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Tiziana Bonifacino

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Work permit: Italian **Gender:** Female **Date of birth:** 30/01/1983 **Place of birth:** Savona, Italy **Nationality:** Italian

WORK EXPERIENCE

University of Genova,

City: Genova | **Country:** Italy | **Name of unit or department:** Department of Pharmacy (DIFAR), Section of Pharmacology and Toxicology

[01/02/2025 – Current] **Associate Professor BIOS-11/A ex BIO/14 - Pharmacology**

School of Medical and Pharmaceutical Sciences, Department of Pharmacy (DIFAR), Section of Pharmacology and Toxicology

Research and teaching

Department of Pharmacy (DIFAR), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[01/02/2022 – 31/01/2025] **Research Associate (RTD B), BIOS-11/A ex BIO/14 - Pharmacology**

School of Medical and Pharmaceutical Sciences, Department of Pharmacy (DIFAR), Section of Pharmacology and Toxicology.

Research and teaching

Department of Pharmacy (DIFAR), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[01/07/2021 – 31/01/2022] **Post-doctoral fellow**

Research topic: ""Caratterizzazione in-vitro dei differenti fenotipi di cellule del sistema nervoso centrale coinvolte nella sclerosi laterale amiotrofica." (BIO/14; nuovo SSD BIOS-11/A – Pharmacology)

Research and teaching support

Department of Pharmacy (DIFAR), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[01/01/2020 – 07/04/2021] **Research Associate (RTD B), BIOS-11/A ex BIO/14 - Pharmacology**

School of Medical and Pharmaceutical Sciences, Department of Pharmacy (DIFAR), Section of Pharmacology and Toxicology.

Research and teaching

Country: Italy

[18/11/2020] **National scientific qualification as Academic Associate Professor**

D.M. n. 639/2024 del 02/05/2024,GSD 05/BIOS-11 – Pharmacology

Department of Pharmacy (DIFAR), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[01/10/2015 – 31/12/2019] **Research Associate (RTD A), BIOS-11/A ex BIO/14 - Pharmacology**

School of Medical and Pharmaceutical Sciences, Department of Pharmacy (DIFAR), Section of Pharmacology and Toxicology.

Research and teaching

Universitäts Klinik Für Psychiatrie u. Psychosomatik, Universitats Klinikum Freiburg, Germania.

City: Freiburg | **Country:** Germany

[13/06/2016 – 03/09/2016] **Visiting Researcher**

Neurochemisches Labor I, Neurochemistry and Neuroimmunology Lab, Universitats Klinikum Freiburg

Research

City: Milan | **Country:** Italy

[17/10/2016 – 18/10/2016] **Attending of Neuroscience School "Divulgare le Neuroscienze", SINS**

Department of Pharmacy (DIFAR), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[04/05/2015 – 30/09/2015] **Post-doctoral fellow**

Research Topic: "La ketamina come strumento per analizzare la natura dell'azione antidepressiva rapida. Implicazioni per la terapia della depressione resistente al trattamento" (BIO/14; new SSD BIOS-11/A – Pharmacology)

Research and teaching support

Department of Pharmacy (DIFAR), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[02/04/2013 – 01/04/2015] **Post-doctoral fellow**

Research topic: "Recettori metabotropi del glutammato del Gruppo I come possibili bersagli per interventi terapeutici innovativi nella sclerosi laterale amiotrofica" (BIO/14; new SSD BIOS-11/A – Pharmacology)

Research and teaching support

Department of Experimental Medicine (DIMES), University of Genova (UNIGE)

City: Genova | **Country:** Italy

[03/01/2011 – 02/01/2013] **Post-doctoral fellow**

Topic research: "Meccanismi molecolari alla base dei livelli eccessivi di acido glutammico riscontrati nella sclerosi laterale amiotrofica: interazioni tra recettori metabotropi del glutammato di gruppo Ie recettori per gli endocannabinoidi nella modulazione del rilascio di glutammato da astrociti" (BIO/14; new SSD BIOS-11/A – Pharmacology)

Research and teaching support

University of Genova

City: Genova | **Country:** Italy

[01/01/2008 – 31/12/2010] **PhD Student**

PhD COURSE IN NEUROCHEMISTRY AND NEUROBIOLOGY - Experimental, Molecular and Clinical Biology and Medicine, University of Genova

