

INFORMAZIONI PERSONALI Stefania Sabella

POSIZIONE RICOPERTA Technologist, Senior Researcher and Principal Investigator of Nanoregulatory
TITOLO DI STUDIO Group of D3-PharmaChemistry. Istituto Italiano di Tecnologia (IIT)

ESPERIENZA PROFESSIONALE

-
- 2015- current Technologist and Principal Investigator of the Nanoregulatory Group of D3PharmaChemistry, Genova. Italy
 Web Nanoregulatory platform: <https://www.iit.it/it/web/d3-pharmachemistry/nanoregulatory-platform>
- 2009-2015: Team Leader at Italian Institute of Technology, IIT - Center for Biomolecular Nanotechnologies, CBN, Lecce, Italy

ISTRUZIONE E FORMAZIONE

-
- 2006-2008:
 - Post-doctoral fellow at National Nanotechnology Laboratory-CNR, Lecce, Italy with Prof. R. Cingolani.*Development of smart polymeric microchips for efficient and fast sensing of biomolecules for POC diagnostics.*
- 2004-2005:
 - External researcher at TU-Wien, Austria with Prof. B. Lendl.*Analytical method for the selective separation and detection of abeta amyloids by FTIR and capillary electrophoresis*
- 2002-2003:
 - Junior researcher, University of Pavia (Department of Experimental and Applied Pharmacology), Italy.*Characterization of the Abeta amyloid fragments and their role in Alzheimer disease.*
- 2003-2005:
 - Ph.D. in Pharmaceutical Chemistry, University of Pavia, Italy with Prof. E. De Lorenzi and Prof. V. Bellotti.*Effect of drugs on the aggregation process of amyloidogenic proteins.*
- 2002-2005
 - M.Sc. in Analytical Chemistry at University of Pavia, Italy with Prof. E. De Lorenzi and Prof. V. Bellotti.*Development of analytical techniques to characterize amyloidogenic intermediates of β 2-microglobulin and Abeta-peptides.*

- Chimica Analitica
- Farmacologia
- Chimica Farmaceutica
- Sostituire con un elenco delle principali materie trattate o abilità acquisite
- Chimica Analitica applicata alla Nanotecnologia

- Nanotecnologia e tecniche di fabbricazione di lab-on-chip
- Tossicologia di nanomateriali

COMPETENZE PERSONALI

Lingua madre Italiano

Altre lingue

Inglese

COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
Ascolto	Lettura	Interazione	Produzione orale	
C1/C2	C1/C2	C1/C2	C1/C2	C1/C2

Competenze comunicative

SELECTED ORAL CONTRIBUTIONS TO INTERNATIONAL CONFERENCES:

- **S. Sabella**, Istituto Superiore di Sanità and Italian Ministry of Health “Assorbimento orale dei nanomateriali: un approccio in vitro per il rispetto degli obblighi di informazione di cui al regolamento REACH”, seminar “Messa a punto delle Standard Operating Procedure (SOP) per la digestione simulata in vitro e relativi risultati” 7 March 2023, On-line Workshop in Streaming (*Invited*)
- **S. Sabella** “Scientific basis for a new GD on integrated in vitro approach for intestinal fate of orally ingested nanomaterials”; NanoHarmony, Agenda NanoHarmony Consortium Meeting, 25th – 27th April 2022
- **S. Sabella**, Istituto Superiore di Sanità, “Assorbimento orale dei nanomateriali: un approccio in vitro per il rispetto degli obblighi di informazione di cui al regolamento REACH”, seminar “Modelli di digestione simulata in vitro: stato dell’arte” 9 March 2021, On-line Workshop in Streaming (*Invited*)
- NanoHarmony, Horizon 2020 (n. 885931): International Workshop on Gap Analysis and Data Requirements to support OECD Test Guideline and Guidance Document Development. 3-5 November 2020. Session 4, **S. Sabella** was invited with the seminar “Data gaps identification related to intestinal fate of ingested nanomaterials” on line workshop. (*invited*).
- **S. Sabella**, OECD-WPMN STEERING GROUP ON TESTING AND ASSESSMENT OF MANUFACTURED NANOMATERIALS Project proposal ENV/CHEM/NANO(2019)5/ADD1/REV, 13 May, 2020 14-16 (Paris time) on-line workshop: “Integrated in vitro Approach for Intestinal Fate or Orally Ingested Nanomaterials” 13 May, on line seminar (*Invited*).
- **S. Sabella** “Test di dissoluzione di NPs in fluidi digestivi sintetici: quantificazione delle bio-trasformazioni e loro impatto sulla valutazione del rischio” Workshop “Il supporto scientifico alla regolamentazione europea per la gestione dei nanomateriali ingegnerizzati: il contributo italiano” Ministero della Salute, 14 febbraio 2017, Roma, IT (*Invited*)
- **S. Sabella** “Framing the nano-biointeractions by proteomics” Bios SPIE Photonics West, 21 - 26 January 2012, Moscone Center, San Francisco, CA, USA (*Invited*)
- **S. Sabella** “The study of nano-biointeractions by proteomics and their role in nanotoxicology” NANOFORUM, Rome, 26 September (2012) (*Invited*)
- **S. Sabella**, et al. “Cell Culture Media Elicit a Different Dynamic Formation of Protein-NP Complexes: Effects on the Cellular Response” TechConnectWorldConference and Expo 2011, June 13-16, Boston (MA) (*Oral Communication*)
- **S. Sabella** “Nano-biointeractions and nanotoxicology@IIT-CBN” 1st Italian-Swedish Workshop on Health Impacts of Engineered Nanoparticles, Tor Vergata University, Rome, October 14-15 (2010) (*Invited*)
- **S. Sabella** “Nanomaterials can influence living biological systems with nanometer sensitivity” BIT’s 1st Annual World Congress of NanoMedicine, October 23-25, 2010, Beijing, China (*Invited*)
- **S. Sabella** “Nano-biointeractions and nanotoxicology@IIT-CBN” Nanomedicine @ King’s College London (KCL), 1th Symposium of Nanomedicine, 01 December 2010, London, UK (*Invited*)

Competenze organizzative e gestionali

GRANTS AND FUNDINGS:

Since 2015, during her research activity, S.S. secured more than ca. 2 M€ of external funding.

- *Delivered as Principal Investigator*

- Nano Key Advanced (EPTR0009) - Nano and Key enabling technologies: advanced innovations and health and safety in the workplace- (2021-2023) funded by Italian Workers’ Compensation Authority (INAIL), Rome, Italy.
- GRACIOUS - Grouping, Read-Across, Characterisation and classification

framework for regulatory risk assessment of manufactured nanomaterials and Safer design of nano-enabled products – (2019-2022) Horizon 2020 (n. 760840).

- NanoKey (EPTR0003) - Nano and Key enabling technologies: advanced innovations and health and safety in the workplace- (2018-2020) funded by Italian Workers' Compensation Authority (INAIL), Rome, Italy.
- NanoForma (EPNZ0096) – Definition of an standard operating procedure, SOP, for the in vitro digestion of substances and nanoforms in the food and Guidance Document in the framework of OECD and regulation REACH - (2019-2023) funded by Italian Ministry of Health.
- OECD ENV/CHEM/NANO(2019)5/ADD1 - Integrated in vitro approach for intestinal fate of orally ingested nanomaterials - (2019-2023) in collaboration with OECD, ISS and Italian Ministry of Health, Italy.
- NanoHarmony, Horizon 2020 (n. 885931): Associated Partners in Task 1.5 Scientific basis for a new GD on the determination of solubility and dissolution rate of ENMs and Task 1.8 Scientific basis for a new GD on integrated in vitro approach for intestinal fate of orally ingested ENMs.
- NanoREG II - Development and implementation of Grouping and Safe-by-Design approaches within regulatory frameworks (H2020-NMP-2014, GA 646221) (2016-2018);
- AIRC - Translating innovation into colorectal cancer control” (2010-2012) Unit Coordinator;

