UNIVERSITÀ POLITECNICA DELLE MARCHE

Supervisor: Prof. Francesco Piva

Dept. of Odontostomatologic and Specialized Clinical Sciences
https://www.disco.univpm.it/

Project idea: : Data mining for personalized therapies in oncology

UNIVERSITÀ POLITECNICA DELLE MARCHE

Prof. Francesco Piva

Position: Associate Professor – BIOS-10/A
Institution: Università Politecnica delle Marche (UNIVPM), Italy
Brief CV & Academic Track
Senior researcher with expertise in **cancer biology**
ORCID: **https://orcid.org/0000-0003-1850-2482**
Total publications: 115 (Scopus)

5 Selected Recent / Significant Publications

Oketch DJA et al. (2025) – *Pancreatology*
Dugo E et al. (2025) – *Journal of Cellular and Molecular Medicine*
Giannella L et al. (2025) - *Cancers*
Bracci M et al. (2025) – *International Journal of Molecular Sciences*
Giulietti et al. (2024) - *Cells*

Funded Projects & Awards

National projects: AIRC grant (2014), FIRC-AIRC Fellowships (2018), Cariverona foundation grant (2018), Cariverona foundation PhD fellow (2018)

Mentorship & Leadership

Supervisor of 3 **PhD candidates** and 25 **MSc theses**
Member of the Teaching Staff of the Doctoral School in Biomedical Sciences at UNIVPM

Research Interests & Potential MSCA Area

Pancreatic cancer, targeted drug delivery systems in pancreatic cancer, single cell RNA seq data processing
[➡ Potential project domain: **Life Sciences**

Host Department [DISCO] — UNIVPM

A multidisciplinary environment supporting research in:
Biology, Biochemistry, Physics

Research Group Description

The Applied Biology research group studies pancreatic cancer through cellular models and transcriptomic data processing. The group has interdisciplinary expertise, including bioinformatics and software programming. We are currently developing computer models for data mining and prognosis prediction in clinical data from cancer patients. We develop algorithms in Matlab.

Team composition: **Two associated Professors**

Key Infrastructure & Laboratories

Available facilities include:
[Room 1]: Cell culture equipment, fluorescence microscopy with on-stage cell incubator, electromagnetic field generators
[Room 2]: Server for transcriptomic data processing and AI model development

Training & Career Development Opportunities
Access to doctoral school courses, transferable skills training
Support for Open Science, dissemination, and stakeholder engagement
Opportunities for **secondments** and **non-academic placement**

UNIVERSITÀ POLITECNICA DELLE MARCHE

Overall Goal

The project aims to develop **prognosis prediction algorithms and personalized therapy**, contributing to:
Scientific advancement in **oncology**
Innovation potential in **treatments in genitourinary oncology**
Strengthening European research excellence

Specific Objectives

Investigate **relationship between clinical variables and response to therapies**
Develop **knowledge extraction algorithms**
Validate results through **patients whose prognosis and response to therapy are known**

Novelty & Interdisciplinarity

Combines expertise in **oncology + informatics**
Strong potential for academic + non-academic impact

Expected Outcomes

High-impact publications
New methodology / prototype / dataset
Enhanced career perspectives for the fellow

SUN RISE — SMALLER (STRATEGIC) UNIVERSITIES NETWORK FOR REGIONAL INNOVATIVE AND SUSTAINABLE EVOLUTION

hr — HR EXCELLENCE IN RESEARCH

UNIVERSITÀ POLITECNICA DELLE MARCHE

The Department of Odontostomatologic and Specialized Clinical Sciences

Director: Prof. Giovanni Cobellis

2026

AT A GLANCE

DISCO

Last three years 2023-24-25

741 Publications

15 Scientific Areas
MEDS-07/B, MEDS-14/B, MEDS-14/C,
MEDS-16/A, MEDS-22/A, MEDS-22/B,
MEDS-20/A, MEDS-21/A, MEDS-26/A,
MEDS-08/C, MEDS-26/B, BIOS-07/A,
BIOS-08/A, BIOS-09/A, BIOS-10/A,
PHYS-06/A

>2.900.000 € Research income

45 Staff

48 PhD, Post-doc, Research fellows

Teaching programs for **undergraduates** in Medicine and Surgery, Dentistry, Professional education, Physiotherapy, Dietetics, Dental hygiene, Nursing, Speech Therapy, Obstetrics, Biomedical laboratory techniques, Prevention techniques in the environment and workplace, Medical, Imaging and Radiation Therapy techniques.
Postgraduate Medical Training specialty in Gynecology and Obstetricia, Medical Physics, Pediatrics, Pediatric Surgery, Radiodiagnostics, Urology, Nuclear Medicine, Oral Surgery, Sport Medicine

1 Centre of Artificial Intelligence & Digital Health in Medicine and Biology AIDH
1 Centre of Health Education and promotion (CIESS)

Master's Degree in:
- **Nutrition and Dietetics**
- **Applied Nutrition and Dietetics**
- **Sports Applied Nutrition and Dietetics**
- **Vegetarian Nutrition and Dietetics**
- **Expert in Diet Planning**
- **Nutrition in Physiological condition**
- **Nutrition in Patological condition**

8 Clinical research Units

19 Research Laboratories

6 Clinic Laboratories