



UNIVERSITÀ DEGLI STUDI DI MILANO

TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

Gerardo Abbandonato

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Abbandonato
Name	Gerardo
Date of birth	10 giugno 1985

PRESENT OCCUPATION

Appointment	Structure
TYPE B FELLOWSHIPS	Università degli Studi di Milano

EDUCATION AND TRAINING

Degree	Course of studies	University	Year of achievement of the degree
Degree	Master Degree in Chemistry	Università degli studi di Pisa	2009
PhD	Molecular Biophysics	Scuola Normale Superiore di Pisa	2017

FOREIGN LANGUAGES

Languages	level of knowledge
Italian	Native
English	B2
German	A2+

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2014	Fellowship in the framework of the FIRB project (prot. RBAP11X42L_03) at Scuola Normale Superiore (Pisa). Implementation of molecular sensors able to measure chemical-physical parameters in living cells with high spatio-temporal resolution.
2014	Fellowship CNR - NANO, Laboratorio NEST Pisa (announcement BS 006/2014 PI 21/07/2014). Experimental study of organization properties of the cellular plasma membrane by using fluorescence microscopy techniques.



2015	Fellowship in Hepatology - call 2015. Development of high sensitivity bioanalytical methods for the determination of morphologically different components in the subviral particle pool produced by HBV and diagnostic validation.
2016	Fellowship CNR - NANO, Laboratorio NEST (announcement BS 001/016 PI 21/01/2016). Experimental study of biological systems through fluorescence microscopy techniques.
2018	EBSA grant for the participation to the XXII School of Pure and Applied Biophysics

TRAINING OR RESEARCH ACTIVITY

I started my education at University of Pisa where I studied Chemistry (Bachelor's degree) and Physical Chemistry (Master's Degree) and both the theses were focused

- spectroscopic techniques: Liquid and solid state NMR - with experience in T1 and T2 measurements and multinuclear, 2D and field gradient diffusion experiments-, IR, UV-vis Absorbance spectroscopy, Steady state and time resolved fluorescence spectroscopy, Fluorescence resonance Energy transfer FRET, Fluorescence Correlation Spectroscopy FCS.

Then I successfully applied for a PhD position in Biophysics at Scuola Normale Superiore in Pisa and I worked in the Laboratorio NEST. In this multidisciplinary lab I deepened both chemical and biological knowledge and I acquired experience in

- fluorescence microscopy: Wide field and confocal microscopy (Experiences with commercial systems Leica SP5 and Olympus FV1000), Fluorescence lifetime imaging by time-domain method (Experiences with Picoquant System and Symphotime software) and phasors approach analysis (SimFCS software), Fluorescence resonance Energy transfer (FRET) imaging;
- basic programming with software for numerical and image analysis (Microcal Origin, MestReNova, Wolfram Mathematica);
- tissue culture techniques: cell culture, gene expression using transient transfection;

in order to study simple reactions or variations of physical properties in living cells systems and to apply my skills to study medical/biological problems. In particular, during the PhD I focused my research activity on the development of a molecular probe for polarity and viscosity. The probe can be easily bioconjugated to membrane lipids in order to selectively stain the plasma membrane and study its remodeling during molecular stimuli.

In the last months I started a type B fellowship in the University of Milan where I learnt standard molecular biologic techniques (i.e. DNA cloning and purification...).

CONGRESSES AND SEMINARS

Date	Title	Place
10-12/9/2018	International Symposium. Ion channel design using experimental and computational inputs	Garniano Italy
15-19/1/2018	XXII School of Pure and Applied Biophysics	Venice Italy



20-23/3/2017	DBS2017/ EBS2017	Potsdam Germany
13-16/9/2015	14th Conference on Methods and Applications of Fluorescence MAF14	Würzburg Germany
11-13/6/2015	SIBF 2015	Bari Italy
30/3- 3/4/2014	SIOF School of Photonics 2014,	Cortona Italy
8-11/9/2013	13th Conference on Methods and Applications of Fluorescence MAF13	Genoa Italy
2-6/2/2013	57th Biophysical Meeting	Philadelphia, Pennsylvania
7-8/10/2010	Mathematica Italia 4° User Group Meeting	Milan Italy
24-29/2/2008	XXXVII Congresso Nazionale di Chimica Fisica	Camogli (GE) Italy

PUBLICATIONS

Books

Chiappe C., D'Andrea F., Abbandonato G., *Tecniche spettroscopiche e identificazione di composti organici. Problemi svolti e da svolgere*, ETS, Pisa, 2011

Articles in reviews

Abbandonato G., Storti B., Tonazzini I., Stöckl M., Subramaniam V., Montis C., Nifosì R., Cecchini M., Signore G., Bizzarri R., *Lipid-conjugated rigidochromic probe discloses membrane alteration in model cells of Krabbe disease*, submitted.

