
BIOGRAPHICAL SKETCH**NAME:** Angelica Facchetti

POSITION TITLE: Biologist, head of Radiobiology Unit, Fondazione CNAO

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Pavia, Italy	B.S.	07/1999	Biology
University of Pavia, Italy	Ph.D.	01/2003	Cellular Biology
University College of London (UCL), London	M.Sc	09/2005	Radiation Biology
University of Pavia, Italy	Postdoctoral	09/2007	Clinical Pathology

A. Personal Statement

(Here you can insert a short description of your professional status and achievements. Max 10 lines)

I am a Senior Researcher and Head of the Radiobiology Unit at the CNAO Foundation, leading translational research on the cellular and molecular effects of protons and carbon ions. My work integrates advanced 2D and 3D models (spheroids, organoids, scaffolds) to optimize hadrontherapy for radioresistant tumors. I currently serve as Project Manager for the EU-funded HITRplus project and coordinate a research team involved in national (INFN, MAECI) and international collaborations. Committed to academic training, I hold teaching positions at the Universities of Pavia and Milan. My scientific contribution includes 90 indexed publications with an h-index of 23.

B. Positions and Honors**Positions and Employment**

(Complete the following table. Begin with older positions. Add/delete rows as necessary.)

date1- date2	Position
2003-2007	Post-doctoral fellowship, Dept of animal Biology, University of Pavia
2005-2006	Post-doctoral fellowship, Dept of Nuclear and Theoretical physics, University of Pavia
2006- 2011	Lecturer at the University Of Milan, applied Biology, Univ of Milan, Italy
2008-2009	Full time researcher, Dept of Nuclear and

	Theoretical Physics, University of Pavia, Italy
2010- present	Researcher, National Hadrontherapy Center for Cancer Treatment (CNAO), Pavia, Italy
2010- 2013	Lecturer at the University of Pavia, Department of Physics in Biology, Univ Pavia, Italy
2012-present	Contract professor for Applied Biology at University of Milan, Milan
2015- present	Contract professor Biology, Anatomy and Physiology, University of Pavia, Pavia

Honors

(Complete the following table, Add/delete rows if necessary.)

date	honour
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Patents

Application date	Application Number
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Reviewer Experience

(List the journals where you have acted as reviewer.)

- Journal of Chemotherapy
- Cancers
- Radiation
- International Journal of Particle Therapy
- Radiotherapy and Oncology <
- Tumori

C. Contributions to Science

(Here you can insert a short description of your contributions to science (max 20 lines) followed by the list of the 10 most significant publications of the last 10 yrs)

I am a Senior Researcher and the Head of the Radiobiology Unit at the CNAO Foundation, where I coordinate research activities focused on the biological effects of ionizing radiation, specifically protons and carbon ions used in oncological hadrontherapy. My scientific activity investigates the cellular and molecular mechanisms of radiation response—including DNA damage, repair pathways, and cell death—to optimize therapeutic protocols for radioresistant tumors. I employ multidisciplinary approaches that integrate advanced 2D and 3D cellular models, such as spheroids, organoids, and decellularized biological scaffolds, to bridge the gap between basic and clinical research. Beyond experimental work, I manage international projects such as HITRIplus and collaborations funded by entities like INFN and MAECI. I also hold teaching positions at the Universities of Pavia and Milan and supervise PhD candidates, actively contributing to academic training and scientific dissemination in the field of radiobiology. My scientific production includes 90 indexed publications with an h-index of 23. Orcid ID: <https://orcid.org/0000-0001-8215-9258>

1. Charalampopoulou A, Barcellini A, Magro G, Bellini A, Borgna SS, Fulgini G, Ivaldi GB, Mereghetti A, Orlandi E, Pullia MG, Savazzi S, Tabarelli De Fatis P, Volpi G, **Facoetti A**. *Advancing Radiobiology: Investigating the Effects of Photon, Proton, and Carbon-Ion Irradiation on PANC-1 Cells in 2D and 3D Tumor Models*. *Curr Oncol*. 2025 Jan 18;32(1):49.
2. Charalampopoulou A, Barcellini A, Peloso A, Vanoli A, Cesari S, Icaro Cornaglia A, Bistika M, Croce S, Cobianchi L, Ivaldi GB, Locati LD, Magro G, Tabarelli de Fatis P, Pullia MG, Orlandi E, **Facoetti A**. *Unlocking the Potential Role of Decellularized Biological Scaffolds as a 3D Radiobiological Model for Low- and High-LET Irradiation*. *Cancers (Basel)*. 2024 Jul 18;16(14):2582.
3. **Facoetti A**, Rossi S. *The Heavy Ions Therapy Research Integration plus project*. *Health and Technology*, 2024, 14(5), pp. 939–944.
4. Charalampopoulou A, Barcellini A, Frittitta GE, Fulgini G, Ivaldi GB, Magro G, Liotta M, Orlandi E, Pullia MG, Tabarelli de Fatis P, **Facoetti A**. *In Vitro Effects of Photon Beam and Carbon Ion Radiotherapy on the Perineural Invasion of Two Cell Lines of Neurotropic Tumours*. *Life (Basel)*. 2023 Mar 15;13(3):794.

