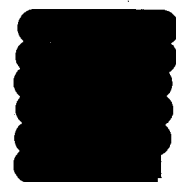


Personal information: **Ilaria TONAZZINI**

Date of Birth: [REDACTED] (MS), Italy.

Career breaks: [REDACTED]

Email: [REDACTED]



Education

- **January 2004- May 2007:** University of Pisa, Faculty of Pharmacy, PhD in Drug's Science (*Medicinal Chemistry* area: *Design, development and biological activity of new drugs*), obtained on 4th May 2007. Thesis: "Purinergic system: regulations and interactions" (ISBN 978-3-639-51302-8).
- **2005:** University of Pisa, Bachelor Degree in *Drug Control and Quality Assurance*, with 110/110 *cum laude*. Experimental thesis: "Proteomic and bi-dimensional electrophoresis" (27-01-2005).
- **1998-2003:** University of Pisa, Specialistic (Master) Degree in *Pharmaceutical Chemistry and Technology* (C.T.F), with emphasis on Biochemistry and Pharmacology, score 110/110 *cum laude*.
- **1993-1998:** High School, Liceo Classico "E. Repetti", Carrara (final grade 56/60).

Positions and Scientific activity



March 2018 – present: Marie Curie Individual Fellowship 2017 (H2020-MSCA-IF-2017 #795948), at Dept. of Neuroscience, Erasmus Medical Center (EMC), Rotterdam (NL), with Prof. Ype Elgersma. Project: *Study of neuronal sensing and migration/guidance dynamics in neurodevelopmental disorders by nano-engineered chips*.



November 2017 – February 2018:

Post-doc position (assegno di ricerca) at Istituto Nanoscienze-CNR, Laboratorio NEST (National Enterprise for nanoScience and nanoTechnology), Pisa (IT). Topic: Nanotechnology for tumor molecular fingerprinting and early diagnosis.

Responsible of the Cell and Tissue Culture facilities of the research center NEST (ruolo di preposto).



January 2015 – October 2017:

Fellow of Fondazione Umberto Veronesi, working at Istituto Nanoscienze-CNR, NEST (National Enterprise for nanoScience and nanoTechnology), Pisa (IT), thanks to **3 Post-doc fellowship grants** (2015, 2016 and 2017) of Fondazione Umberto Veronesi. Topic: Study of neuronal cell sensing dynamics in pathological (autistic) models by nanostructured materials and microfluidics.

Responsible of the Cell and Tissue Culture facilities of the research center NEST (ruolo di preposto).



July 2010 – Jan 2015:

Post-doc position (assegno di ricerca) at Scuola Normale Superiore, NEST (National Enterprise for nanoScience and nanoTechnology) laboratory, Pisa (IT); affiliated to Istituto Nanoscienze CNR.

Topic: Study of cell mechanotransduction by nanostructured substrates and by chemical stimulation with microfluidic chips. PI: Dr. Marco Cecchini.

Responsible of the Cell and Tissue Culture facilities of the research center NEST (ruolo di preposto, *since October 2010*). **Maternity break included** (Dec 2011-May 2012, included).



March 2007 - December 2009:

Post-doc position (with different contracts: assegno di ricerca; co.co.co with a spin-off company) at the Institute for the Study of Nanostructured Materials (ISMN)-CNR, Bologna (IT). Topic: Study of neural cell activities by organic semiconductor transducers. PI: Prof. F. Biscarini. **Maternity break included** (August 2008-June 2009).



January 2004 – 2007:



18-02-2019

PhD position in Drug's Science, Faculty of Pharmacy, Dept. of Psychiatry-Neurobiology-Pharmacology & Biotechnology, University of Pisa (IT). Topic: GPCRs, purinergic receptors. Tutor: Prof. C. Martini. *Cultore della materia* in subject BIO/11.



February 2003 - October 2003:

Undergraduate student at Section of Pharmacology and Toxicology, Dept. of Veterinary Clinic, within Centre of Excellence AmbiSEN (Centre for the study of the Effects of Harmful Agents), University of Pisa (IT). Topic: HPLC analysis of vitamins and metabolites. Tutor: Prof. G. Soldani.

Visiting fellowships

November 2016: CNR *Short-term mobility grant* to visit the Dept. of Neuroscience, Erasmus Medical Center (EMC), Rotterdam (NL). Project: *Study of rescue strategies for impaired neuronal contact guidance in Ubiquitin ligase E3a (Ube3a)-deficient neurons*, in collaboration with Prof. Y. Elgersma.

November-December 2015: CNR *Short-term mobility grant* to visit the Dept. of Neuroscience, Erasmus Medical Center (EMC), Rotterdam (NL). Project: *Study of the molecular mechanisms of neuronal sensing in Ubiquitin ligase E3a- Knock-Out (Ube3a-KO) neurons*, in collaboration with Prof. Y. Elgersma.

October 2014: E-COST (EU cooperation in Science and Technology) *Short-term scientific mission grant* to perform experiment in the laboratory of Prof. Y. Elgersma, Dept. of Neuroscience, Erasmus Medical Center (EMC), Rotterdam (NL). Project: *Nanotechnologies to unravel the role of Ube3a protein in neuronal focal adhesion development*.

January-February 2011: European Molecular Biology Organization (EMBO) *Short-term fellowship* to join the laboratory of Prof. Y. Elgersma, Dept. of Neuroscience, EMC, Rotterdam (NL). Project: *Study of UBE3A-knockout neurons: research on neuronal plasticity in patho-physiological conditions*.