Research and teaching support

University of Genova

City: Genova | **Country:** Italy

[01/11/2005 – 05/11/2007] **Ungraduated Student**

PRE-GRADUATED GRADUATED RESEARCH ACTIVITY for experimental thesis at DIMES, Section Pharmacology and Toxicology, University of Genova

Research

EDUCATION AND TRAINING

[05/11/2007] **Degree in Pharmaceutical Chemistry and Technologies**

University of Genova

City: Genova | **Country:** Italy | | **Final grade:** 110 cum laude | **Thesis:** "Study on the interaction between excitatory and inhibitory receptors in primary cultures of motoneurons". Supervisor Prof. M. Raiteri

- primary cell colture

- neurotransmitter release

- neuropharmacology

[11/2007] **Qualification to the Profession of Pharmacist (State Examination)**

University of Genova

City: Genova | **Country:** Italy |

I session

[25/03/2011] **PhD in Neurochemistry and Neuobiology**

University of Genova

City: Genova | **Country:** Italy | **Field(s) of study:** Course in Molecular, Experimental and Clinical Biology and Medicine (XVII cycle) | **Thesis:** "Pathophysiology of glutamatergic transmission: modulation by 5-HT1D, 5-HT1A and P2X7 receptors in the human and rat central nervous system" PhD Supervisor Prof. G. Maura.

in vitro and ex vivo human and animal models

glutamate transmission

receptors and intracellular pathways

neuropharmacology

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

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

SKILLS

Technical Skills

functional experiments (superfusion system) | ex-vivo subcellular preparation (synaptosomes and gliosomes) | primary cell cultures (microglia, astrocytes and neurons) | cell line management | i n-vivo pharmacological treatments | RIA and ELISA analysis | wester blotting, rt-PCR and immunofluorescence studies | in-vivo motor behavioural studies | Microsoft Word | HPLC measurements | transgenic mouse colony management

Informatic skills

Social Media | Microsoft Powerpoint | Microsoft Excel | Microsoft Office | Google Drive

PUBLICATIONS

Research Activity

The reasearch activity is documented by many peer-review pubblications (as first, last or corresponding Author).

Tiziana Bonifacino is Author in 47 peer-reviewed (WOS, Scopus) papers.

Total Impact Factor **254.456**; Average Impact Factor **5.414**

Citations: **1631** (scopus)

h-index: **22** (scopus)

List of publications: https://www.scopus.com/authid/detail.uri?authorId=26867550400

HONOURS AND AWARDS

[2021] **Young Investigator Award**

Winner of the IJMS 2021 Young Investigator Awards

[2020] **Best Poster Award Awarding institution:** Motor Neuron Diseases, understanding the pathogenic mechanisms to develop therapies

FFABR Awarding institution: ANVUR

Admission to the individual annual finacial plan for the reasearch activity - FINANZIAMENTO ANNUALE INDIVIDUALE DELLE ATTIVITÀ BASE DI RICERCA (FABBR)

ANVUR: AGENZIA NAZIONALE DI VALUTAZIONE DEL SISTEMA UNIVERSITARIO E DELLA RICERCA; Italia - Italian agency for the evaluation of the university sistem and research.

2017

[2016] **Travel Grant Awarding institution:** UNIGE

[2015] **Travel Grant Awarding institution:** Italian Society of Neuroscience

SINS travel grant, “XVI SINS Congress”, Cagliari.

[2014] **Travel Grant Awarding institution:** Italian Society of Neuroscience

SINS travel grant,“9th FENS Forum of Neuroscience”, Milano.

[2011] **Travel Grant Awarding institution:** Italian Society of Neuroscience

SINS travel grant, “8th IBRO World Congress of Neuroscience”, Firenze.

TEACHING ACTIVITY

[2024 – Current] **Teaching assignments in the Bachelor's Degree in Medical-Pharmaceutical Biotechnology, University of Genova**

2024/2025. Holder of 6h of the course of Pharmacogenomics and Pharmacogenetics (code 98816; 20 hours of frontal lessons in English; 2.5 CFU).

[2024 – Current] **Teaching assignments in the Master's Degree in Applied and Experimental Biology, University of Genova**

2024/2025-today. Lecturer in Food Toxicology (code 104210; 48 hours of lectures; 6CFU), Master's Degree in Applied and Experimental Biology, UNIGE.