- *Delivered as WP Leader*

- *NanoREG* - A common European approach to the regulatory testing of nanomaterials (FP7-NMP-2012-LARGE, GA 310584) (2012-2015);
- *ITS-NANO* - Intelligent testing strategy for engineered nanomaterials (FP7-NMP-2011-CSA, no. 290589) (2012-2013);
- FIRB Nanogenomica (2007-2013)

Competenze professionali

ORGANIZATION OF SCIENTIFIC MEETINGS:

- Organization and Chair of the Workshop “*Nano and Key enabling technologies: advanced innovations and health and safety in the workplace*” – NanoInnovation, Rome, 2023.
- Organization and Chair of the Workshop “*NanoKey*” *prevention-through-design approach: development, validation and technology transfer* – NanoInnovation, Rome, 2021.
- Organization and Chair of the Workshop “*In vitro digestion models: state of the art*” – NanoInnovation, Rome, 2021.

TEACHING AND TUTORING ACTIVITIES:

- Professor at Inail Master “*Risk management in occupational settings*”,

University of Sapienza, Rome, Italy (2023) with lessons on “*Toxicity of nanomaterials and relationship to chemical-physical properties in the context of nanoregulatory*” (ongoing).

- 2022-28-01: Assessment Committee Member for PhD students of National Food Institute, Technical University of Denmark; name of the student: Else Skovgaard Holmfred.
- Professor at Inail Master “*Risk management in occupational settings*”, University of Sapienza, Rome, Italy (2021) with lessons on “*Toxicity of nanomaterials and relationship to chemical-physical properties in the context of nanoregulatory*”.
- Professor at International Master NAMED, University of Pavia, Italy (2018) with lessons “*Advanced analytical methods for biotech and nanomaterials*” Lessons: *Toxicology of nanomaterials Generalities and related analytics*”.
- Professor at School of Nanomedicine, INSTM, CNR, Bari, Italy (2015) with lessons on “*Nanoparticles for biomedical applications and nanoregulatory issues*”
- (2005-ongoing) Tutoring activities of graduate and PhD students of the University of Pavia, University of Lecce and IIT (multidisciplinary activities in Physics, Biology, Biotechnology, Medicinal Chemistry).

Altre competenze

AWARDS:

- In 2004, SS was selected as Italian researcher in the Bilateral and Multilateral Cooperation project “Technological Innovation and Transfer of Technology” financially supported by the Ministry of Foreign Affairs (Italy) and TU-Wien (Austria). Name of the project: “*New instrumental techniques for the characterization of early folding intermediates of β 2-microglobulin and other proteins responsible for amyloidosis*”
- In 2014, Stefania Sabella was endorsed by EC (through Nanostair, <http://www.nanostair.eu-vri.eu>) as Italian technical expert in Nanoregulatory and appointed by Italy as Committee member of ISO/TC 229/JWG2 and CEN/TC 352/WG 1/PG 2 and IIT representative.

Pubblicazioni
 Presentazioni
 Progetti
 Conferenze
 Seminari
 Riconoscimenti e premi
 Appartenenza a gruppi/
 associazioni
 Referenze
 Menzioni
 Corsi
 Certificazioni

PUBLICATIONS IN REFERRED JOURNALS:

1. Valentina Tolardo, Alessio Romaldini, Francesco Fumagalli, Andrea Armirotti, Marina Veronesi, Davide Magrì, Stefania Sabella*, Athanassia Athanassiou, Despina Fragouli* “Polycarbonate nanoplastics and the in vitro assessment of their toxicological impact on liver functionality” *Environmental Science: Nano*, 2023, accepted, * corresponding authors
2. Delia Cavallo, Cinzia Lucia Ursini, Anna Maria Fresegna, Aureliano Ciervo, Fabio Boccuni, Riccardo Ferrante, Francesca Tombolini, Raffaele Maiello, Pieranna Chiarella, Giuliana Buresti, Valentina Del Frate, Diana Poli, Roberta Andreoli, Luisana Di Cristo, Stefania Sabella, Sergio Iavicoli “A follow-up study on workers involved in the graphene production process after the introduction of exposure mitigation measures: evaluation of genotoxic and oxidative effects” *Nanotoxicology*, 1-15, 2022, <https://doi.org/10.1080/17435390.2022.2149359>
3. Luisana Di Cristo, Victor C. Ude, Georgia Tsiliki, Giuseppina Tatulli, Alessio Romaldini, Fiona Murphy, Wendel Wohlleben, Agnes G. Oomen, Pier Paolo Pompa,