October 2005 – March 2006: *Marie Curie fellowship* at the Marie Curie Training Site on Basic mechanisms of amino acid neurotransmission, at Centre for Molecular Biology and Neuroscience (CMBN), University of Oslo (NO). Tutors: Prof. J. Storm-Mathisen and Dr. L. Bergersen. Project: *Study of adenosine A₁ and purinergic P2Y₁ receptor co-localization in hippocampus*.

May-September 2005: *PhD visiting fellowship* at the Dept. of Physiology and Pharmacology, Karolinska Institutet, Stockholm (SE), with Prof. B. Fredholm. Projects: Study on effects of different challenges on astrocytes in primary cultures from adenosine receptor knock-out mice; *In vivo* study of caffeine-ethanol interactions using the A₁ and A_{2A}-KO mice.

Research Grants

2018- H2020 Marie Curie Individual Fellowship 2017 (795948). Project: *Study of neuronal sensing and migration/guidance dynamics in neurodevelopmental disorders by nano-engineered chips* (NEUROGUIDE). Dept. of Neuroscience, Erasmus Medical Center (EMC), Rotterdam (NL).

2017- Fondazione Umberto Veronesi *Post-doctoral grant* 2017 (1 year). Project: Solving the puzzle of UBE3A function in neuronal development (pU^{be3a}zzle). The project is carried out at Istituto Nanoscienze CNR, Pisa (with provvedimento di associazione).

2016- Fondazione Umberto Veronesi *Post-doctoral grant* 2016 (1 year). Project: Rescue strategies for impaired neurite guidance in Ube3a-deficient neurons (REguide). The project is carried out at Istituto Nanoscienze CNR, Pisa (with provvedimento di associazione). Documents: CNR-Istituto Nanoscienze Pisa num. 0005283 del 31-12-2015.

2015- Fondazione Umberto Veronesi *Post-doctoral grant* 2015 (1 year). Project: Nanotechnologies to unravel the Role of Ube3a protein in Neuronal contact sensing and cytoskeleton structural dynamics. The project is carried out at Istituto Nanoscienze CNR, Pisa. Documents: CNR-Istituto Nanoscienze Pisa num. 0000649 del 11-02-2015; num. 00007887 del 23-12-2014.

Other grants

2016- CNR *Short-term mobility grant* (STM 2016) to perform experiments at EMC, Rotterdam (NL).

2016- EMBO *travel grant* for the EMBO Workshop "Mechanisms of neuronal remodeling", Seon (DE), June.

2015- SINS *travel grant* for the participation to the 16^o Congress for the Italian Society for Neuroscience (SINS), Cagliari (IT), October 2015.

2015- CNR *Short-term mobility grant* (STM 2015) to perform experiments at EMC, Rotterdam (NL).

- 2014-** eCOST (EU cooperation in Science and Technology) – action BM1001 (Brain Extracellular Matrix), *Short-term scientific Mission grant* (STSM-BM1001-191014-046588) at Erasmus MC, Rotterdam (NL). Project: *Nanotechnologies to unravel the role of Ube3a protein in neuronal focal adhesion development*.
- 2014-** eCOST (EU cooperation in Science and Technology) – ExtraCellular matrix-NET *full boarding fellowship* for the meeting "Brain Extracellular Matrix Targeting in Regeneration and Rehabilitation", Volterra (IT), July.
- 2011-** EMBO *Short-term fellowship grant* (ASTF 200.00-2010, 2 months), to join Prof. Elgersma' lab at Erasmus MC, Rotterdam (NL). Project: *Study of UBE3A-KO neurons: research on neuronal plasticity in patho-physiological conditions*.
- 2011-** SINS (Società Italiana di Neuroscienze) *travel grant* for the 8th IBRO World Congress of Neuroscience, Firenze (IT), July 2011.
- 2010-** FENS (Federation of European Neuroscience Societies) *travel grant* for the 7th Forum of European Neuroscience, Amsterdam (NL), July 2010.
- 2005-** EU-Marie Curie PhD fellow *grant* (HPMT-CT-2001-00406; 6 months) at Univ. of Oslo (NO). Project: *Study of adenosine A₁ and purinergic P2Y₁ receptor co-localization in hippocampus*.

Prizes

- 2016-** Two images of mine selected in the competition "Biologia, che spettacolo!", organized by magazine "PLaNCK!" (<http://www.planck-magazine.it/index.php/news/36-biologia-che-spettacolo>).
- 2014-** Two images of mine selected in the competition "Arte o Scienza?" 2014, organized by University of Trieste and Immaginario Scientifico (<http://www.artescienza.it/le-opere-migliori-edizione-2014/>).
- 2007-** Winner (*best project prize*) of the Business Plan competition Start Cup 2007, organized by University of Bologna and Regione Emilia Romagna, with the start-up project Nano4Bio (Nanostructured surfaces for life science applications).
- 2007/2008-** Winner (*selected finalist*) of the Business Plan competition Mind the bridge 2007-2008, organized by Google-Italia and the USA Embassy in Italy, project Nano4Bio: SMART Nanostructured Surfaces for Cell Culture & Biosensors (<http://www.cnr.it/news/index/news/id/4701>).
- 2006-** *Best Poster prize* at the 8^o Int. Symposium on Adenosine and Adenine nucleotides, Ferrara (IT), 24-28 May 2006.

Patents

- "Functional surfaces with controlled morphology in the nanometric scale influence adhesion, viability and proliferation of cells". N° MI2009A001099 (Milano, 22/06/2009) **Tonazzini I**, Bystrenova E, Lazar A, Stoliar P, Biscarini F, CNR.

