Curriculum Vitae
Paola Sena

Education

2005: PhD in Human Colorectal Oncology, University of Modena, Italy
1999 B.S degree

Position Held

2005 – Researcher **BIO**/17-Histology, University of Modena and Reggio Emilia, Italy
2002 - 2005: PhD in Human Colorectal Oncology, Department of Human Anatomical Sciences, University of Modena, Italy (PhD Thesis Research Project: Role of Wnt pathway in human colorectal cancer).

Societies

SIAI - Italian Society of Anatomy and Histology Italian
ABCD - Italian Association of Cell Biology and Differentiation

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Organizer of the following workshop

2013 -The role of inflammation in the colorectal carcinogenesis, Modena, Italy.
Invited Lecturer "Inflammation process and pre-malignant lesions in human colorectal cancer"

Academic service

2021- Member of the Council of the Department of Surgery Medicine Dentistry and Morphological Sciences with interest in Transplantation, Oncology and Regenerative Medicine – University of Modena and Reggio Emilia.
2021- Member of the Didactic Committee of the Department of Surgery Medicine Dentistry and Morphological Sciences with interest in Transplantation, Oncology and Regenerative Medicine – University of Modena and Reggio Emilia.
2021- Vice-president of the degree course in Biomedical Technique, University of Modena, and Reggio Emilia.

Academic teaching activity

2018-
Holder of Histology teaching for:

- ✓ Biomedical Technique degree(3CFU)
- ✓ psychiatric rehabilitators Degree (3CFU)
- ✓ Biotechnology Degree (6CFU)
- ✓ Medicine and surgery degree (1CFU)

Editorial activity

Member of the Editorial Board of Experimental and Therapeutic Medicine., March, 2020
Guest Editor of Special Issue
"Colorectal Cancer and Adjacent Normal Mucosa Differ in Apoptotic and Inflammatory Protein

Expression" for International Journal of Molecular Science, october,2021.
Member of the Editorial Board of International Journal of Molecular Science, November, 2021

Research activity

The overall research activity of Paola Sena in a temporal succession has involved the fields of cell signaling focused on Wnt signaling in human colorectal cancer. Cellular signaling is a complex ballet of molecules interacting and stimulating surrounding proteins, lipids, and ions, resulting in cytoskeletal reorganization, modulation of differentiation and induction of gene expression. During the first years of her scientific path, the research activity was focused on morphological evaluation of Microadenomas in human colorectal samples. During the last years, thanks to an interdisciplinary scientific approach, the research gradually moved to the study of the molecular signaling events on cell proliferation and differentiation in colorectal cancer. In particular, the signaling mechanism downstream the Wnt pathway were investigated in physiological conditions and upon drugs treatment. Of note, recently the focus is the analysis of new molecular regulators acting in the role of inflammation in the onset of human colorectal cancer

Selected Pubblications:

- Altered expression of apoptosis biomarkers in human colorectal microadenomas (Cancer Epidemiology, Biomarkers & Prevention (2010) 19, (351-357) **Sena, P**., Roncucci, L., Marzona, L., (...), Manenti, A., De Pol, A.
-
- Osteocyte apoptosis and absence of bone remodeling in human auditory ossicles and scleral ossicles of lower vertebrates: A mere coincidence or linked processes? Calcified Tissue International (2012) 90(3), pp. 211-218 Palumbo, C., Cavani, F., **Sena, P.**, Benincasa, M., Ferretti, M.
-
- Application of poly-L-lactide screws in flat foot surgery: Histological and radiological aspects of bio-absorption of degradable devices Histology and Histopathology (2012) 27(4), pp. 485-496 **Sena, P.**, Manfredini, G., Barbieri, C., (...), Marzona, L., Palumbo, C.
-
- Matrix metalloproteinases 15 and 19 are stromal regulators of colorectal cancer development from the early stages **Sena, P.**, Mariani, F., Marzona, L., (...), Palumbo, C.,Roncucci, L. International Journal of Oncology, (2012) 41(1), pp. 260-266
-
- Th Inducing POZ-Kruppel Factor (ThPOK) Is a Key Regulator of the Immune Response since the Early Steps of Colorectal Carcinogenesis PLoS ONE (2013) 8(1),e54488 Mariani, F., **Sena, P.**, Pedroni, M., (...), de Leon, M.P., Roncucci, L.

