



**Federica Di Fonzo**

## EDUCATION AND TRAINING

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### PhD in Biochemistry XXXVI cycle

*Università degli studi di Roma "La Sapienza"* [01/11/2020 - ongoing]

Address: Dept. of Biochemical Sciences "A. Rossi-Fanelli", Rome (Italy)

Thesis: Characterization of SHMT1-nucleic acids interaction

**Research activity:** My research is focusing on the study of biochemical and biological interaction between SHMT1-nucleic acids *in vitro* and *in cellulo*.

### Degree in Pharmaceutical Chemistry and Technology

*Università degli studi di Roma "La Sapienza"* [2011-2019]

Address: Dept. of Pharmacy, Rome (Italy)

Final grade: 103/ 110

Thesis: Synthesis and characterization of polymeric nanoparticles for siRNA delivery in human lymphocyte HIV-1 infected

## LANGUAGE SKILLS

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Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## PUBLICATIONS

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### siRNA Transfection Mediated by Chitosan Microparticles for the Treatment of HIV-1 Infection of Human Cell Lines [2022]

Materials 15, 5340 (2022)

Chronopoulou L., Falasca F., Di Fonzo F., Turriziani O., Palocci C.

## COMMUNICATION AT CONGRESS AS PARTICIPANT

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### 1 - Metabolism and DNA repair: clues from the role of serine hydroxymethyltransferase

**Di Fonzo F.**, Boi D., Liberati F.R., Bouzidi A., Spizzichino S., Parroni A., Tramonti A., Boumis G., Paiardini A., Giardina G., Paone A., Rinaldo S., Cutruzzolà F. 46<sup>th</sup> FEBS congress (Lisbon, Portugal 9 - 14 July 2022) - Poster presentation

### 2 - Metabolism and DNA repair: clues from the role of serine hydroxymethyltransferase

**Di Fonzo F.**, Boi D., Liberati F.R., Bouzidi A., Spizzichino S., Parroni A., Tramonti A., Boumis G., Paiardini A., Giardina G., Paone A., Rinaldo S., Cutruzzolà F. 1<sup>st</sup> MOSBRI scientific conference (Paris, France 20 - 22 June 2022) - Poster presentation

### 3 - Metabolism and DNA repair: clues from the role of serine hydroxymethyltransferase

**Di Fonzo F.**, Spizzichino S. 1, Parroni A. 1, Boi D. 1, Iszrael R. 3,4, Liberati F.R. 1, Sara Di Russo 1, Tramonti A. 2, Boumis, G. 1, Paiardir A. 1, Giardina, G. 1, Rinaldo S. 1, Paone A. 1, Vertessy B. 4,5, Cutruzzolà F. 62<sup>nd</sup> SIB Congress (Firenze, Italy 07 - 09 September 2023) Poster presentation

### 4 - Metabolism and DNA repair: clues from the role of serine hydroxymethyltransferase

**Di Fonzo F.**, Spizzichino S. 1, Parroni A. 1, Boi D. 1, Iszrael R. 3,4, Liberati F.R. 1, Sara Di Russo 1, Tramonti A. 2, Boumis, G. 1, Paiardir A. 1, Giardina, G. 1, Rinaldo S. 1, Paone A. 1, Vertessy B. 4,5, Cutruzzolà F. Deciphering and Reshaping Nucleic Acids- 1st workshop of the SIB group Nucleic Acids (University of Calabria, Italy 05 - 06 October 2023) Oral presentation

## COMMUNICATION AT CONGRESS AS CO-AUTHOR

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### 1 - Riboregulation of human Serine Hydroxymethyltransferase activity in cellular metabolism

**Liberati F.R.,** Bouzidi A., Spizzichino S., Di Fonzo F., Boumis G., Rinaldo S., Giardina G., Paone A., Cutruzzolà F. 45<sup>th</sup> FEBS virtual congress (online 3 - 8 July 2021) - Poster presentation