Start-up Company

2008: the project Nano4Bio (SMART Nanostructured Surfaces for Cell Culture & Biosensors), thanks to the funding of 2 Business Plan competitions, was developed in a **start-up company**, Nano4Bio srl (in which I have been partner until 2015). N4B was founded and based in Bologna (IT) (<http://www.cnr.it/news/index/news/id/4701>).

Publications in peer reviewed journals

H-index = 16; first author; * = *corresponding author*

1. Quantitative Microproteomics Based Characterization of the Central and Peripheral Nervous System of a Mouse Model of Krabbe Disease. Pellegrini D, Del Grosso A, Angella L, Giordano N, Dilillo M, **Tonazzini I**, Caleo M, Cecchini M, McDonnell L. *Molecular Cellular Proteomics* **2019**, in press.
2. Lipid-conjugated rigidochromic probe discloses membrane alteration in model cells of Krabbe disease. Abbandonato G, Storti B, **Tonazzini I**, Stöckl M, Subramaniam V, Nifosì R, Cecchini M, Signore G, Bizzarri R. *Biophysical Journal* **2018**, in press
3. Novel fluorescent triazinobenzimidazole derivatives as probes for labelling human A1 and A2B adenosine receptor subtypes. Barresi E, Giacomelli C, Daniele S, **Tonazzini I**, Robello M, Salerno S, Piano I, Cosimelli B, Greco G, Da Settimo F, Martini C, Trincavelli ML, Taliani S. *Bioorganic & Medicinal Chemistry* **2018**, in press. DOI: 10.1021/acs.analchem.8b00972

4. Surface-acoustic wave (SAW)-driven device for dynamic cell cultures. Greco G, Agostini M, **Tonazzini I**, Sallemi D, Barone S, Cecchini M. *Anal Chem* **2018**, 90: 7450–7457. DOI: 10.1021/acs.analchem.8b00972
5. Peptide-based coatings for flexible implantable neural interfaces. Righi M, Puleo G, Tonazzini I, Giudetti G, Cecchini M, Micera S. *Sci Rep.* **2018** 8(1):502. doi: 10.1038/s41598-017-17877-y.
6. Hierarchical thermoplastic rippled nanostructures regulate Schwann Cell adhesion, morphology and spatial organization. Masciullo C, Dell'Anna R, Tonazzini I, Böttger R, Pepponi G, Cecchini M. *Nanoscale* **2017**, DOI: 10.1039/C7NR02822A
7. Size and specimen-dependent strategy for X-ray micro-CT and TEM correlative analysis of nervous system samples. Cappello V, Parlanti P, Brun F, Tromba G, Rigolio R, **Tonazzini I**, Cecchini M, Piazza V, Gemmi M. *Sci Reports* **2017**, 7: 2858.
8. Neuregulin-1 functionalization of organic fibers for Schwann cell guidance. **Tonazzini I**, Moffa M, Pisignano D, Cecchini M. *Nanotechnology* **2017**, 28, 155303. doi.org/10.1088/1361-6528/aa6316 IF 3.44
9. Neuronal mechanisms for nanotopography sensing. **Tonazzini I** and Cecchini M. *Ebook Frontiers in Nanomedicine- Nanomedicine and Neurosciences: Advantages, Limitations and Safety Aspects*, Bentham Science Publishers, **2017**, 2: 107-121.
10. Ultrastructural characterization of the lower motor system in a mouse model of Krabbe disease. Cappello V, Marchetti L, Parlanti P, **Tonazzini I**, Cecchini M, Piazza V, Gemmi M. *Sci Reports* **2016**, 6: 1. DOI: 10.1038/s41598-016-0001-8.
11. Lithium improves cell viability in psychosine treated MO3.13 human oligodendrocyte cells via autophagy activation. Del Grosso A, Antonini S, Angella L, **Tonazzini I**, Signore G, Cecchini M. *J Neurosci Res* **2016**, 94: 1246. doi: 10.1002/jnr.23910
12. Impaired neurite contact guidance in Ubiquitin ligase E3a (Ube3a)-deficient hippocampal neurons on nanostructured substrates. **Tonazzini I***, Meucci S, Van Woerden GM, Elgersma Y, and Cecchini M. *Adv Healthcare Mat* **2016**, 5: 850. doi: 10.1002/adhm.201500815.
13. RP-CARS reveals molecular spatial order anomalies in myelin of an animal model of Krabbe disease. de Vito G, Cappello V, **Tonazzini I**, Cecchini C, Piazza V. *Journal of Biophotonics* **2016**, 10: 385. doi: 10.1002/jbio.201500305.
14. Topographical strategies to control neural outgrowth. Roccasalvo IM, Sergi PN, **Tonazzini I**, Cecchini M, Micera S. *Conf Proc IEEE Eng Med Biol Soc.* **2015**: 7147-50. doi: 10.1109/EMBC.2015.7320040.
15. Schwann Cell Contact Guidance versus Boundary Interaction in Functional Wound Healing along Nano and Microstructured Membranes. **Tonazzini I***, Jacchetti E, Meucci S, Beltram F, Cecchini M. *Adv Healthcare Mat* **2015**, 4: 1849. DOI: 10.1002/adhm.201500268
16. Human Neuronal SHSY5Y Cells on PVDF:PTFE Copolymer Thin Films. **Tonazzini I***, Bystrenova E, Chelli B, Greco P, De Leeuw D, Biscarini F. *Adv Eng Mat* **2015**, 17: 1051. doi: 10.1002/adem.201400441.
17. Role of extracellular calcium and mitochondrial oxygen species in psychosine-induced oligodendrocyte cell death". Voccoli V, **Tonazzini I**, Signore G, Caleo M, Cecchini M. *Cell Death & Disease* **2014**, 5: e1529.
18. Acoustofluidics and whole-blood manipulation in surface acoustic wave counterflow devices. Travagliati M, Shilton R, Pagliuzzi M, **Tonazzini I**, Beltram F, Cecchini M. *Analytical Chemistry* **2014**, 86: 10633.
19. Microstructured polydimethylsiloxane membranes for peripheral nerve regeneration. Jacchetti E, **Tonazzini I**, Meucci S, Beltram F, Cecchini M. *Microelectronic Engineering* **2014**, 124: 26.
20. RP-CARS: label-free optical readout of the myelin intrinsic healthiness. De Vito G, **Tonazzini I**, Cecchini M, Piazza V. *Optics Express* **2014**, 22: 13733.
21. Interaction of leech neurons with topographical gratings: comparison with rodent and human neuronal lines and primary cells. **Tonazzini I***, Pellegrini M, Pellegrino M, Cecchini M. *Interface Focus* **2014**, 4: 20130047.
22. Interaction of SH-SY5Y cells with nanogratings during neuronal differentiation: comparison with primary neurons. **Tonazzini I**, Cecchini A, Elgersma Y, Cecchini M. *Adv Healthcare Mat* **2014**, 3(4): 581.
23. PC12 Guidance on Nanogratings: Computational Model of Interplay between Growth Cones and Nanostructures. Sergi PN, Morana Roccasalva I, **Tonazzini I**, Cecchini M, Micera S. *PLOS One* **2013**, 8:e70304.
24. Neuronal differentiation on anisotropic nanotopographies: neurite contact guidance tolerance to topographical noise. **Tonazzini I***, Meucci S, Faraci P, Beltram F, Cecchini M. *Biomaterials*, **2013**, 34: 6027.