5. Barcellini A, Charalampopoulou A, De Cecco L, Fodor A, Rabaiotti E, Candotti G, Secondino S, **Facoetti A**, Locati LD, Pignata S, Orlandi E, Mangili G. *Ovarian Cancer Radiosensitivity: What Have We Understood So Far?* Life (Basel). 2022 Dec 20;13(1):6.
6. Charalampopoulou A, Barcellini A, Ciocca M, Di Liberto R, Pasi F, Pullia MG, Orlandi E, **Facoetti A**. *Factors released by low and high-LET irradiated fibroblasts modulate migration and invasiveness of pancreatic cancer cells*. Front Oncol. 2022 Oct 12;12:1003494.
7. **Facoetti A**. *Il rischio di secondo tumore radioindotto da adroterapia rispetto alla radioterapia tradizionale [The risk of second radiation-induced cancer from hadrontherapy compared to traditional radiotherapy]*. G Ital Med Lav Ergon. 2020 Dec;42(4):252-256.
8. **Facoetti A**, Barcellini A, Valvo F, Pullia M. *The Role of Particle Therapy in the Risk of Radio-induced Second Tumors: A Review of the Literature*. Anticancer Res. 2019 Sep;39(9):4613-4617.
9. **Facoetti A**, Cavagnini M, Ciocca M, Nano R, Pasi F, Aprile C, Lodola L, Persico MG, Marengo M, Valvo F, Orecchia R. *Effects of L-DOPA Pretreatment on the Kinetics, Migration and Carbon Ion Radiation Response of T98G Cells*. Anticancer Res. 2019 Jan;39(1):119-125.
10. **Facoetti A**, Di Gioia C, Pasi F, Di Liberto R, Corbella F, Nano R, Ciocca M, Valvo F, Orecchia R. *Morphological Analysis of Amoeboid-Mesenchymal Transition Plasticity After Low and High LET Radiation on Migrating and Invading Pancreatic Cancer Cells*. Anticancer Res. 2018 Aug;38(8):4585-4591.

D. Past and Ongoing Research Support

(Complete the following table with the list of your projects, Add/delete rows if necessary.)

Completed Research Supports

From To	Project Title	Funding Agency	Role in the project
2015-2018	Pre-clinical experimental and theoretical studies to improve treatment and protection by charged particles	National Institute for Nuclear Physics	Responsible for CNAO activities
2013-2014	Targeted and Non-Targeted effects of Radiation Action	National Institute for Nuclear Physics	Responsible for CNAO activities
2009-2010	Early and late health risks to normal / healthy tissues from the use of existing and emerging techniques for radiation therapy	EU Euratom	Responsible for UNIPV research activities
2009-2011	Targeted” and “Non targeted” effects and quality of ionizing radiation	National Institute for Nuclear Physics	Responsible for UNIPV research activities
2006-2010	Non-targeted effects of ionizing radiation-Bystander responses, genomic instability and	EU Euratom	Responsible for UNIPV research activities

	adaptive responses in different cell culture systems		

E. Experience as a research supervisor

1 postdocs

4 PhD students

More than 20 undergraduates

Ongoing Research Support

From To	Project Title	Funding Agency	Role in the project
2021-2026	Heavy Ion Therapy Research Integration plus (HITRIplus)	EU Horizon 2020	Deputy coordinator
2025-2028	HiROC - Targeting hypoxia with heavy ions to gain control of radioresistant cancers	EP PerMed	Coordinator
2023-2026	INDAGA - In depth analysis of salivary gland cancers: from cell lines and genomic evaluation towards clinical trials in locally advanced and recurrent/metastatic disease	FRRB	Responsible for CNAO radiobiology activities
2026-2028	HEARTBEAT - Hadrontherapy with hElium and protons as Advanced Radiotherapy Treatment for BrEAst Tumors	National Institute for Nuclear Physics	Responsible for CNAO activities