



GIANLUCA CIDONIO

Date of birth:

Nationality: Italian

CONTACT

WORK EXPERIENCE

- **01/11/2019 – CURRENT** Rome, Italy
PostDoctoral Fellow Istituto Italiano di Tecnologia
- **01/04/2021 – 01/04/2023** Rome, Italy
AIRC ALDI Fellow AIRC-IIT
- **01/11/2019 – CURRENT** Southampton, United Kingdom
Visiting Research Fellow University of Southampton
- **11/2018 – 30/10/2019** Southampton, United Kingdom
EPSRC FELLOW University of Southampton

EDUCATION AND TRAINING

- **09/2015 – 19/10/2018** Southampton, United Kingdom
PhD Engineering University of Southampton
Website <https://www.southampton.ac.uk/>
- **01/11/2012 – 01/10/2014** Rome, Italy
MSc. Biomedical Engineering University of Rome "La Sapienza"
Website <https://www.uniroma1.it/it>
- **01/09/2009 – 31/10/2012** Rome, Italy
BSc. Clinical Engineering University of Rome "La Sapienza"
Website <https://www.uniroma1.it/it>
- **01/09/2013 – 01/09/2014** Philadelphia, United States
Global Exchange program Fellow Temple University
Website <https://www.temple.edu/>

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

Other language(s):

English

Listening C2
Reading C2
Writing C2

Spoken production C2
Spoken interaction C2

Spanish

Listening B1
Reading B1
Writing B1

Spoken production B1
Spoken interaction B1



DIGITAL SKILLS

Microsoft Excel | Microsoft Office | Matlab | Microsoft Word | Microsoft Teams | Fusion 360 CAD | COMSOL Multiphysics | Research and Grant Management | Excellent communication skills in Spanish and English | Teaching, explaining

ADDITIONAL INFORMATION

Communication and interpersonal skills

- **Docente a contratto "Ingegneria per la medicina rigenerativa" a.a. 2022/2023 - University of Rome "La Sapienza"**
- **Lead Demonstrator - Southampton 3D Printing Workshop, University of Southampton**
- **Science communication and public engagement**
 - Maker Faire Rome - The European Edition
 - Show at Palazzo delle Esposizioni (The science of Rome)
 - Southampton Roadshow, Thomas Hardy School (Dorchester, UK); Winchester Science Festival (Winchester, UK)

Honours and awards

- **2024 MTF Biologics**
OSTEOMimetic 3D MICROfluidic bioprinting of decellularised human bone and vascular allograft ink for skeletal regeneration (OSTEOMIMIC)
- **2023 ON Foundation**
Bioprinting meniscus implants harnessing microfluidic biofabrication technology to pattern density gradient porosity and biologics (BUBBLES)
- **2021 AIRC**
3D bioprinted model for the study of proliferation, migration and homing of metastasising breast cancer to bone tissue (3D breast-to-bone)
- **2018 EPSRC**
TOWARDS PRINTABLE LIVING BONE: Development and application of innovative natural and nanocomposite-based cell-laden scaffolds for in vivo skeletal regeneration
- **2013 University of Rome "La Sapienza"**
Global Exchange Program Sapienza-Temple
- **2022 Gruppo Italiano Staminali Mesenchimali (GISM)**
Young Investigator Award
- **2019 Italian Consulate UK**
Italy Made Me 2019 Award (for scientific merit of research in UK)
- **2018 Tissue Cells and Engineering Society (TCES) UK**
TCES Adam Curtis Collaboration Award

Publications

- **[Unravelling hierarchical patterning of biomaterial inks with 3D microfluidic-assisted spinning: a paradigm shift in bioprinting technologies](#)**

2023

S Mohammadi, G Cidonio, Frontiers in Biomaterials Science, 2

- **[Harnessing Biofabrication Strategies to Re-Surface Osteochondral Defects: Repair, Enhance, and Regenerate](#)**

2023



F Bini, S D'Alessandro, A Pica, F Marinozzi, G Cidonio; Biomimetics 8:260.