25. Nanotopography induced contact guidance of the F11 cell line during neuronal differentiation: a neuronal model cell line for tissue scaffold development. Wieringa P, **Tonazzini I**, Micera S, Cecchini M. *Nanotechnology*, **2012**, 23: 275102.
26. Biocompatible noisy nanotopographies with specific directionality for controlled anisotropic cell cultures. Meucci S, **Tonazzini I**, Beltram F, Cecchini M. *Soft Matter*, **2012**, 8: 1109-19.
27. Nanotopographic control of neuronal polarity. Ferrari A, Cecchini M, Dhawan A, Micera S, **Tonazzini I**, Stabile R, Pisignano D, Beltram F. *Nano Letters*, **2011**, 11: 505-11.
28. Stable non covalent large area patterning of inert Teflon-AF surface: a new approach to multiscale cell guidance. Valle F, Chelli B, Bianchi M, Greco P, Bystrenova E, **Tonazzini I**, Biscarini F. *Advanced Engineering Materials*, **2010**, 12: **B185-B191**.
29. Multiscale morphology of organic semiconductor thin films controls the adhesion and viability of human neural cells. **Tonazzini I**, Bystrenova E, Chelli B, Greco P, Stoliar P, Calò A, Lazar A, Borgatti F, D'Angelo P, Martini C, Biscarini F. *Biophysical Journal*, **2010**, 98: 2804-12.
30. Control of neuronal cell adhesion on single-walled carbon nanotube 3D patterns. Dionigi C, Bianchi M, D'Angelo P, Chelli B, Greco P, Shehu A, **Tonazzini I**, Lazar A, Biscarini F. *Journal of Materials Chemistry*, **2010**, 20: 2213-18.
31. Adenosine A₁ and A₃ receptors protect astrocytes from hypoxic damage. Bjorklund O, Shang M, **Tonazzini I**, Darè E, Fredholm B. *Eur. Journal of Pharmacology*, **2008**, 596: 6-13.
32. Neural Networks Grown on Organic Semiconductors. Bystrenova E, Jelitai M, **Tonazzini I**, Lazar A, Huth M, Stoliar P, Dionigi C, Cacace MG, Nickel B, Madarasz E, Biscarini F. *Advanced Functional Materials*, **2008**, 18: 1751-1756.
33. Regulation of A₁ adenosine receptor functioning induced by P2Y₁ purinergic receptor activation in human astroglial cells. **Tonazzini I**, Trincavelli ML, Montali M, Martini C. *Journal of Neuroscience Research*, **2008**, 86: 2857-2866.
34. Short-term TNF- α treatment induced A_{2B} adenosine receptor desensitization in human astroglial cells. Trincavelli ML[§], **Tonazzini I**[§], Montali M, Abbracchio MP, Martini C. *Journal of Cellular Biochemistry*, 2008, 104: 150-161. [§]*These authors contributed equally to the work.*
35. Co-localization and functional cross-talk between A₁ and P2Y₁ purine receptors in rat hippocampus. **Tonazzini I**, Trincavelli ML, Storm-Mathisen J, Martini C, Bergersen LH. *European Journal of Neuroscience*, **2007**, 26: 890-902.
36. Proteome analysis of whole saliva: a new tool for rheumatic diseases—the example of Sjögren's syndrome. Giusti L, Baldini C, Bazzichi L, Ciregia F, **Tonazzini I**, Mascia G, Giannaccini G, Bombardieri S, Lucacchini A. *Proteomics*, **2007**, 7: 1634-1643.
37. Toxic effects of cobalt in primary cultures of mouse astrocytes. Similarities with hypoxia and role of HIF-1 α . Karovic O, **Tonazzini I**, Rebola N, Edström E, Lövdahl C, Fredholm BB, Darè E. *Biochemical Pharmacology*, **2007**, 73: 694-708.

