

## AGNESE CRISTINI

Postdoctoral Scientist, Ph.D.

Cancer Research Center of Toulouse, 31037, Toulouse, France

Nationality: Italian

Email: agnese.cristini@inserm.fr

Twitter: @AgneseCristini

## EDUCATION

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- 01/10/2011-13/11/2015: **PhD in Cellular and Molecular Biology, Specialty: Oncology**  
University of Toulouse (Paul Sabatier University – Toulouse III), Toulouse, France
- 01/10/2008-24/03/2011: **Master's Degree in Pharmaceutical Biotechnology**  
Faculty of Pharmacy, University of Bologna, Bologna, Italy
- 01/10/2005-16/10/2008: **Bachelor's Degree in Biotechnology**  
Faculty of Mathematical, Physical and Natural Sciences, University of Bologna, Bologna, Italy

## RESEARCH EXPERIENCE

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- 03/2020-Present: **"Fondation de France" Postdoctoral Researcher, Cancer Research Center of Toulouse (CRCT)**  
"Cancer cell signaling and therapeutics" Team; PI: Prof Favre and Dr Sordet  
CRCT UMR1037, Toulouse, France
- 01/2016-02/2020: **Postdoctoral Researcher, University of Oxford**  
"R-loop biology in health and disease" Team; PI: Dr Gromak  
Sir William Dunn School of Pathology, University of Oxford, Oxford, UK
- 10/2011-11/2015: **PhD Student in Oncology, University of Toulouse**  
"RHO GTPases in tumor progression" Team; PI: Prof Favre. Supervisor: Dr Sordet.  
CRCT UMR1037, Toulouse, France
- 10/2010-09/2011: **Master's Degree Internship (Part 2) and Post-Graduate Fellow, University of Bologna**  
"Cancer genome instability group" Team; PI: Prof Capranico  
Alma Mater Studiorum, University of Bologna, Bologna, Italy
- 04/2010-10/2010: **Master Degree Internship Student (Part 1), CRCT**  
"RHO GTPases in tumor progression" Team; PI: Prof Favre. Supervisor: Dr Sordet.  
CRCT UMR1037, Toulouse, France
- 04/2008-08/2008: **Bachelor's Degree Student, University of Bologna**  
"Anatomical Pathology" Lab; PI: Prof Pession. Supervisor: Prof Pession and Dr Morandi. Oncologic Science Department, Bellaria Hospital, Bologna, Italy

## FELLOWSHIPS AND GRANTS

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- 2021: *"Fondation de France", Post-doctoral fellowship*
- 2020: *"Fondation de France", Post-doctoral fellowship*
- 2019: *Cancer Research UK (CRUK) Development Fund*
- 2018: *Pump Priming Funding, MSIF, University of Oxford*
- 2014-2015: *"Fondation pour la Recherche Médicale" Fellowship 4<sup>th</sup> year of PhD*
- 2011-2014: *Ministère de l'Enseignement Supérieur et de la Recherche PhD fellowship*
- 2011: *Post-graduate fellowship, University of Bologna*
- 2010: *Fellowship for master internship abroad, Faculty of Pharmacy, University of Bologna*

## PRIZES AND TRAVEL GRANT

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- 2019: **BioLegend Award** for international conferences
- 2019: **Lockey Trust Travel Grant** for international conferences
- 2018: **EMBO travel Grant** for EMBO conference
- 2018: **Lockey Trust Travel Grant** for international conferences
- 2015: **SFR-BMT studentship** to attend international congresses
- 2011: **Prix “Alberto Losso”** for academic year 2010-2011 *Pharmaceutical Biotechnology* and master thesis

## PROFESSIONAL SKILLS

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**Molecular Biology/Biochemistry:** Biochemical fractionation, pull-down, R-loop IP, proteomics, enzyme activity assays, WB, slot blot, comet assays, RNA Immunoprecipitations (RIP), Chromatin Immunoprecipitation (ChIP)-Sequencing, RNA/DNA hybrid immunoprecipitation (DRIP)-Sequencing, chromatin RNA-Seq, PCR.

**Cellular Biology:** Cell culture (cell lines and primary cells), transfections, immunofluorescence, confocal and high-content microscopy, flow cytometry, fluorescence *in situ* hybridization (FISH).

**Informatics:** Office package, EndNote, Photoshop, GraphPad Prism. Databases: Pubmed, Pantherbd, ENSEMBL, UCSC Genome browser.