[Biomimetic 3D bioprinting approaches to engineer the tumor microenvironment](#) 2023

F Bini, [...] G Cidonio; Int J Bioprinting

[Microfluidic 3D printing of emulsion ink for engineering porous functionally graded materials](#)
2022

M Marcotulli, [...] G Cidonio and A Barbetta; Advanced Materials Technologies

[Modelling skeletal pain harnessing tissue engineering](#) 2022

L Iafrate, [...] G Cidonio; In vitro models

[Bioprinting stem cells: building physiological tissues one cell at a time](#) 2020

C Scognamiglio, A Soloperto, G Ruocco and G Cidonio; Am. J. Physiol. Physiol. 319 C465-80

[Revolutionizing agriculture: Harnessing nano-innovations for sustainable farming and environmental preservation](#)

2024

S Mohammadi, F Jabbari, G Cidonio, V Babaeipour; Pesticide Biochemistry and Physiology

[Rapid Production of Nanoscale Liposomes Using a 3D-Printed Reactor-In-A-Centrifuge: Formulation, Characterisation, and Super-Resolution Imaging](#)

2023

Y He, [...] G Cidonio, R Nunes Bastos, V Pereno, D Carugo; Micromachines

[Unlocking Neural Function with 3D In Vitro Models: A Technical Review of Self-Assembled, Guided, and Bioprinted Brain Organoids and Their Applications in the Study of Neurodevelopmental and Neurodegenerative Disorders](#)

2023

C D'Antoni, [...] G Cidonio, P Bezzi, F Cordella, S Di Angelantonio; Int J Mol Sci 24:10762

[Differences in the organization of interface residues tunes the stability of the SARS-CoV-2 spike-ACE2 complex](#)

2023

M Miotto, [...] G Cidonio, G Gosti, M Leonetti, G Ruocco, E Milanetti; Front Mol Biosci 10:1205919

[3D Co-Printing and Substrate Geometry Influence the Differentiation of C2C12 Skeletal Myoblasts](#)

2023

G Loi, [...] G Cidonio, N Marchesi, L Benedetti, G Ceccarelli, M Conti; Gels 9:595

[3D printing of inorganic-biopolymer composites for bone regeneration](#) 2022

D van der Heide, G Cidonio, M J Stoddart, M D'Este; Biofabrication 14 042003

[De Novo Design of Functional Coassembling Organic-Inorganic Hydrogels for Hierarchical Mineralization and Neovascularization](#)

2021



B O Okesola, [...] G Cidonio, [...] R O C Oreffo and A Mata; ACS Nano 15, 11202–11217

3D printing of biphasic inks: beyond single-scale architectural control 2021

G Cidonio, M Costantini, F Pierini, C Scognamiglio, T Agarwal, A Barbetta; J. Mater. Chem. C

Nanoclay-based 3D printed scaffolds promote vascular ingrowth ex vivo and generate bone mineral tissue in vitro and in vivo

2020

G Cidonio, [...] R O C Oreffo; Biofabrication

Printing bone in a gel: using nanocomposite bioink to print functionalised bone scaffolds 2019

G Cidonio, M Cooke, M Glinka, J I Dawson, L Grover, R O C Oreffo; Materials Today Bio

The cell in the ink: improving biofabrication by printing stem cells for skeletal regenerative medicine

2019

G Cidonio, M Glinka, J I Dawson, R O C Oreffo; Biomaterials

Osteogenic and angiogenic tissue formation in high fidelity nanocomposite Laponite-gelatin bioinks

2019

G Cidonio, [...] R O C Oreffo; Biofabrication

Development of a clay based bioink for 3D cell printing for skeletal application 2017

T Ahlfeld & G Cidonio, [...] R O C Oreffo & M Gelinsky

Nanocomposite clay-based bioinks for skeletal tissue engineering 2020

G Cidonio, M Glinka, Y-H Kim, J I. Dawson and R O C Oreffo; Springer Methods Mol Biol

Conferences and seminars

2023 Sydney, Australia

AUS Bioprint Workshop - invited talk

2022 Manchester, USA

University of New Hampshire Lecture - invited talk

2022 Milan, Italy

33.BI-MU FieraMilano, New technologies for biofabrication

2022 - 2022 Vienna, Austria

Vienna Ludwig Boltzmann Lecture series

2022 Montecatini, Italy

International Society for Biofabrication 2022 conference - Keynote speaker

2022 Krakow, Poland

Tissue Engineering and Regenerative Medicine Society (TERMIS) - EU 2022

2019 Rhodes, Greece

Tissue Engineering and Regenerative Medicine Society (TERMIS) - EU 2019



2018 Würzburg, Germany

International Society for Biofabrication 2018 conference

Management and leadership skills

Communications Officer (Communications & Outreach Committee) TERMIS EU SYIS

Future Investigators in Regenerative Medicine (FIRM) organising committee

Editorial Board member for BMC Methods and Early Career Board Member for In vitro models, Frontiers in Medical Technology and Frontiers in Biomaterials Science (Frontiers)

Research supervision
Main advisor for students in the lab

Co-advisor for students in the lab

Co-advisor for students in the lab

Networks and memberships

Member of Gruppo Nazionale Bioingegneria

Member of Tissue Engineering and Regenerative Medicine International Society (TERMIS)

Member of International Society for Biofabrication (ISBF)

Member of European Society for Biomaterials (ESB)