- Josje Arts, Vicki Stone and Stefania Sabella* “Grouping of orally ingested silica nanomaterials via use of an integrated approach to testing and assessment to streamline risk assessment” *Particle and Fibre Toxicology* 19 (1), 1-26 <https://doi.org/10.1186/s12989-022-00508-4>
4. Di Cristo L., Janer G., Dekkers S., Boyles M., Giusti A., Keller J. G., Wohlleben W., Braakhuis H., Ma-Hock L., Oomen A.G., Haase A., Stone V., Murphy F., Johnston H.J., Sabella, S. (2022). Integrated approaches to testing and assessment for grouping nanomaterials following dermal exposure. *Nanotoxicology*, 1-23. DOI: 10.1080/17435390.2022.2085207
 5. Murphy F., Johnston H.J., Dekkers S., Bleeker E.A.J., Oomen A.G., Fernandes, T.F., Rasmussenc, K., Jantunenc, P., Rauscher H., Hunt, N., Di Cristo L., Braakhuis H., Haase A., Hristozov D., Wohlleben W., Sabella S., Stone V. (2022). “How to formulate hypotheses and IATA to support grouping and read-across of nanoforms” *ALTEX*, DOI: 10.14573/altex.2203241
 6. Romaldini, R. Spanò, F. Catalano, F. Villa, A. Poggi, S. Sabella “Sub-lethal concentrations of graphene oxide trigger acute-phase response and impairment of phase-I xenobiotic metabolism in Upcyte® Hepatocytes” *Frontiers in Biotechnology and Bioengineering*, 2022, *Front. Bioeng. Biotechnol.* doi: 10.3389/fbioe.2022.867728
 7. Di Cristo L., Oomen A.G., Dekkers S., Moore C., Rocchia W., Murphy F., Johnston H.J., Janer G., Haase A., Stone V., Sabella S. Grouping hypotheses and an integrated approach to testing and assessment of nanomaterials following oral ingestion *Nanomaterials*, 2021, vol. 11, (no. 10) DOI [10.3390/nano11102623](https://doi.org/10.3390/nano11102623)
 8. C. Carnovale, D. Guarnieri, L. Di Cristo, I. De Angelis, G. Veronesi, A. Scarpellini, M. A. Malvindi, F. Barone, P.P. Pompa and S. Sabella “Biotransformation of Silver Nanoparticles into Oro-Gastrointestinal Tract by Integrated In Vitro Testing Assay: Generation of Exposure-Dependent Physical Descriptors for Nanomaterial Grouping” *Nanomaterials* 2021, 11(6), 1587; <https://doi.org/10.3390/nano11061587>
 9. F. Murphy, S. Dekkers, H. Braakhuis, L.M.-Hock, H. Johnston, G. Janer, L. Di Cristo, S. Sabella, N. R. Jacobsen, A. G. Oomen, A. Haase, T. Fernandes, V. Stone “An integrated approach to testing and assessment of high aspect ratio nanomaterials and its application for grouping based on a common mesothelioma hazard” *NanoImpact* 22, 2021, 100314, <https://doi.org/10.1016/j.impact.2021.100314>
 10. Tombolini F., Boccuni F., Ferrante R., Natale C., Marasco L., Mantero E., Del Rio Castillo A.E., Leoncini L., Pellegrini V., Sabella S. and Iavicoli S. “Integrated and multi-technique approach to characterize airborne graphene flakes in the workplace during the production phases” *Nanoscale*, 2021, <https://doi.org/10.1039/D0NR07114E>
 11. Cristo L.D., Boccuni F., Iavicoli S., Sabella S. “A human-relevant 3d in vitro platform for an effective and rapid simulation of workplace exposure to nanoparticles: Silica nanoparticles as case study” *Nanomaterials*, vol. 10, (no. 9), pp. 1-10, 2020, DOI
 12. Ursini C. L., Fresegna A. M., Ciervo A., Maiello R., Del Frate V., Folesani G., Galetti M., Poli D., Buresti G., Di Cristo L., Sabella S., Iavicoli S., Cavallo D. “Occupational exposure to graphene and silica nanoparticles. Part II: pilot study to identify a panel of sensitive biomarkers of genotoxic, oxidative and inflammatory effects on suitable biological matrices” *Nanotoxicology*, 2020, :1-15, DOI: 10.1080/17435390.2020.1850903
 13. Boccuni F., Ferrante R., Tombolini F., Natale C., Gordiani A., Sabella S., Iavicoli S.

