



PERSONAL INFORMATION

Name **Molinari Chiara**
Address
Telephone
Mobile
E-mail chiara.molinari@irst.emr.it
Nationality ITALIAN
Date of birth
Type of business or sector Research biologist. MS-PhD

WORK EXPERIENCE

- Dates 1st February 2008 - today
- Name and address of employer **Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST) s.r.l. IRCCS, via Piero Maroncelli 40, 47014 Meldola (FC) Italy**
- Type of business or sector Molecular Biology in the field of oncology
- Occupation or position held **Researcher- biologist**
 - Main activities and responsibilities Researches on prognostic and predictive markers in gastrointestinal cancers. Active participation in Gastrointestinal multidisciplinary groups at IRST and in collaboration with AUSL Romagna. Member of Alliance against Cancer-Working group Colon (contact biologist for IRST).

- Dates January 2005-January 2008
- Name and address of employer **Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST) s.r.l. IRCCS, via Piero Maroncelli 40, 47014 Meldola (FC) Italy and University of Bologna, Italy**
- Type of business or sector Molecular biology in the field of oncology
- Occupation or position held **PhD student**
 - Main activities and responsibilities Evaluation of new molecular markers in breast, brain and rectal cancer

- Dates October 2003 –December 2004
- Name and address of employer **Morgagni-Pierantoni hospital, via Forlanini, 47100 Forlì (FC), Italy**
- Type of business or sector Molecular biology in the field of oncology

- Occupation or position held
 - Main activities and responsibilities

Volunteer researcher and National Civil Service volunteer

Evaluation of new diagnostic markers for colorectal cancer. Improvement of quality of AUSL services.

- Dates
- Name and address of employer
- Type of business or sector
- Occupation or position held
 - Main activities and responsibilities

December 2002 - September 2003

University of Bologna, Italy

Cellular and molecular biology

Post-graduate training

Evaluation of the action of 9-hydroxysteraric acid on osteosarcoma cell lines

- Dates
- Name and address of employer
- Type of business or sector
- Occupation or position held
 - Main activities and responsibilities

November 2001-December 2002

University of Bologna, Italy

Cellular and molecular biology; biochemistry

Student

Evaluation of the action of 9-hydroxysteraric acid on osteosarcoma cell lines

- Dates
- Name and address of employer
- Type of business or sector
- Occupation or position held
 - Main activities and responsibilities

September - October 2001

Developmental Biology Program, European Molecular Biology Laboratory (EMBL), Heidelberg

Summer student

Evaluation of proliferation in normal and neoplastic cell systems

EDUCATION AND TRAINING

- Dates
- Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded

December 2018

University of Parma, Italy

Biologist license (Abilitazione alla professione di biologo)

- Dates
- Name and type of

December 2009

University of Bologna, Italy

- organisation providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded
 - Genomic alterations in rectal tumors and response to neoadjuvant radiochemotherapy
 - Graduated on Cellular and Molecular Biology. Mark 110/110.
 - May 2008
 - University of Bologna, Italy**
- Dates
 - Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded
 - Inositide-dependent signal transduction in breast carcinoma
 - PhD on Human Morphological and Molecular Sciences. Mark: Excellent
 - December 2002
 - University of Bologna, Italy**
- Dates
 - Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded
 - Mechanism of action of 9-hydroxysteraric acid on osteosarcoma cell lines
 - Graduated on Industrial Biotechnology. Mark 110/110 cum laude.
 - July 1997
 - Liceo Classico Vincenzo Monti, Cesena**
- Title of qualification awarded
 - National High School Leaving Certificate. mark 58/60

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

ENGLISH

- Reading skills Excellent
- Writing skills Excellent
- Verbal skills Excellent

TECHNICAL SKILLS AND COMPETENCES

COMPUTER

Excellent knowledge of Microsoft Windows, Office and Internet Explorer.

MOLECULAR BIOLOGY

DNA, RNA, miRNA, protein extraction from liquid biopsies, stool, frozen tissues and paraffin embedded tissues.

PCR, Real Time PCR, digital PCR, Sequencing.

Methylation specific Multiple Ligation Probe Amplification (MS-MLPA).

Array Comparative Genomic Hybridization (aCGH).

Protein purification and Immunoprecipitation.

Electrophoresis and Western Blot.