**Supervision:** Lara Fernandez-Martinez, PhD and master student (PhD co-director); Stella Kristensen (Erasmus STUDIO program); Flavia Costantinescu, undergraduate (2018) and master student (2019-2020); Clelia Accalai, research assistant (2018-2019); Pawluchin Anna, undergraduate student (2019), Heiringhoff Robin, undergraduate student (2017); Park Joon-Hyung, master student (2015).

**Languages:** Italian (native language), French and English (fluent).

## PUBLICATIONS

**ORCID:** <https://orcid.org/0000-0003-0235-8770>

**Cristini A.\***, Géraud M. and Sordet O\*. Transcription-associated DNA Breaks and Cancer: Topoisomerases and Beyond. *Int Rev Cell Mol Biol.* 364, 195-240.

\*Co-corresponding author.

McCann J.L.\*, **Cristini A.\***, Law E.K., Lee S.Y., Tellier M., Kim J.J., Salamango D.J., Jarvis M.C., Beghè C., Carpenter M.A., Murphy S., Miller K.M., Gromak N.# and Harris R.S.# R-loop resolution and mutagenic outcomes promoted by the DNA cytosine deaminase APOBEC3B. **2021.** *BioRxiv*. doi: <https://doi.org/10.1101/2021.08.30.458235>. \*Equal contribution.

**Cristini A.**, Gromak N., Sordet O. **2020.** Transcription-dependent DNA double-strand breaks and human disease. *Mol Cell Oncol.* 10;7(2):1691905.

**Cristini, A.**, Ricci G., Britton S., Salimbeni S., Huang S.N., Marinello J., Calsou P., Pommier Y., Favre G., Capranico G, Gromak N.#, and Sordet O#. **2019.** Dual Processing of R-Loops and Topoisomerase I Induces Transcription-Dependent DNA Double-Strand Breaks. *Cell reports.* 28:3167-3181 e3166.

Abakir, A., Giles T.C., **Cristini, A.**, Foster J.M., Dai N., Starczak M., Rubio-Roldan A., Li M., Eleftheriou M., Crutchley J., Flatt L., Young L., Gaffney D.J., Denning C., Dalhus B., Emes R.D., Gackowski D., Correa I.R., Garcia-Perez. Jr J.L., Klungland A.#, Gromak N.#, and Ruzov A#. **2019.** N(6)-methyladenosine regulates the stability of RNA:DNA hybrids in human cells. *Nat Genet.* 52(1):48-55.

**Cristini, A.\***, Groh M.\*, Kristiansen M.S., and Gromak N. **2018.** RNA/DNA Hybrid Interactome Identifies DXH9 as a Molecular Player in Transcriptional Termination and R-Loop-Associated DNA Damage. *Cell reports.* 23:1891-1905. \*Equal contribution.

Mouly, L., Mamouni K., Gence R., **Cristini A.**, Cherier J., Castinel A., Legrand M., Favre G., Sordet O.#, and Monferran S. #. **2018.** PARP-1-dependent RND1 transcription induced by topoisomerase I cleavage complexes confers cellular resistance to camptothecin. *Cell Death Dis.* 9:931.

Groh, M., Albulescu L.O., **Cristini A.**, and Gromak N. **2017**. Senataxin: Genome Guardian at the Interface of Transcription and Neurodegeneration. *J Mol Biol.* 429:3181-3195.

**Cristini, A.**, J.H. Park, G. Capranico, G. Legube, G. Favre, and O. Sordet. **2016**. DNA-PK triggers histone ubiquitination and signaling in response to DNA double-strand breaks produced during the repair of transcription-blocking topoisomerase I lesions. *Nucleic Acids Res.* 44:1161-1178.

Marinello, J., Bertoncini S., Aloisi I., **Cristini A.**, Malagoli Tagliazucchi G., Forcato M., Sordet O., and Capranico G. **2016**. Dynamic Effects of Topoisomerase I Inhibition on R-Loops and Short Transcripts at Active Promoters. *PLoS One.* 11:e0147053.

Mamouni, K., **Cristini A.**, Guirouilh-Barbat J., Monferran S., Lemarie A., Faye J.C., Lopez B.S., Favre G. #, and Sordet O#. **2014**. RhoB promotes gammaH2AX dephosphorylation and DNA double-strand break repair. *Mol Cell Biol.* 34:3144-3155.

Meyer, N., Peyret-Lacombe A., Canguilhem B., Medale-Giamarchi C., Mamouni K., **Cristini A.**, Monferran S., Lamant L., Filleron T., Pradines A, Sordet O., and Favre G. **2014**. RhoB promotes cancer initiation by protecting keratinocytes from UVB-induced apoptosis but limits tumor aggressiveness. *J Invest Dermatol.* 134:203-212.