Butini M. E., Abbandonato G., Di Rienzo C., Trampuz A. and Di Luca M., *Isothermal microcalorimetry detects the presence of persister cells in a Staphylococcus aureus biofilm after vancomycin treatment*, submitted.

Tkhilaishvili T., Di Luca M., Abbandonato G., Maiolo E. M., Klatt A. B., Reuter M., Möncke-Buchner E., Trampuz A., [Real-time assessment of bacteriophage T3 lytic activity versus biofilm-empeded Escherichia coli by isothermal microcalorimetry](#), Res Microbiol. 2018 in press.

Storti B., Margheritis E., Abbandonato G., Domenichini G., Dreier j., Testa I., Garau G., Nifosì R., and Bizzarri R., [Role of Gln222 in Photoswitching of Aequorea Fluorescent Proteins: A Twisting and H-Bonding Affair?](#), ACS Chem. Biol., 2018, 13(8): p.2082-2093.

Abbandonato G., Polli D., Viola D., Cerullo G., Storti B., Cardarelli F., Salomone F., Nifosì R., Signore G., and Bizzarri R., [Simultaneous detection of environmental polarizability and viscosity by a single fluorescent probe in cells](#), Biophys. J, 2018, 114(9): p.2212-2220.

Abbandonato, G., Hoffmann, K., Resch-Genger, U., [Determination of Photoluminescence Quantum Yields of Semiconductor Quantum Dots with Fluorescence Correlation Spectroscopy](#), Nanoscale, 2018, 10: p.7147-7154.

Abbandonato, G., Storti, B., Signore, G., Beltram, F., Bizzarri, R., [Quantitative Optical Lock-In Detection \(qOLID\) for quantitative imaging of switchable and non-switchable components](#), Microsc. Res. Tech, 2016, 79(10): p.929-937.



Brancato, G., Signore, G., Neyroz, P., Polli, D., Cerullo, G., Abbandonato, G. , Nucara, L., Barone, V., Beltram, F., Bizzarri, R., Dual fluorescence through Kasha's rule breaking: an unconventional photomechanism for intracellular probe design . J Phys Chem B, 2015. 119 (20): p. 6144-54.
Battisti, A., Panettieri, S., Abbandonato, G. , Jacchetti, E., Cardarelli, F., Signore, G., Beltram, F., Bizzarri, R., Imaging intracellular viscosity by a new molecular rotor suitable for phasor analysis of fluorescence lifetime . Anal Bioanal Chem, 2013. 405 (19): p. 6223-33.
Signore, G. and Abbandonato, G. , Storti, B., Stockl, M., Subramaniam, V., Bizzarri, R., Imaging the static dielectric constant in vitro and in living cells by a bioconjugable GFP chromophore analog . Chem Commun (Camb), 2013. 49 (17): p. 1723-5.
Abbandonato, G. , Catalano, D., Domenici, V., Zalar, B., 2H NMR orientational study of a probe dissolved in nematic solution and, used as crosslinker, in a liquid crystalline elastomer . Liquid Crystals, 2012. 39 (2): p. 165-174.
Abbandonato, G. , Signore, G., Nifosi, R., Voliani, V., Bizzarri, R., Beltram, F., Cis-trans photoisomerization properties of GFP chromophore analogs . Eur Biophys J, 2011. 40 (11): p. 1205-14.
Abbandonato, G. , Catalano, D., Marini, A., Aggregation of perfluorooctanoate salts studied by 19F NMR and DFT calculations: counterion complexation, poly(ethylene glycol) addition, and conformational effects . Langmuir, 2010. 26 (22): p. 16762-70.

OTHER INFORMATION

14/07/2011 State examination for qualified chemistry - University of Florence (Italy)
01/02/2016-31/05/2017. Guest Scientist at Bundesanstalt für Materialforschung und -prüfung (BAM) Zweiggelände Adlershof Berlin (Germany)

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Milano, 16.11.2018

SIGNATURE