Use of ABI PRISM® 3100 Genetic Analyser for methylation analysis and fragment analysis.

Next Generation Sequencing

Good knowledge of software for statistical (SPSS) and molecular analyses (Gene Mapper, Beacon designer, BlueFuse, JMP Genomics, Copy Caller).

CELLULAR BIOLOGY

Use of microtome.

Tumor cell cultures.

Immunohistochemistry.

Fluorescent in situ hybridization (FISH).

ADDITIONAL INFORMATION

AWARDS

Coordinator of the European project GRAMMY (InteGRative analysis of tuMor, Microenvironment, immunitY and patient expectation for personalized response prediction in Gastric Cancer) funded by ERA PerMed JTC2019.

“Spandidos Publication Award” for the oral presentation “New predictive markers of response to chemo-radiotherapy in rectal cancer: miR-17-92 and methylation profile” at the “19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine”, October 2014, Athen.

EORTC grant for EORTC-NCI-ASCO tutorial "From Hypothesis to Product: Diagnostic Development EORTC Tutorial" and ENASCO congress on "Molecular Markers in Cancer", October 2011, Bruxelles.

MEMBERSHIPS

Member of italian research group for gastric cancer (GIRCG); Reviewer for several impacted journals; Member of Editorial Academy for International Journal of Oncology; Topics board member for Biology; Member of Examination

Board at University of Bologna.

PUBLICATIONS

- **Molinari C**, Tedaldi G, Rebuzzi F, Morgagni P, Capelli L, Ravaioli S, Tumedei MM, Scarpi E, Tomezzoli A, Bernasconi R, Ambrosio MR, D'Ignazio A, Solaini L, Limarzi F, Ercolani G, Martinelli G, Ulivi P and Saragoni L. Early Gastric Cancer: identification of molecular markers able to distinguish submucosa-penetrating lesions with different prognosis. Accepted for publication in Gastric Cancer. October 2020.
- Isidori F, Bozzarelli I, Mastracci L, Malvi D, Lugaresi M, **Molinari C**, [...], Bonora E and Mattioli S. Targeted Sequencing of Sorted Esophageal Adenocarcinoma Cells Unveils Known and Novel Mutations in the Separated Subpopulations. Clin Transl Gastroen. September 2020.
- Zamagni A, Pasini A, Pirini F, Ravaioli S, Giordano E, Tesei A, Calistri D, Ulivi P, Fabbri F, Foca F, Delmonte A, **Molinari C**. CDKN1A upregulation and cisplatin-pemetrexed resistance in non-small cell lung cancer cells. Int J Oncol. 2020 Jun;56(6):1574-1584.
- Tedaldi G, Pirini F, Tebaldi M, Zampiga V, Cangini I, Danesi R, Arcangeli V, Ravegnani M, Abou Khouzam R, **Molinari C**, Oliveira C, Morgagni P, Saragoni L, Bencivenga M, Ulivi P, Amadori D, Martinelli G, Falcini F, Ranzani GN, Calistri D. Multigene Panel Testing Increases the Number of Loci Associated with Gastric Cancer Predisposition. Cancers (Basel). 2019 Sep 11;11(9).
- Rossi T, Tedaldi G, Petracci E, Abou Khouzam R, Ranzani GN, Morgagni P, Saragoni L, Monti M, Calistri D, Ulivi P, **Molinari C**. E-cadherin Downregulation and microRNAs in Sporadic Intestinal-Type Gastric Cancer. Int J Mol Sci. 2019 Sep 10;20(18).
- **Molinari C**, Marisi G, Passardi A, Matteucci L, De Maio G, Ulivi P. Heterogeneity in Colorectal Cancer: A Challenge for Personalized Medicine? Int J Mol Sci. 2018 Nov 23;19(12).
- De Matteis S*, **Molinari C***, Abbati G, Rossi T, Musuraca G, Napolitano R, Ghetti M, Lucchesi A, Cangini D, Cuneo A, Rigolin GM, i Martinelli G, Fattori PP, Calistri D. (*equally contributed). Effector-like Treg cells combine pro-inflammatory and immunosuppressive functions and expand in Chronic Lymphocytic Leukemia patients. J Trans med 2018.
- **Molinari C**, Abou Khouzam R, Salvi S, Rossi T, Ranzani GN , Calistri D

Detection of CDH1 rare transcript variant in fresh-frozen gastric cancer tissues by chip-based digital PCR . Journal of Visualized Experiments Feb 2018.

