug delivery system*. **Nanomedicine**, 11(16), 2119-2130. **IF 5.005**

Chapter book

1. Campodoni E, Dozio SM, Mulazzi M, Montanari M, Montesi M, Panseri S, Sprio S, Tampieri A, Sandri M. (2019). *Biomimetic approaches for the design and development of multifunctional bioresorbable layered scaffolds for dental regeneration*. **Current Advances in Oral and Craniofacial Tissue Engineering**.
2. Preti L, Lambiase B, Campodoni E, Sandri M, Ruffini A, Pugno N, Tampieri A, Sprio S (2019). *Nature-inspired processes and structures: new paradigms to develop highly bioactive devices for hard tissue regeneration*. **Bio-Inspired Technology**. IntechOpen.
3. Campodoni E, Patricio T, Montesi M, Tampieri A, Sandri M, Sprio S (2018). *Biomineralization process generating hybrid nano and micro-carriers*. **Core-Shell Nanostructures for Drug Delivery and Theranostics**, (pp 19-42). Woodhead Publishing.

Oral presentations

1. WBC2020 virtual – 11th World Biomaterials Congress, Glasgow, 2020, *"Biomimetic scaffolds functionalized with magnetic nanoparticles: a new approach to follow the in-vivo bone regeneration"*.
2. ESB - 27th European Conference on Biomaterials, Athens (Greece), 2017 *"Bio-hybrid matrix-based aligned 3D porous dentin-like scaffold".*
3. SIB, Milano (Italy), 2017. "*Innovative hybrid and intrinsically magnetic nanobeads as drug delivery system.*
4. SIB, Ischia (Italy), 2016. "*Gelatine/Nanocellulose Polymeric Blends to Develop 3D Scaffolds for Tissue Regeneration".*

Poster presentation

1. DSCTM Conference Department 2019. *Following In Vivo Bone Regeneration Through A Magnetic Biomimetic Scaffold.*
2. 3rd international silk Conference, Trento (Italy), 2019. *"The role of Ti and Fe ions in the hydroxyapatite; can improve its ability as physical filter in sunscreen formulation?"*
3. ESB – 28th European Conference on Biomaterials, Maastricht (The Netherlands), 2018 "*Hybrid polymer composite made from gelatin and cellulose nanofibrils: a nanobiomaterial with tunable degradability and mechanical performances".*
4. International School of Crystallization, ISC Granada, 2018. *"The role of Ti and Fe ions in the hydroxyapatite; can improve its ability as physical filter in sunscreen formulation?".*
5. Bioceramics29, Toulouse, France, 2017. *"Bio-hybrid matrix-based aligned 3D porous dentin-like scaffold".*
6. Materials.it 2016, Catania, Italy, 2016. "*Polymeric blend of gelatin and cellulose nanofibrils: a nanobiomaterial with controlled mechanical performances and degradability* ".
7. Biomineralization Gordon Conference, Girona (Spain), 2016. "*3D Porous Scaffolds with Oriented*

Microtubules designed for Dental Regeneration".

8. National Young Researchers' Forum on Material Science and Technology, Ischia (Italy), 2016. "*Gelatin/Nanocellulose Polymeric Blends to Develop 3D Scaffolds for Tissue Regeneration*".
9. International Conference on Nanotechnology in Medicine, Manchester UK, 2015. "*Development of Innovative Hybrid Magnetic Nanobeads as Drug Delivery System*".

Il presente Curriculum è reso sotto forma di dichiarazione sostitutiva di certificazione e di dichiarazione sostitutiva dell'atto di notorietà ai sensi degli artt. 46 e 47 del d.P.R. 445/2000. All'uopo il sottoscritto dichiara di essere consapevole della responsabilità penale prevista, dall'art. 76 del citato decreto per le ipotesi di falsità in atti e dichiarazioni mendaci ivi indicate.
Il sottoscritto autorizza il trattamento dei dati personali in esso contenuti e per le finalità connesse all'uso dello stesso ai sensi del d.lgs. n. 196/03 e successive modifiche e integrazioni.

Signature

February 28th 2022