Publications and proceedings in conference and symposia

1. Role of extracellular calcium and mitochondrial oxygen species in psychosine-induced oligodendrocyte cell death. Voccoli V, **Tonazzini I**, Caleo M, Cecchini M. *Glia* **2015**, vol. 63, S1:E134. ISSN: 0894-1491; eISSN: 1098-1136
2. Galactosylceramidase (GALC) enzymatic activity and psychosine accumulation in central and peripheral nervous system cells and tissues from wild-type and Twitcher mice. Del Grosso A, Antonini S, **Tonazzini I**, Signore G, Cecchini M. *Glia* **2015**, vol. 63, S1:E163-E164. ISSN: 0894-1491; eISSN: 1098-1136.
3. Mechanotransduction of hippocampal neurons: Role of ubiquitin ligase E3a (Ube3a) in neurite contact guidance. **Tonazzini I**, Van Woerden GM, Meucci S, Elgersma Y, Beltram F, Cecchini M. *43rd Annual Meeting of the Society-for-Neuroscience, Society for Neuroscience- Abstract Viewer and Itinerary Planner*, San Diego (CA, USA) November 9-13 2013, **2013**, vol. 43.
4. GPR17 and vascular endothelial growth factor receptor stimulation in PC12 cells, a model of neuronal differentiation. Ciampi O, **Tonazzini I**, Cuboni S, Trincavelli ML, Abbracchio MP, Martini C. *Purinergic Signalling*, **2008**, 4, S34-35. ISSN: 1573-9538
5. Protective function of adenosine A₁ and A_{2A} receptors from damage after hypoxia or neurotoxins in primary astrocytes. Karovic O, **Tonazzini I**, Fredholm B, Darè E. *Neuron Glia Biology*, **2007**, 2, S56. ISSN: 1740-925X

6. Co-localization and functional cross-talk between A1 and P2Y1 purine receptors in the brain. **Tonazzini I**, Trincavelli ML, Bergersen LH, Storm-Mathisen, Abbracchio MP, Martini C. *Neuron Glia Biology*, **2007**, 2, S163. ISSN: 1740-925X
7. Proteome analysis in whole saliva of patients affected by autoimmune rheumatological disorders: a study of systematic Sclerosis and primary Sjogren's syndrome. Giusti L, Baldini C, Bazzichi L, Ciregia F, **Tonazzini I**, Mascia G, Giannaccini G, Bombardieri S, Lucacchini A. *Italian Journal of Biochemistry* **2006**, 55-1/2, 11.
8. TNF-alpha mediated short-time regulation of A_{2B} adenosine receptor functioning in human astroglial cells. Trincavelli ML, Tuscano D, **Tonazzini I**, Guidi S, Martini C. *J Neurochem* **2005**, 94-s2, 99. ISSN: 0022-3042
9. Potential usefulness of proteomic approach to study the serum and saliva proteins patterns of patients affected by Sjogren's syndrome. Bazzichi L, Giusti L, Giannaccini G, **Tonazzini I**, Lucacchini A, Baldini C, De Feo F, Giuliano T, Rossi A, Bombardieri S. *Annals of the Rheumatic diseases*, **2005**, 64, 312. DOI: 10.1002/pmic.200600783 ISSN: 16159853, eISSN: 1468-2060

International Conference contributions

Oral contributions

- Materials.it 2018 (Italian National conference on Materials science and technology), Bologna (IT), 22-26 October 2018. *Study of neuronal guidance dynamics in neurodevelopmental disorders models by nano-engineered platforms*. **Tonazzini I**, Masciullo C, Van Woerden GM, Cecchini M, Elgersma Y.
- NanoMedicine International Conference 2018 (NANOMED 2018), Venice (IT), 23-25 October 2018. *Study of neuronal guidance dynamics in neurodevelopmental disorders models by nano-engineered platforms*. **Tonazzini I**, Masciullo C, Van Woerden GM, Cecchini M, Elgersma Y. Conference Co-chair of Nanomaterials for Medicine session.
- European- Material Research Society E-MRS 2017 Fall Meeting, Warsaw PL, 18-21 September 2017. *Study of contact guidance dynamics in autistic neuronal models by nano/micro-grooved substrates*. **Tonazzini I**, Masciullo C, Van Woerden GM, Elgersma Y, Beltram F and Cecchini M.
- XVI Congress for the Italian Society for Neuroscience (SINS), Cagliari-IT 8-11 October 2015. *Neurite contact guidance of ubiquitin ligase E3a (Ube3a)-KO neurons by nano-grooved substrates*. **Tonazzini I**, Meucci S, Van Woerden GM, Elgersma Y, Beltram F and Cecchini M.
- 4th International Angelman Syndrome Scientific Conference, Liverpool-UK, 2 October 2015. *Impaired neurite contact guidance in Ubiquitin ligase E3a-deficient neurons*. **Tonazzini I**, Meucci S, Van Woerden GM, Elgersma Y, Beltram F and Cecchini M.
- European- Material Research Society E-MRS 2014 Spring Meeting, Lille- FR, 26-30 May 2014. *Nano/microstructured membranes for neuronal tailoring and peripheral nerve regeneration*. **Tonazzini I**, Meucci S, Beltram F, Cecchini M.
- 2nd Int. Symposium on Peripheral Nerve Regeneration, Torino- IT, 23-25 January 2014. *Nano/micro-structured PDMS membranes for peripheral nerve regeneration*. **Tonazzini I**, Jacchetti E, Meucci S, Raimondo S, Geuna S, Poggetti A, et al.
- European- Material Research Society E-MRS 2013 Spring Meeting, Strasbourg- FR, 27-31 May 2013. *Anisotropic nanostructured substrates and neuronal cells: neurite contact guidance in patho-physiological models*. **Tonazzini I**, Meucci S, Van Woerden GM, Elgersma Y, Beltram F, Cecchini M.
- Workshop on Nanomedicine and nanobiosystems, Lecce- IT, 6-8 September 2012. Short presentation: *Adhesion and differentiation of neuronal cells on anisotropic nanostructured substrates: neurite contact guidance tolerance to topographical noise*. **Tonazzini I**, Meucci S, Faraci P, Beltram F, Cecchini M.
- 2nd Joint Italian-German Purine Club Meeting, Leipzig- DE, 12-15 September 2007. *Functional interaction between A₁ and P2Y₁ purinergic receptors in the brain*. **Tonazzini I**, Trincavelli ML, Bergersen LH, Storm-Mathisen J, Martini C.

