Sabrina Luigia D'Agosto, PhD

EDUCATION

29th May 2017. Defense of the PhD thesis in the PhD program of Inflammation, Immunity and Cancer. University of Verona.
15th Oct. 2013. Master Level Degree in Pharmaceutical Biotechnology. University of Perugia.
October 2011. Bachelor Level Degree in Biotechnology. University of Perugia.

RESEARCH EXPERIENCES

Sept 2021 – present Lab Manager of the Data Generation and Experimental Validation Unit, Computational Biology Research Centre, Human Technopole, Milan.
April 2020 – Aug. 2021 AIRC research Fellowship (n. 24043) on a research project entitled: "Modeling the role of lymph node metastases in pancreatic and biliary tract cancers"; Dept. of Diagnostics and Public Health, Verona University.
1st July 2017 – Mar 2020 Post-doctoral position at Verona University on a research project "Organoid Models of Pancreatic, Breast and Colonrectal Cancer Model Development Center (CMDC)"; ARC-Net Research Centre.
Sep. 2015 – Aug. 2016. Visiting PhD position at Barts Cancer Institute on a research project entitled: "Evaluation of PDAC-organoids as system to model patient tumor progression and drug response"; Dept. of Stem Cells in Cancer & Ageing, Queen Mary University of London (UK).
Jan. 2014 – Dec. 2016. PhD student in the Ph.D. program of Inflammatory, Immunity and Cancer, Verona University. Thesis on: "Evaluation of cancer stem-cells in different models of pancreatic ductal adenocarcinoma".
Oct. 2012 – Oct 2013. Master's thesis research at Perugia University on "Immunomodulatory effects of viral synthetic oligonucleotides in plasmacytoid dendritic cells".

TECHNICAL SKILLS

Molecular biology: PCR, reverse transcription and qRT-PCR; nucleic acid isolation and quantification. Gene silencing using Si-RNA (RNA Interference). Genome-editing using Crisp-Cas9 system.
Sequencing technologies: generation of libraries from human and mouse samples (tissues and models), next-generation targeted sequencing using Ion Torrent PGM.
Cell culture: establishment of patient-derived organoid cultures from hepatobiliary-pancreatic tumors, either primary than metastatic lesions (N = 73 models), maintenance and cryopreservation of 2D and 3D cell cultures. Procedure to digest human and mouse tissues for single-cells RNA sequencing analysis.
Molecular technologies in histopathology: immunohistochemistry on FFPE and frozen tissues.
Protein and Biochemical: Purification and separation of proteins; Western blot and immuno-staining.
Flow cytometry: Experience with flow cytometry technologies and applications. Knowledge of the following instruments: BD FACSCanto and BD FACSAria II. Knowledge of FlowJo and FACS Diva software.
In vivo studies: Mouse colony management, surgical and non-surgical procedures, blood sampling, drugs administration, post-mortem procedures.

LAB MANAGEMENT SKILLS

July 2017- Aug. 2021 Coordinator of the CMDC project in Verona. During these years, I acquired competencies in lab management being part of CMDC-CSHL group. Details are listed below:

- Manage the biobank facility, as part of Human Cancer Model Initiative (HCMI) group
- Supervise technicians working on this project and coordinate the entire process (from the collection of patient samples to the shipment of our success models to ATCC and Leidos)
- Manage and daily update our LabCollector-LIMS
- Setting up workflows and writing SOPs for establish Pancreatic Tumor Organoid Cultures
- Weekly update to the Project Manager of CMDC in CSHL.

PUBLICATIONS

1) "Therapeutic potential of combined BRAF/MEK blockade in BRAF-wild type preclinical tumor models" Anais Del Curatolo, Fabiana Conciatori, Ursula Cesta Incani, Chiara Bazzichetto, Italia Falcone, Vincenzo Corbo, **Sabrina D'Agosto**, Adriana Eramo, Giovanni Sette, Isabella Sperduti, Teresa De Luca, Mirko Marabese, Senji Shirasawa, Ruggero De Maria, Aldo Scarpa, Massimo Broggini, Donatella Del Bufalo, Francesco Cognetti, Michele Milella, Ludovica Ciuffreda. *J EXP CLIN CANC RES* (2018) Jul; 37: 140.
   Impact factor: 6.217
2) "Preclinical modelling of PDA: is organoid the new black?"
   Sabrina D'Agosto, Silvia Andreani, Aldo Scarpa, Vincenzo Corbo. *INT J MOL SCI* (2019) *20*(11), 2766. https://doi.org/10.3390/ijms20112766.
   Impact factor: 4.183
3) "Immunoevolution of mouse pancreatic organoid isografts from preinvasive to metastatic disease"
   Dea Filippini*, **Sabrina D'Agosto***, Pietro Delfino, Michele Simbolo, Geny Piro, Borislav Rusev, Lisa Veghini, Cinzia Cantù, Francesca Lupo, Stefano Ugel, Francesco De Sanctis, Vincenzo Bronte, Michele Milella, Giampaolo Tortora, Aldo Scarpa, Carmine Carbone & Vincenzo Corbo. *Scientific Report* (2019) 9:12286. https://doi.org/10.1038/s41598-019-48663-7.
   Impact factor: 4.525
4) "Generation of Pancreatic Organoid-Derived Isografts" **D'Agosto Sabrina**, Lupo Francesca, Corbo Vincenzo. *STAR Protocols* (2020). 10.1016/j.xpro.2020.100047.
5) "Combinatorial Effect of Magnetic Field and Radiotherapy in PDAC Organoids: A Pilot Study"
   Luca Nicosia, Filippo Alongi, Silvia Andreani, Ruggero Ruggieri, Borislav Rusev, Beatrice Mantoan, Rita Teresa Lawlor, Antonio Pea, Aldo Scarpa, Linda Agolli, Vincenzo Corbo, **Sabrina D'Agosto**. *Biomedicines.* (2020) Dec 14;8(12):609. doi: 10.3390/biomedicines8120609.
   Impact factor: 4.717

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