[31/01/2023] **Public engagement**

Seminario UNITE dal titolo “Farmacovigilanza nella terza età”

[2023 – 2024] **Teaching assignments in the degree course in Chemistry and Pharmaceutical Technologies, University of Genova**

2023/2024. Lecturer in Pharmacognosy (code 80461; 40 hours of lectures; 5CFU), Degree Course in Pharmaceutical Chemistry and Technology (CTF, 2nd year), UNIGE.

[2008] **Contract for the assignment of teaching support activities as per the provisional regulation for the implementation of art. 33 of the statute of the University of Genoa**

Rectoral decree n.1201/s of 2.2.1996: 30 hours of laboratory exercises for the Toxicology course, Degree Course in Pharmaceutical Chemistry and Technology (CTF), Faculty of Pharmacy, UNIGE.

[2015 – 2018] **Teaching assignments in the Pharmacy degree course, University of Genova**

2017/2018 - today. Holder of the Pharmacovigilance module (5 CFU, code 80330, 40 hours of frontal lessons), integrated teaching Pharmacognosy and Pharmacovigilance (code 80328), Degree Course in Pharmacy (IV year), UNIGE.

2016/2017. Professor of Pharmacovigilance (5 CFU, code 67531, 40 hours of lectures), Degree Course in Pharmacy (IV and V year), UNIGE.

2015/2016. 14 hours of frontal lessons in the Pharmacovigilance course, Degree Course in Pharmacy (5th year, code 67531), UNIGE.

[2016 – Current] **Teaching assignments in the School of Specialization in Hospital Pharmacy, University of Genova**

2022/2023 (2021/2022) – today. Co-holder of the module of Pharmacogenetics and Pharmacogenomics (theoretical part and univ. lab.) (code 93380; 30 hours of lectures; 1 CFU), in the course of Mechanisms of Action of Drugs (C.I.), School of Specialization in Hospital Pharmacy (SSFO, 1st year; code 93381), UNIGE. As part of the co-teachership, TB held 18 hours of lectures.

2016/2017 (2015/2016) - today. Holder of the Pharmacovigilance module (1 CFU; 8 hours of frontal lessons) in the course of Mechanisms of Action of Drugs (C.I.), School of Specialization in Hospital Pharmacy (SSFO, 1st year; code 93381), UNIGE.

[2020 – Current] **Teaching assignments at the Institute of Higher Studies (IANUA-ISSUGE), University of Genova**

024/2025. IANUA-ISSUGE. Advanced School of the University of Genoa. Lecturer of the course "Pharmaceutical information: from science to marketing" (12 h, 2 CFU), UNIGE.

2022/2023. IANUA-ISSUGE. Advanced School of the University of Genoa. Lecturer of the course "Pharmaceutical information: from science to marketing" (12 h, 2 CFU), UNIGE.

2020/2021. IANUA-ISSUGE. Advanced School of the University of Genoa. Lecturer of the course "Pharmaceutical information: from science to marketing" (12 h, 2 CFU), UNIGE..

[2011 – Current] **Other assignments**

From 2011/2012 – to 7 april 2021 and from 1/07/2021 – today. Tutorial activity to assist students in carrying out experimental theses. Master's Degree in Pharmaceutical Chemistry and Technology and Pharmacy, Department of Pharmacy, School of Medical and Pharmaceutical Sciences, UNIGE.

From 2011/2012 – to 7 april 2021 and from 1/07/2021 - today. Tutorial and assistance activities for PhD students. Doctoral School of Experimental, Molecular and Clinical Biology and Medicine, UNIGE.

From 2011/2012 – today. Expert in the subject and Member of the Examination Commission for the course of Pharmacology and Pharmacotherapy (code 67563). Master's Degree in Pharmaceutical Chemistry and Technology. School of Medical and Pharmaceutical Sciences, Department of Pharmacy, UNIGE.

[2022 – Current] **Other courses of professional training**

Courses organized by Istituto zooprofilattico sperimentale della Lombardia e dell'Emilia-Romagna "Bruno Umbertini" , Healthy Institution.