Poster contributions (as presenting author)

- 5th International Angelman Syndrome Scientific Conference, Hamburg-DE, 12 October 2018. *Ubiquitin ligase E3a role in axonal contact guidance: rescue strategies in (Ube3a)-deficient hippocampal neurons*. **Tonazzini I**, Masciullo C, Van Woerden GM, Mientjes E, Cecchini M, Elgersma Y.

- 11th Forum of European Neuroscience, Berlin (DE), 7-11 July 2018. Ubiquitin ligase E3a role in axonal contact guidance: rescue strategies in (Ube3a)-deficient hippocampal neurons. **Tonazzini I**, Masciullo C, Van Woerden GM, Mientjes E, Elgersma Y, Cecchini M.
- Workshop Nanoengineering for Mechanobiology, Camogli (IT), 27-29 March 2017. Biodegradable nano-fibers with Neuregulin-1 functionalization for tuning Schwann cell growth and guidance. **Tonazzini I**, Moffa M, Pisignano D, Cecchini M.
- 10th Forum of European Neuroscience, Copenhagen (DK), 2-6 July 2016. Focal adhesion and contact guidance dynamics in Ubiquitin E3A ligase (UBE3A)-mutant neurons. **Tonazzini I**, Meucci S, Masciullo C, Van Woerden GM, Elgersma Y, Cecchini M.
- EMBO Workshop Mechanisms of neuronal remodelling, Seeon (DE), 5-9 June 2016. Focal adhesion and contact guidance dynamics in Ubiquitin E3A ligase (UBE3A)-mutant neurons. **Tonazzini I**, Meucci S, Masciullo C, Van Woerden GM, Elgersma Y, Cecchini M.
- 9th Forum of European Neuroscience, Milano (IT), 5-9 July 2014. Neuronal and glial cell tailoring by nano/micro-structured membranes: application to patho-physiological models. **Tonazzini I**, Jacchetti E, Meucci S, Elgersma Y, Beltram F, Cecchini M.
- COST-Brain ECM targeting in regeneration and rehabilitation, Volterra (IT), 2-4 July 2014. Anisotropic nano/micro-structured substrates and neuronal cells: neurite contact guidance in patho-physiological models. **Tonazzini I**, Meucci S, Van Woerden G, Elgersma Y, Beltram F, Cecchini M.
- SfN Neuroscience meeting 2013, San Diego (USA) 9-13 November 2013. Mechanotransduction of hippocampal neurons: role of ubiquitin ligase E3a (Ube3a) in neurite contact guidance. **Tonazzini I**, Van Woerden G, Meucci S, Elgersma Y, Beltram F, Cecchini M.
- 8th IBRO World Congress of Neuroscience, Firenze (IT), 14-18 July 2011. Adhesion and differentiation of neuronal cells on anisotropic nanostructured substrates: neurite contact guidance tolerance to topographical noise. **Tonazzini I**, Meucci S, Faraci P, Elgersma Y, Beltram F, Cecchini M.
- 7th Forum of European Neuroscience, Amsterdam (NL), 3-7 July 2010. Control of adhesion and viability of human neural cells: promising applications for biosensing in CNS. **Tonazzini I**, Bystrenova E, Greco P, Stoliar P, Chelli B, Valle F, Martini C, Biscarini F.
- 3rd Biological Surfaces and Interfaces Conference, San Feliu de Guixols (ES), 1-6 July 2007. Influence of roughness of organic semiconductor film on viability of human central nervous system cells. **Tonazzini I**, Bystrenova E, Greco P, Lazar A, Stoliar P, Dutta S, Dionigi C, Cacace MG, Martini C, Biscarini F.
- 51st national Congress of Italian Biochemistry Society (SIB), Riccione (IT), 28-30 September 2006. Co-localization and functional cross-talk between A1 and P2Y1 purine receptors in the brain. **Tonazzini I**, Trincavelli ML, Bergersen LH, Storm-Mathisen J, Abbracchio MP, Martini C.
- 8th Int. Symposium on Adenosine and Adenine nucleotides, Ferrara (IT), May 2006. Co-localization and functional cross-talk between A₁ and P2Y₁ purine receptors in the brain. **Tonazzini I**, Trincavelli ML, Bergersen LH, Storm-Mathisen J, Abbracchio MP, Martini C.

Invited seminars

- 2016-05-13:** Seminar "Neural contact guidance along nanostructured surfaces" at Aptuit (*ex Glaxo*) Center for Drug Discovery & Development, Verona (IT).
- 2015-09-18:** "Neural contact guidance along nanostructured surfaces", in NANO Colloquia at Istituto Nanoscienze-CNR, Pisa.
- 2014-03-12:** Seminar "Neuronal mechanotransduction by nanotopographies" at Istituto Nazionale di Ottica (INO)-CNR, Napoli (host Prof. Pietro Ferraro).