### 2 - Riboregulation of human Serine Hydroxymethyltransferase activity in cellular metabolism

**Liberati F.R.,** Di Fonzo F., Di Russo S., Spizzichino S., Bouzidi A., Boumis G., Rinaldo S., Giardina G., Paone A., Cutruzzolà F. 46<sup>th</sup> FEBS congress (Lisbon, Portugal 9 - 14 July 2022) - Poster presentation

### 3 - Riboregulation of human Serine Hydroxymethyltransferase activity in cellular metabolism

**Liberati F.R.,** Bouzidi A., Spizzichino S., Di Fonzo F., Boumis G., Rinaldo S., Giardina G., Paone A., Cutruzzolà F. 1<sup>st</sup> Workshop of the SIB group Tumor Biochemistry (Bicocca University of Milan - 25/02/2022) - Poster and oral presentation

### 4 - A RNA-based inhibitor for human Serine Hydroxymethyltransferase targeting

**Liberati F.R.,** Di Fonzo F., Di Russo S., Spizzichino S., Bouzidi A., Tramonti A., Contestabile R., Macone A., Boumis G., Tartaglia G.G., Paiardini A., Rinaldo S., Giardina G., Paone A., Cutruzzolà F. SIBBM 2022 congress - Frontiers in molecular biology, The RNA world 3.0 (Rome, Italy 20 - 22 June 2022) - Poster presentation

### 5 - Role of amino acid metabolism in the metastatic potential of breast and lung cancer cells

Di Russo S., Liberati F.R., Riva A., Bouzidi A., Di Fonzo F., Rinaldo S., Macone A., Cutruzzolà F., Paone A. 3<sup>rd</sup> BDT Workshop - Understanding cancer metabolism: exploring tumor heterogeneity to advance cancer therapy (University of Catanzaro, Italy 29 - 30 June 2023) - Oral presentation

### 6 - Influence of the tumor microenvironment on the formation of brain metastases by breast cancer cells

Di Russo S., Bouzidi A., Liberati F.R., Di Fonzo F., Riva A., Boumis G., Rinaldo S., Paone A., Cutruzzolà F., 47<sup>th</sup> FEBS congress (Tours, France 8 - 12 July 2022) - Poster presentation

## GRANTS AND PRIZE

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### Grants for meeting participation

Bursary FEBS to participate FEBS congress (Lisbon, Portugal 9 - 14 July 2022)

Bursary MOSBRI to participate 1<sup>st</sup> MOSBRI scientific conference (Paris, France 20 - 22 June 2022)

### Grant for research activity abroad

Bando per mobilità all'estero di student di dottorato (2022- 2023)

### Grants for tutoring activity

Grant for tutoring activities in Protein engineering and structural biology - Dept. of Biochemical Sciences at La Sapienza University, Rome (C.L.M. BIOTECNOLOGIE - Biotecnologie farmaceutiche) (25/05/21 al 22/07/21)

Grant for tutoring activities in Biochemistry - Dept. of Biochemical Sciences at La Sapienza University, Rome (C.L.M. Biochemistry) (2021/2022)

Grant for tutoring activities in Biochemistry - Dept. of Biochemical Sciences at La Sapienza University, Rome (C.L.M. Biochemistry) (2022/2023)

## TECHNICAL SKILLS

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### Acquired competences

**Biochemical methodologies:** Expression of recombinant proteins in prokaryotic cells. Purification of water soluble proteins with chromatographic techniques (affinity, ion exchange, size exclusion, HPLC), Electromobility shift assay (EMSA) Western-Blot, Dot-Blot, dNTP measurement by PCR technique.

**General molecular biology methodologies:** Recombinant DNA techniques (PCR, cloning, deletion, direct site mutagenesis, RT-PCR, *in vitro* transcription).

**Cellular biology methodologies:** Cell culture, protein quantification, nucleic acids extraction, gene silencing, cell transfection, immunofluorescence assay, FACS, cellular fractionation.

**Other technical skills:** synthesis and purification of polymeric nanoparticles including chitosan NPs, PEI NPs and Liposome, dynamic light scattering (DLS), FACS assay, UV-vis spectroscopy.

**Data analysis:** graphical representation of data (Excel, Prism, IgorPro, Image j, GIMP, Inkscape)