- **2022.** "Elementi base per l'approccio dei ricercatori all'utilizzo degli animali ai fini scientifici - edizione unica" 13 ECM

Training events recognized as suitable by the Ministry of Health with the obtaining of the credits necessary to carry out the following functions: Function all'art. 1, comma 1, lett. a) del D.M 5 agosto 2021 - 21 CFP, Function di cui all'art. 1, comma 1, lett. b) del D.M 5 agosto 2021, Function di cui all'art. 1, comma 1, lett. c) del D.M 5 agosto 2021, Function di cui all'art. 1, comma 1, lett. d) del D.M 5 agosto 2021:

- **2023, 2025.** "Pratiche avanzate di allevamento, modulo 23, Dm 5 agosto 2021- 1^ Edizione" 9 ECM, 6 CFP (Lett.A)B)C)D)).

- **2023, 2025.** "Etica e concezione dei progetti moduli 9, 10, 11 Dm 5 agosto 2021 - Edizione Unica" 9 ECM, 6 CFP (Lett.B).
- **2022.** "Biologia e gestione degli animali da laboratorio, moduli 3.1, 4, 5, 6.1, 7. Dm 5 agosto 2021 roditori e lagomorfi - edizione unica" 19.5 ECM, 21CFP (Lett. A)B)) e 17 CFP (Lett.C) D)).
- **2022, 2025.** "Legislazione nazionale ed etica livello 1, moduli 1 e 2, dm 5 agosto 2021 - edizione unica" 7.5 ECM, 5 CFP (Lett. A)B)C)D)).
- **2022.** "Etica e concezione dei progetti, moduli 9, 10, 11, dm 5 agosto 2021 - edizione unica" 9 ECM, 6 CFP (Lett. B)).

RESEARCH FIELDS OF INTEREST

[2008 – Current] -

TB's scientific interests relate to molecular, cellular, and functional changes in animal models of diseases. Present studies focus on non-neuronal cell contribution to motor neuron damage in ALS. Besides the in-vitro and ex-vivo molecular biology expertise, TB has a well-established and long-lasting experience in in-vivo studies monitoring ALS progression by evaluating motor/coordination skills, and muscle strength, after genetic manipulation or drug intervention.

INSTITUTIONAL ACTIVITY

[2016 – Current] **Institutional tasks in or for the department, University of Genova**

2025-2028. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXX - Duration: 3 years. UNIGE

2024 Member of the Council of the degree course in Applied and Experimental Biology, UNIGE.

2024-2027. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXX - Duration: 3 years. UNIGE.

2024 Member of the committee for the election of the representative of PhD students in Experimental Medicine, cycle XXXIX, UNIGE.

2024 Member of the competition commission for the Doctorate in Experimental Medicine, cycle XXXIX, UNIGE.

2023-2026. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXX - Duration: 3 years. UNIGE.

2023 Member of the committee for the election of the representative of PhD students in Experimental Medicine, cycle XXXVIII, UNIGE.

2023. President of the commission for the election of the representative of the specialists in the School of Specialization in Hospital Pharmacy (SSFO), UNIGE.

2023. Member of the Judging Committee for the awarding of the title of Doctor of Research in Experimental Medicine (cycle XXXV), UNIGE.

2022, 2023. Member of the competition commission for the Doctorate in Experimental Medicine, International Curriculum in Pharmacology and Toxicology, UNIGE.

2022 – today. Member of "Assegnazione Tesi" Commission, Department of Pharmacy (DIFAR), UNIGE.

2022-2025. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXVIII - Duration: 3 years. UNIGE.

2021-2024. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXVII - Duration: 3 years. UNIGE.

2020, 2022, 2023. Member of the Diploma Commission of the Specialization School in Hospital Pharmacy (SSFO), UNIGE.

2020, 2022, 2023. Member of the commission for the assignment of a research grant (BIOS-11/A – Pharmacology), Department of Pharmacy, DIFAR, UNIGE.

2019, 2020, 2022. Member of the evaluation committee for the assignment of the role referred to in the "comparative procedure, by qualifications, aimed at the assignment of n.1 self-employed professional work role - Veterinary Doctor –UNIGE.

2020-2023. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXVI - Duration: 3 years. UNIGE.

2019-2022. Member of the ERASMUS commission of the Department of Pharmacy (DIFAR), UNIGE.

2019-2022. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXV - Duration: 3 anni. UNIGE.