Supervision of thesis students (as tutor)

- 2017:** Eleonora Savi, student of Biotechnology, University of Pisa (IT). Thesis: *Nanostructured substrates for nerve regeneration: searching the bottom limit for contact guidance and the molecular mechanism involved*
- 2015-16:** Mattia Cataldi, student of Biology, University of Pisa (IT). Thesis: *Neuronal contact guidance and Ubiquitin E3A ligase*
- 2013-14:** Cecilia Masciullo, student of Nanotechnology Engineering, University La Sapienza, Roma (IT). Thesis: *Interaction of neuronal cells with nanostructured substrates functionalized with graphene.*

- 2013-14:** Emanuele Fiorino, student of Chemistry and Pharmaceutical technologies (CTF), University of Cosenza (IT). Thesis: *Micro and nano-structured substrates for peripheral nerve regeneration*.
- 2012-13:** Alessandra Cecchini, student of Biotechnologies, University of Pisa (IT). Thesis: *Correlation between mechanotransduction and the dopaminergic system: study in a human neuronal model by using nanostructured substrates*.

Teaching activity

- 2016-2017:** Laboratory activity for the course of Biomaterials Science, Master in Biotechnology, Faculty of Biology, Università di Pisa.
- 2012-2017:** Seminars for the course of Biophysics, PhD course in Molecular Biophysics, Scuola Normale Superiore, Pisa.
- 2004-2007:** Laboratory and tutor activities for the Biochemistry and Molecular Biology courses, Faculty of Pharmacy, Università di Pisa. *Culture della materia* in Biochemistry (scientific sector BIO/10)

Outreach activity

- **2018:** participation at the Dutch event for the Researchers' Night, 28 September 2018, in Rotterdam (NL). Speaker at the Marie Curie corner during the science festival Science Hotel and poster presentation at the Science OPEN Rotterdam, organized by Erasmus University. <https://www.eur.nl/en/events/science-hotel-2018-09-28>; <https://www.eur.nl/over-de-eur/lustrum/science-hotel-science-open/science-hotel>
- **2017:** organization of the "open laboratory" of the Istituto Nanoscienze CNR at the event "Bright- Toscana" for Researchers' Night, 29 September 2017, CNR Pisa (IT). <http://www.nano.cnr.it/?mod=new&id=217>; <http://www.cnrweb.tv/bright-2017/>
- **2016 & 2017:** participation at the research divulgation initiative of Fondazione Umberto Veronesi - *Ricercatori in classe* (Researchers in the classroom) at Liceo Classico "E. Repetti" Carrara (MS, IT) and at Istituto di Istruzione Superiore "A. Meucci" Massa (MS, IT). <http://www.fuvperlascuola.it/i-progetti-per-le-scuole/progetto/ricercatori-in-classe-2016>
- **2016:** participation at the event "Bright- Toscana" for the Researchers' Night for Scuola Normale Superiore-NEST, 30 September 2016, Pisa (IT). Boot "Immagini dal nanomondo – NEST". <http://www.bright-toscana.it/2016/pisa/stand-della-ricerca/>; <http://www.laboratorionest.it/nestbright-2016/>
- **2016:** organization of the stand and activities (e.g. lessons for students) of Scuola Normale Superiore-NEST at Internet Festival (Pisa, October 2016), location Cittadella galileiana Pisa. Title: Il cervello e il computer: un viaggio tra due mondi (brain & computer: a trip between two worlds); topics: Application of nanoscience in biomedical sciences; Neuron-computer interfaces. <http://2016.internetfestival.it/tour/il-cervello-e-il-computer-un-viaggio-tra-due-mondi/>; <http://2016.internetfestival.it/>; <http://www.laboratorionest.it/nest-allinternet-festival-2016/>
- **2015:** organization of a scientific divulgation event for the *Italian league against cancer* (LILT)- Pisa section, at Laboratorio NEST for Scuola Normale Superiore, Pisa (IT). <https://www.liltpisa.it/news/lilt-al-nest/>; <http://www.laboratorionest.it/lilt-nest/>
- **2013:** organization of the boot of the Istituto Nanoscienze CNR and Scuola Normale Superiore-NEST at the event "Shine: CNR e La notte dei Ricercatori" for Researchers' Night, 27 September 2013, Parco della Rinchiostra, Massa (MS, IT). <http://www.ricercatori.eu/expo-scienza-massa/>; <http://www.ricercatori.eu/cnr-e-la-notte-dei-ricercatori>

Qualifications (abilitazioni)

- At CNR:

Bando di selezione n. 367.18
Data del bando 25/03/2016 Prot. AMMCEN n. 0055466/2017 dell'11/08/2016
Provvedimento di nomina prot. AMMCEN n. 0060332 del 22/09/2017
posizione ricercatore, Dipartimento di Scienze Chimiche e tecnologie dei materiali CNR

Bando di selezione n. 368.25 -SCIENTIFIC STRATEGIC FIELD: "Complex systems, Soft Matter, bio-physic"- Abilitazioni Nazionali
Data del bando 23/06/2016 PROT. AMMCNT – CNR – Amministrazione Centrale N. 0044516

Provvedimento di nomina data 21/12/2016
posizione ricercatore in <i>Complex systems, Soft Matter, bio-physic, CNR</i>