- Morphological and quantitative analysis of BCL6 expression in human colorectal carcinogenesis Oncology Reports (2014) 31(1), pp. 103-110 **Sena, P.**, Mariani, F., Benincasa, M., (...), Palumbo, C., Roncucci, L.
- Up-regulation of the chemo-attractive receptor ChemR23 and occurrence of apoptosis in human chondrocytes isolated from fractured calcaneal osteochondral fragments Journal of Anatomy (2014) 224(6), pp. 659-668 **Sena, P**., Manfredini, G., Benincasa, M., (...), Catani, F., Palumbo, C.
-
- Autophagy is upregulated during colorectal carcinogenesis, and in DNA microsatellite stable carcinomas Oncology Reports (2015)34(6), pp. 3222-3230 **Sena, P**., Mariani, F., Mancini, S., (...), Palumbo, C., Roncucci, L.
-
- The Proteasome Inhibitor Bortezomib Maintains Osteocyte Viability in Multiple Myeloma Patients by Reducing Both Apoptosis and Autophagy: A New Function for Proteasome Inhibitors Journal of Bone and Mineral Research (2016) 31(4), pp. 815-827Toscani, D., Palumbo, C., Dalla Palma, B., **Sena, P**.(...), Aversa, F., Giuliani, N.
-
- Metformin induces apoptosis and alters cellular responses to oxidative stress in Ht29 colon cancer cells: Preliminary findings International Journal of Molecular Sciences (2018) 19(5),1478 **Sena, P**., Mancini, S., Benincasa, M., (...), Palumbo, C., Roncucci, L.
-
- Deep learning techniques for detecting preneoplastic and neoplastic lesions in human colorectal histological images Oncology Letters (2019) 18(6), pp. 6101-6107 **Sena, P.**, Fioresi, R., Faglioni, F., (...), Faglioni, G., Roncucci, L.
-
- Gonadotrophins modulate cell death-related genes expression in human endometrium Hormone Molecular Biology and Clinical Investigation (2020) 41(2),20190074 Sacchi, S., **Sena, P.,** Addabbo, C., Cuttone, E., La Marca, A.
-
- Preliminary results of a multidisciplinary italian study adopting a psycho-neuro-endocrine-immunological (Pnei) approach to the study of colorectal adenomas Acta Biomedica 2021 92(1),e2021014 Mancini, S., Alboni, S., Mattei, G., **Sena, P** (...), Galeazzi, G.M., Ferrari, S.
- Role of PD-L1 in licensing immunoregulatory function of dental pulp mesenchymal stem cells.
- Di Tinco R, Bertani G, Pisciotta A, Bertoni L, Pignatti E, Maccaferri M, Bertacchini J, **Sena P**, Vallarola A, Tupler R, Croci S, Bonacini M, Salvarani C, Carnevale G.Stem Cell Res Ther. 2021 Dec 4;12(1):598. doi: 10.1186/s13287-021-02664-4.
- Autoimmunity Profiles as Prognostic Indicators in Patients with Colorectal Cancer versus Those with Cancer at Other Sites: A Prospective Study.
- **Sena P**, Mancini S, Bertacchini J, Carnevale G, Pedroni M, Roncucci L.Cancers (Basel). 2021 Jun 29;13(13):3239. doi: 10.3390/cancers13133239.

- The Combination of AHCC and ETAS Decreases Migration of Colorectal Cancer Cells, and Reduces the Expression of *LGR5* and *Notch1* Genes in Cancer Stem Cells: A Novel Potential Approach for Integrative Medicine.
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- Paganelli F, Chiarini F, Palmieri A, Martinelli M, **Sena P**, Bertacchini J, Roncucci L, Cappellini A, Martelli AM, Bonucci M, Fiorentini C, Hammarberg Ferri I.Pharmaceuticals (Basel). 2021 Dec 18;14(12):1325. doi: 10.3390/ph14121325.
- Expression of Autophagic and Inflammatory Markers in Normal Mucosa of Individuals with Colorectal Adenomas: A Cross Sectional Study among Italian Outpatients Undergoing Colonoscopy.
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- **Sena P**, Mancini S, Pedroni M, Reggiani Bonetti L, Carnevale G, Roncucci L.Int J Mol Sci. 2022 May 6;23(9):5211. doi: 10.3390/ijms23095211.
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Modena, 1° gennaio 2026