2018-2021. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXIV - Duration: 3 years. UNIGE.

2018. Member of the competition committee for the PhD in Experimental Medicine, Pharmacology and Toxicology curriculum, UNIGE.

2017-2020. Member of the teaching staff of the doctorate in experimental medicine [DOT1311778], Cycle: XXXIII - Duration: 3 years. UNIGE.

2017 – today. Member of the internationalization commission at the Department of Pharmacy (DIFAR), UNIGE.

AA 2016-2017 – today. member of 19 commissions of Master's Degree in Pharmacy and CTF, UNIGE.

2016 - today Member of the Council of the School of Specialization in Hospital Pharmacy (SSFO), UNIGE.

2016 – today. Member of the Council of the Department of Pharmacy and of the CULM of the degree courses in Pharmacy and Chemistry and Pharmaceutical Technologies (CTF), UNIGE.

AFFILIATION TO SCIENTIFIC SOCIETIES

[2011 – Current] **Member of Italian Society of Pharmacology (SIF)**

[2010 – Current] **Member of Italian Neuroscience Society (SINS)**

[2010 – Current] **Member of Federation of European Neuroscience Societies (FENS)**

SUPERVISOR / CO-SUPERVISOR OF DEGREE, DOCTORATE OR SPECIALTY THESIS

[2016 – Current] **List of thesis**

2016, TB has been supervisor and co-supervisor of several compilation and experimental theses for students of the course of Pharmacy or Chemistry and Pharmaceutical Technologies, of the SSFO specialization course and of the doctorate course in Experimental Medicine (International Pharmacology and Toxicology Curriculum), UNIGE, as detailed below:

Supervisor of 7 experimental degree theses (BIO/14; new SSD BIOS-11/A – Pharmacology) entitled:

§ "Effetto dell'arricchimento ambientale in ratti adulti modello di ambliopia: impatto sulle componenti motoria, sociale e sensoriale"

§ "Modulazione del rilascio di glutammato nel midollo spinale di topo da parte dei recettori metabotropi glutammatergici del gruppo I ed implicazioni nella sclerosi laterale amiotrofica"

§ "Funzione degli autorecettori del glutammato del gruppo I nel midollo spinale di topi SOD1G93A durante la progressione della sclerosi laterale amiotrofica"

§ "Metabolismo aerobico e anaerobico a livello pre- e peri-sinaptico nel modello sperimentale SOD1G93A di sclerosi laterale amiotrofica: studio in una fase pre-sintomatica della patologia"

§ "Il blocco farmacologico del recettore metabotropo del glutammato di tipo 5 migliora il decorso della sclerosi laterale amiotrofica nel modello animale SOD1G93A"

§ "La somministrazione acuta di ketamina blocca l'eccessivo rilascio di glutammato nella corteccia prefrontale in un modello animale di stress post-traumatico"

§ "Studio del rilascio di glutammato e di dopamina nella corteccia prefrontale di un modello animale di resilienza e/o vulnerabilità allo stress acuto"

Supervisor of 5 compilation theses (BIO/14; new SSD BIOS-11/A – Pharmacology) entitled:

§ "L'effetto dell'esercizio fisico nella sclerosi laterale amiotrofica"

§ "Interazioni bidirezionali tra diabete e alzheimer: meccanismo e possibili target terapeutici"

§ "L'evoluzione del ruolo degli astrociti e il loro contributo nella patogenesi della sclerosi laterale amiotrofica"

§ "Ecofarmacovigilanza: una risorsa per la tutela dell'ambiente e nella lotta all'antibiotico-resistenza"

§ "La neuropatia indotta da farmaci chemioterapici: il ruolo di Pannexin-1"

Co-supervisor of 6 experimental degree theses (BIO/14; new SSD BIOS-11/A – Pharmacology) entitled:

• "Ruolo della calpaina-1 nella fase precoce asintomatica della sclerosi laterale amiotrofica"

§ "Eccessivo rilascio di glutammato in un modello di sclerosi laterale amiotrofica e meccanismi che lo supportano"

§ "Effetti del blocco farmacologico del recettore GPR17 nella sclerosi laterale amiotrofica"

§ "L'ablazione genica in-vivo del recettore metabotropo del glutammato di tipo 5 rallenta la progressione della sclerosi laterale amiotrofica nel modello murino SOD1G93A"