-De Matteis S, Granato AM, Napolitano R, **Molinari C**, Valgiusti M, Santini D, Foschi FG, Ercolani G, Vespasiani Gentilucci U, Faloppi L, Scartozzi M, Frassinetti GL, Casadei Gardini A. Interplay Between SIRT-3, Metabolism and Its Tumor Suppressor Role in Hepatocellular Carcinoma. Digestive Diseases and Sciences.

-Abou Khouzam R, **Molinari C**, Salvi S, Marabelli M, Molinaro V, Orioli D, Saragoni L, Morgagni P, Calistri D, Ranzani GN. Digital PCR identifies changes in CDH1 (E-cadherin) transcription pattern in intestinal-type gastric cancer. Oncotarget 2017.

-Passardi A and **Molinari C**. Why is neoadjuvant chemoradiation therapy underused for locally advanced rectal cancer? Expert Review of Gastroenterology & Hepatology 2016.

-Salvi S, Martignano F, **Molinari C**, Gurioli G, Calistri D, De Giorgi U, Conteduca V, Casadio V. The potential use of urine cell free DNA as a marker for cancer. Expert Review of Molecular Diagnostics 2016

Molinari C, Salvi S, Foca F, Teodorani N, Saragoni L, Puccetti M, Passardi A, Tamberi S, Avanzolini A, Lucci E, Calistri D. MIR17–92 evaluation and response to neoadjuvant chemoradiotherapy in rectal cancer. Oncotargets and Therapy 2016; 9:2735-2742.

Molinari C, Matteucci F, Caroli P and Passardi A. Biomarkers and Molecular Imaging as Predictors of Response to Neoadjuvant Chemoradiotherapy in Patients with Locally Advanced Rectal Cancer. Clinical Colorectal Cancer 2015 Dec;14(4):227-38.

-Rengucci C, De Maio G, Casadei Gardini A, Zucca M, Scarpi E, Zingaretti C, Foschi G, Tumedei MM, **Molinari C**, Saragoni L, Puccetti M, Amadori D, Zoli W and Calistri D. Promoter methylation of tumor suppressor genes in pre-neoplastic lesions; potential marker of disease recurrence. Journal of Experimental & Clinical Cancer Research 2014;33(1):65.

Molinari C, Casadio V, Foca F, Zingaretti C, Giannini M, Avanzolini A, Lucci E, Saragoni L, Passardi A, Amadori D, Calistri D and Zoli W. Gene Methylation in Rectal Cancer: Predictive Marker of Response to Chemoradiotherapy? Journal of Cellular Physiology 2013; 228: 2343 –2349.

-Casadio V, **Molinari C**, Calistri D, Tebaldi M, Gunelli R, Serra L, Falcini F,

Zingaretti C, Silvestrini R, Amadori D and Zoli W. DNA Methylation profiles as predictors of recurrence in non muscle invasive bladder cancer: an MS-MLPA approach. *Journal of Experimental & Clinical Cancer Research* 2013, 32:94.

-Molinari C, Medri L, Follo MY, Piazzini M, Mariani GA, Calistri D and Cocco L. PI-PLCB1 gene copy number alterations in breast cancer. *Oncology Reports* 2012; 27: 403-408.

-Pasini A, Iorio P, Bianchi E, Cerasoli S, Cremonini AM, Faedi M, Guarnieri C, Guiducci G, Riccioni L, **Molinari C**, Rengucci C, Calistri D and Giordano E. LOH 19q indicates shorter disease progression-free interval in low-grade oligodendrogliomas with *EMP3* methylation. *Oncology Reports* 2012; 28: 2271-2277.

-Molinari C, Ballardini M, Teodorani N, Giannini M, Zoli W, Emiliani E, Lucci Passardi A, Rosetti P, Saragoni L, Guidoboni M, Amadori D and Calistri D. Genomic Alterations in Rectal Tumors and Response to Neoadjuvant Chemoradiotherapy exploratory study. *Radiation Oncology* 2011, 6:161.