Bando di selezione n. 364.114 (LE115/10, Materiali e Dispositivi)
Data del bando 09/06/2011
Provvedimento di nomina n. 0059047 data 01/10/2012
posizione tecnologo, CNR-Istituto Nanoscienze

Bando di selezione n. 364.92 (MI61/1, Personalized Drugs)
Data del bando 22/12/2009 PROT. AMMCNT – CNR – Amministrazione Centrale N. 0089308
Provvedimento di nomina n. 0070682 data 04/10/2011
posizione ricercatore, CNR-Istituto Neuroscienze, scientific area G1-Medical Sciences

Bando di selezione n. 364.93 (PD61/3, Technologies for Nanomedicine)
Data del bando 22/12/2009 PROT. AMMCNT – CNR – Amministrazione Centrale N. 0089330
Provvedimento di nomina n. 0090253 data 22/12/2011
posizione ricercatore, CNR-Istituto Neuroscienze, scientific area G1-Medical Sciences

Bando di selezione n. 364.95 (PI61/3, Molecular and clinical imaging and diagnostics)
Data del bando 22/12/2009 PROT. AMMCNT – CNR – Amministrazione Centrale N. 0089326
Provvedimento di nomina n. 0078881 data 07/11/2011
posizione posizione ricercatore, CNR-Istituto Neuroscienze, scientific area G1-Medical Sciences

- **MIUR**, Abilitazione nazionale come Professore di II fascia in Biochimica Generale (settore concorsuale 05/E1). Bando 1532/2016- abilitata fino al 31-03-2023

Other professional experiences, trainings and qualifications:

- 2011-present: reviewer activity for several journals; Review Editor for Neural Technology- Frontiers in Neuroscience.
- 2009-2010: High school Chemistry teacher (part-time), at Ist. Tecnico “D. Zaccagna” and Ist. “G. Galilei”, Massa Carrara.
- 2009-2010: Scientific & Technical Information Network training course, organized by Chemical Abstracts, for patent and data bank research (Milano, IT).
- 2003: National qualification as Pharmacist, Faculty of Pharmacy, University of Pisa (IT)- 2° section 2003.
- 2003: Full standard European Computer Driving Licence (ECDL), Test center, University of Pisa.

Scientific expertise

- Cell cultures (cell lines; primary cell cultures); brain/nerve extraction and set-up of neuronal/glia cultures (hippocampal, cortical, astroglial, Schwann cells)
- Survival/death cell assays; cell functional and intracellular signaling assays; cell-materials biocompatibility tests; morphological imaging of Focal Adhesions; cell transfection (e.g. electroporation, liposomes)
- Western-blotting and bi-dimensional electrophoresis; proteomics
- Immunohisto- and immunocyto-chemistry (animal perfusion; immunofluorescence; post-embedding immunogold; gelatin embedding; tissue processing)
- Biosensor (e.g. SAW, organic semiconductor FET) biological characterization, investigations for cell-devices coupling; microfluidics
- Optical, fluorescence and electron microscopies; confocal, TIRF and spin-disk microscopy
- Micro/nano-fabrication techniques (e.g. spin coating, nanopatterning, soft-lithography, nanoimprint lithography, replica moulding) and characterization of bio-materials (e.g. contact angle measurement, AFM)
- PCR and animal genotyping

- Radioactive-ligand binding assays (binding and receptor functioning); Screening tests of new pharmaceutical molecules (binding, activity, activity/structure) with activity on adenosine, purine, GABA receptors

FIRMA(**)

18 febbraio 2019.....

(*) ai sensi dell'art. 15, comma 1 della Legge 12/11/2011, n. 183 le certificazioni rilasciate dalla P.A. in ordine a stati, qualità personali e fatti sono valide e utilizzabili solo nei rapporti tra privati; nei rapporti con gli Organi della Pubblica Amministrazione e i gestori di pubblici servizi, i certificati sono sempre sostituiti dalle dichiarazioni sostitutive di certificazione o dall'atto di notorietà di cui agli artt. 46 e 47 del DPR 445/2000

N.B:

- 1) Datare e sottoscrivere tutte le pagine che compongono la dichiarazione.
- 2) Allegare alla dichiarazione la fotocopia di un documento di identità personale, in corso di validità.
- 3) Le informazioni fornite con la dichiarazione sostitutiva devono essere identificate correttamente con i singoli elementi di riferimento (esempio: data, protocollo, titolo pubblicazione ecc...).
- 4) Il CNR, ai sensi dell'art. 71 e per gli effetti degli artt. 75 e 76 del D.P.R. 445 del 28/12/2000 e successive modifiche ed integrazioni, effettua il controllo sulla veridicità delle dichiarazioni sostitutive.
- 5) La normativa sulle dichiarazioni sostitutive si applica ai cittadini italiani e dell'Unione Europea.
- 6) I cittadini di Stati non appartenenti all'Unione, regolarmente soggiornanti in Italia, possono utilizzare le dichiarazioni sostitutive di cui agli artt. 46 e 47 del D.P.R. 445 del 28.12.2000 limitatamente agli stati, alla qualità personali e ai fatti certificabili o attestabili da parte di soggetti pubblici italiani, fatte salve le speciali disposizioni contenute nelle leggi e nei regolamenti concernenti la disciplina dell'immigrazione e la condizione dello straniero. Al di fuori dei casi sopradetti, i cittadini di Stati non appartenenti all'Unione autorizzati a soggiornare nel territorio dello Stato possono utilizzare le dichiarazioni sostitutive nei casi in cui la produzione delle stesse avvenga in applicazione di convenzioni internazionali fra l'Italia e il Paese di provenienza del dichiarante.