§ "Effetti del montelukast nella sclerosi laterale amiotrofica: uno studio preclinico in topi SOD1G93A"

§ "Profilazione di modelli murini attraverso la video tracking analisi"

Co-supervisor of 1 compilation thesis (BIO/14; new SSD BIOS-11/A – Pharmacology) entitled:

§ "Ecofarmacovigilanza: impatto ambientale dei prodotti farmaceutici"

Supervisor of 3 specialization theses of the School of Specialization in Hospital Pharmacy (SSFO) entitled: "Farmacovigilanza nel periodo pandemico da COVID-19"

§ "La terapia farmacologica dell'atrofia muscolare spinale e il ruolo del farmacista ospedaliero nella gestione dei farmaci"

§ "Antimicrobial stewardship in ASL2: sorveglianza attiva e controllo delle infezioni nel paziente ospedalizzato e sul territorio – il ruolo del farmacista del servizio sanitario nazionale"

Supervisor of a doctoral thesis in Experimental Medicine, International Pharmacology and Toxicology Curriculum (BIO/14; new SSD BIOS-11/A – Pharmacology) entitled:

§ "Effects of pharmacological GPR17 modulation in the sod1g93a mouse model of amyotrophic lateral sclerosis"

[2019 – Current] **DOCTORAL THESIS EVALUATION**

2019. TB was a reviewer of a PhD thesis, School of Pharmacology and Toxicology, Department of Physiology and Pharmacology "Vittorio Erspamer"Università della Sapienza di Roma, dal titolo "The role of glial cells in neuropsychiatrc disorders".

SCHOOL / WORK ACTIVITY

[2022 – Current] **Dissemination activities (seminars and workshops)**

11-04-2024. Laboratory activities (5.5 ore) PCTO PNRR "Caratterizzazione chimico-nutrizionale di prodotti alimentari del territorio per il loro potenziale im (4263)"

04-03-2024. Seminar PCTO dal titolo "La Farmacovigilanza: il continuo monitoraggio dei farmaci nella vita di tutti i giorni".

05-02-2024. Seminar PCTO dal titolo "La Farmacovigilanza: il continuo monitoraggio dei farmaci nella vita di tutti i giorni".

16-01-2023. Seminar PCTO dal titolo "La Farmacovigilanza: il continuo monitoraggio dei farmaci nella vita di tutti i giorni".

10-02-2022. Seminar PCTO dal titolo "La Farmacovigilanza: il continuo monitoraggio dei farmaci nella vita di tutti i giorni".

EDITORIAL COMMITEE

Editorial Member

- 2022: Co-guest editor, Special Issue, Role of Glutamate receptors in CNS disease, IJMS
- Frontiers in Molecular Neuroscience
- Frontiers in Neuropharmacology
- Frontiers in Non-Neuronal Cells
- Frontiers in Brain Disease Mechanisms

RESEARCH PROJECT

[2010 – Current]

Responsibility for scientific studies and research entrusted by qualified public or private institutions, admitted to funding on the basis of competitive calls that include peer review.

Principal Investigator (PI) in:

30-11-2023 / 29-11-2025: MIUR PRIN (Progetti di Rilevante Interesse Nazionale) PNRR (piano nazionale di ripresa e resilienza). 3 year Project P2022B5J32. "Sex-dependent, non-cell autonomous autophagy dysfunctions in amyotrophic lateral sclerosis: a basis for gender-personalized medicine" Euros 128421 TB (Total Euros 245391).

27-04-2020 / 27-4-2023 (prorogato al 31-1-2024): ARISLA Foundation Project: FG_12/2019; "New strategies to enhance the trophic functions and remyelinating abilities of adult NG2-glia in amyotrophic lateral sclerosis via the GPR17 receptor" (duration 36 months –Euros 80000 TB (Total Euros 200000).

Unit member in:

1.7.2024 - 30-6-2027. Miur project - PON T4 "HybridHub (H2UB) - Modelli cellulari e computazionali, micro e nanotecnologie per la personalizzazione di terapie innovative. Attività A3.2. (Lead Optimization, Individuazione e Caratterizzazione di target terapeutici), all'interno dell'Obiettivo specifico OS.3 (Organizzazione di una infrastruttura per la ricerca preclinica).