-Molinari C, Iorio P, Medri L, Ballardini M, Guiducci G, Cremonini AM, Cerasoli S, Riccioni L, Faedi M, Mariani GA, Zoli W, Silvestrini R and Calistri D.

Chromosome 1p and 19q evaluation in low-grade oligodendrogliomas: A descriptive study. *International Journal of Molecular Medicine* 2010; 25: 145-151.

-Calistri D, Rengucci C, **Molinari C**, Ricci E, Cavargini E, Milandri G, Fabbri C, Ravaioli A, Russo A, Amadori D and Silvestrini R. Quantitative fluorescence determination of dna amplification in stool as a marker of early detection of colorectal cancer. *Cellular Oncology* 2009;31(1):11-7.

-Calonghi N, Pagnotta E, Parolin C, **Molinari C**, Boga C, Dal Piaz F, Brusa GL, Santucci MA and Masotti L. Modulation of apoptotic signalling by 9-hydroxystearic acid in osteosarcoma cells. *Biochimica et Biophysica ACTA-Molecular and Cell Biology of Lipids* 2007;1771:139-46.

POSTER AND ORAL PRESENTATIONS:

- Tedaldi G, Ulivi P, **Molinari C**, et al. Multiple approaches reveal heterogeneous molecular alterations affecting CDH1 gene in patients with Hereditary Diffuse Gastric Cancer syndrome. "4th Annual Meeting Alleanza Contro il Cancro. Roma, Novembre 2019.

- **Molinari C**, [...], Saragoni L. "Early gastric cancer: identification of molecular

- markers able to distinguish penetrating lesions with different prognosis (on behalf of GIRCG)". IGCC 2019, Praga maggio 2019.
- Tedaldi G, [...], **Molinari C**, [...] Calistri D. Multigene panel testing increases the number of loci associated with gastric cancer predisposition al congresso 13th International Gastric Cancer Congress IGCC 2019, Praga maggio 2019.
 - **Molinari C**, [...], Calistri D "MicroRNAs and CDH1 regulation in intestinal-type gastric cancer". ESMO GI, Barcellona 2018.
 - Tedaldi G, [...], **Molinari C**, [...], Calistri D. Hereditary Diffuse Gastric Cancer al congresso "The new frontiers in Gastric Cancer diagnosis and treatment". Forlì, Settembre 2018.
 - Tedaldi G, [...], **Molinari C**, [...], Calistri D. Multigene panel testing increases the number of loci associated with gastric cancer predisposition al XXI Congresso Nazionale SIGU. Catania, Ottobre 2018.
 - **Molinari C** Classificazione molecolare dei tumori. Convegno "La biologia molecolare nell'oncologia clinica" Bertinoro 27-28 Ottobre 2016.
 - Abou Khouzam R, [...], **Molinari C**, [...], Ranzani GN. CDH1 transcripts' analysis in gastric cancer. XII Congresso AIFEG; Napoli Novembre 2015.
 - **Molinari C** New predictive markers of response to chemo-radiotherapy in rectal cancer: miR-17-92 and methylation profile. 19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine, 2014 Athen.
 - **Molinari C**, [...], Amadori D. Methylation profile and chemoradioresistance in rectal cancer. EORTC-NCI-ENASCO 2011.
 - **Molinari C**, [...], Calistri D. Array CGH profile as a marker to predict neo-adjuvant radio-chemotherapy response of rectal carcinoma. Congresso IRST 2008, Forlì; ISCO 2008, Amsterdam.
 - **Molinari C**, [...], Frattarelli M. Potenzialità delle metodiche LOH e FISH per la valutazione delle delezioni dei cromosomi 1 e 19 negli oligodendrogliomi di grado 2. AINO 2007, Lecce
 - Ballardini M, **Molinari C**, [...], Calza S. Comparison between potentials and limits of different CGH array methodologies to identify genetic alterations profiles of clinical relevance. SISMEC 2007, Palermo
 - Calistri D, Rengucci C, **Molinari C**, [...], Amadori D. Quantitative Fluorescence Determination of DNA Amplification in Stool as a Marker for Colorectal cancer early detection. SIC 2006, Bari.
 - **Molinari C**, [...], Masotti L. Induction of apoptosis by 9-hydroxiystearic acid in human osteosarcoma. SIB-BIB 2003, Milano.

Meldola 23/10/20

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