1.9.2019 - 31-8-2022. MIUR PRIN project "The interplay between the "rna/protein quality control system" and "exosomes" as a spreading mechanism in amyotrophic lateral sclerosis [ex_als]". (Prot. 2017F2A2C5).

1-3-2018 - 30-6-2021: 3 year project granted by Compagnia San Paolo (Prot. ROL20571) : "Effetti terapeutici di miRNA veicolati in esosomi prodotti da cellule staminali mesenchimali nella sclerosi laterale amiotrofica". Ruolo: componente dell'unità di ricerca

5.2.2017 - 5.2.2020. MIUR PRIN project, "Risposte maladattative dello stress: studio dei meccanismi che le regolano per identificare nuovi bersagli terapeutici nelle malattie neuropsichiatriche". (Protocollo2015HRE757).

25.4.2017 - 25.4.2020. INTERRREG ALCOTRA – ANTEA project, "Attività innovative per lo sviluppo della filiera transfrontaliera del fiore edule". (n. 1139 Antea).

1.5.2017 - 30.4.2018. ARISLA Foundation project, "New strategies to enhance the trophic functions and remyelinating abilities of adult NG2-glia in amyotrophic ,lateral sclerosis via the GPR17 receptor". (Protocollo PGBR_16/2016).

1.1.2017 - 31.3.2019. Motor Neurone Disease Association (MND) project: "Exosome-shuttled miRNAs as mediators of the therapeutic effect of mesenchymal stem cells in ALS". (Protocollo April16/848-791).

8.3.2014 - 8.3.2017. MIUR PRIN project, "Ketamina come strumento per analizzare la natura dell'azione antidepressiva rapida. Implicazioni per la terapia della depressione resistente al trattamento" (Protocollo2012A9T2S9).

23.9.2015 - 23.9.2018. MIUR Scientific Independence of young Researchers (SIR) project, "Neuronal and non-neuronaldepletion of Group I metabotropicglutamatereceptors in ALS: an innovative way to hit upon a therapy". (ProtocolloRBSI14B1Z1).

1.2.2013 - 1.2.2016. Progetto MIUR PRIN, dal titolo: "Atassie ereditarie, uno studio integrato: dall'approccio genomico ai meccanismi patogenetici mediante modelli animali e cellulari" (Protocollo20108WT59Y).

17.10.2011 - 17.10.2013. MIUR PRIN project, "Meccanismi cellulari e molecolari degli effetti dello stress e del trattamento con farmaci antidepressivi sul rilascio di acido glutammico nel sistema nervoso centrale". (Protocollo2009BRMW4W).

22.3-.2010 - 22.9.2012. MIUR PRIN project, "Interazioni tra recettori metabotropi del glutammato di gruppo I e recettori per gli endocannabinoidi nella modulazione del rilascio di glutammato da astrociti e loro ruolo in un modello murino di sclerosi laterale amiotrofica" (Protocollo2008LCKEXC).

[2018 – Current] **Responsibility for scientific studies and research entrusted by qualified public or private institutions, admitted to funding NOT on the basis of competitive calls that require peer review.**

As Principal Investigator (PI):

2024. co-PI of a research contract to of a research contract to enhance and validate, through scientific evidence, the purifying, anti-cytotoxic and antioxidant effects of the product of the phytotherapeutic line "DEPURERBE FORTE", by ESI srl, Albisola Superiore (16500 Euros).

2018-2021 co-PI of a research contract titled "Testing Metys compounds in in-vitro assays on neurotransmitter release" by Metys Pharmaceuticals AG, Basel, Svizzera. (27500 Euros).

NATIONAL AND INTERNATIONAL CONGRESSES

[27/09/2018 – 29/09/2018] **Organization of national and international congresses**

TB organized the internation congress "Focus on ALS. Motor neuron diseases – molecular and cellular basis of vulnerability" , Genova.

[26/09/2019 – 29/09/2019] **Symposia proposal**

TB proposed a symposium titled *"New central and peripheral pharmacological targets potentially involved in amyotrophic lateral sclerosis"* in XVIII SINS National Congress Perugia dal 26 al 29 settembre 2019.

[2014 – Current] **Congress attendance**

TB is author of 155 scientific contributions presented in National and International Congresses, 13 oral communications (10 selected by scientific commitee and 3 invited) and 26 posters as first author.

[2014 – Current] **Oral communications**

"*Montelukast improves disease progression in the female SOD1G93A mouse model of ALS by restoring oligodendrocyte maturation and counteracting altered glial reactivity"* XX SINS National Congress, Torino, 14 - 17/9/2023.

International Congress, **invited**, talk titled: *"Effects of the in-vivo treatment with the non-selective GPR17 antagonist montelukast on disease outcome in the SOD1G93A mouse model of ALS*" Pharmameet 2023, international meet on pharmaceutics and drug delivery system, 9-11/2/2023 Porto, Portogallo.

"Pre-synaptic and peri-synaptic maladaptive responses induced by acute stress in rat prefrontal cortex" XIX SINS National Congress, Virtual Edition, 9-11/9/2021.

"Neurons vs. astrocytes: bioenergetic signature of the pre- and peri-synaptic compartments in amyotrophic lateral sclerosis" et al. G. 40° SIF National Congress, SIF week digital edition, 9-13/3/2021.

"mGluR5 as a target to reduce the reactive phenotype of spinal cord astrocytes from SOD1G93A mouse model of amyotrophic lateral sclerosis" 39° SIF National Congress, Firenze 20-23 /11 2019.

"Knocking out mGluR5 attenuates the reactive phenotype of spinal cord astrocytes from the SOD1G93A mouse model of ALS". XVIII SINS National Congress, Perugia 26 - 29 /9 /2019.

"Aspetti tossicologici e microbiologici dei fiori eduli". Related to ANTEA project. Attività innovative per lo sviluppo della filiera transfrontaliera del fiore edule. I fiori eduli: corso di formazione e aggiornamento. 10-11 /6/ 2019, Sanremo.

International Congress, **invited**, talk titled: *"Excessive glutamate release and undelying synaptic mechanisms in a mouse model of amyotrophic lateral sclerosis".* 23rd International Conference on Neurology & Neurophysiology (session: Molecular Neuropharmacology), Edinburgh, Scozia, 18-19 / 3/ 2019.

International Congress, *"Beneficial effects of Metabotropic glutamate receptor type 5 on ALS progression"* Focus on ALS. Motor neuron diseases: molecular and cellular basis of selective vulnerability. Genova, 27-29 /9/ 2018.

International Congress, *"Metabotropic glutamate receptor 5 as a potential target in ALS"* 1st Meeting in Translational Pharmacology, Santiago di Compostela, 19-22/6/2018.

International Congress, **invited**, *"Altered Synaptic Mechanisms and Excessive Glutamate Release in Amyotrophic Lateral Sclerosis".* BIT's 9th Annual World Congress of Neurotalk-2018, Bangkok, Thailand, 16-18 /5/2018.

"Altered Mechanisms Underlying the Abnormal Glutamate Release in Amyotrophic Lateral Sclerosisat a Pre-Symptomatic Stage of the Disease". XVII SINS National Congress, Lacco Ameno, Ischia, 1-4 / 10/2017.

Seminar, **invited**, in Neurochemisches Labor I, Universitäts Klinik Für Psychiatrie u. Psychosomatik, Universitats Klinikum Freiburg, Germania titled: *"Group I metabotropic glutamate receptors and neurotoxicity in amyotrophic lateral sclerosis (ALS)"*, 28/6/2016.

"Molecular mechanisms supporting abnormal glutamate release in the spinal cord of a mouse model of Amyotrophic Lateral Sclerosis". Seminario Dottorandi ed Assegnisti di Ricerca, 17° Seminario SIF, Rimini, 16-18/9/2014.

MINISTERIAL PROJECT FOR ANIMAL USE

[2010 – Current] -

2024 – 2027. Responsible of experimental procedures (lett. a) del D.M 5 /8/ 2021) research project 214/2024-PR

2023 – 2026. Responsible of experimental procedures (lett. a) del D.M 5 /8/ 2021) research project 692/2023-PR

2020 – 2026. Responsible of experimental procedures (lett. a) del D.M 5 /8/ 2021) research project1022/2020-PR

2010 – 2017. (post DL 26/2014). Member of the projects involved in experimental procedures

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In accordance with Legislative Decree 30/06/2003 n.196, I authorize the processing of the personal data provided

Genova, 26/06/2025