- “Occupational exposure to graphene and silica nanoparticles. Part I: workplace measurements and samplings” *Nanotoxicology*, vol. 14, (no. 9), pp. 1280-1300, 2020, DOI
14. Di Cristo L., Grimaldi B., Catelani T., Vazquez E., Pompa P.P., Sabella S. Repeated exposure to aerosolized graphene oxide mediates autophagy inhibition and inflammation in a three-dimensional human airway model *Materials Today Bio*, vol. 6:100050, 2020, DOI: 10.1016/j.mtbio.2020.100050
 15. Sanchez Jimenez A., Puelles R., Perez-Fernandez M., Gomez-Fernandez P., Barruetabena L., Jacobsen N.R., Suarez-Merino B., Micheletti C., Manier N., Trouiller B., Navas J.M., Kalman J., Salieri B., Hischier R., Handzhiyski Y., Apostolova M.D., Hadrup N., Bouillard J., Oudart Y., Merino C., Garcia E., Liguori B., Sabella S., Rose J., Masion A., Galea K.S., Kelly S., Stepankova S., Mouneyrac C., Barrick A., Chatel A., Dusinska M., Runden-Pran E., Mariussen E., Bressot C., Aguerre-Chariol O., Shandilya N., Goede H., Gomez-Cordon J., Simar S., Nesslany F., Jensen K.A., van Tongeren M., Rodriguez Llopis I Safe(r) by design implementation in the nanotechnology industry, Volume 20, October 2020, 100267, <https://doi.org/10.1016/j.impact.2020.100267>
 16. [Effects of Particles on the Placenta: studies on in vivo and in vitro models](#) L Campagnolo, V Lacconi, G Somma, M Massimiani, F La Civita, L Paglione, A Magrini, MA Malvindi, S Sabella, PP Pompa, FR Cassee, A Pietroiusti *TOXICOLOGY LETTERS* 314, S32-S32 (2019)
 17. [Safe innovation approach: Towards an agile system for dealing with innovations](#) Lya G Soeteman-Hernandez, Margarita D Apostolova, Cindy Bekker, Susan Dekkers, Roland C Grafström, Monique Groenewold, Yordan Handzhiyski, Petra Herbeck-Engel, Karl Hoehener, Varvara Karagkiozaki, Sean Kelly, Annette Kraegeloh, Stergios Logothetidis, Christian Micheletti, Penny Nymark, Agnes Oomen, Thies Oosterwijk, Isabel Rodriguez-Llopis, Stefania Sabella, Araceli Sanchez Jimenez, Adrienne JAM Sips, Blanca Suarez-Merino, Isabella Tavernaro, Jacqueline van Engelen, Susan WP Wijnhoven, Cornelle W Noorlander *Materials Today Communications* 20, 100548 (2019)
 18. [Nanomaterial grouping: Existing approaches and future recommendations](#) Anna Giusti, Rambabu Atluri, Rositsa Tsekovska, Agnieszka Gajewicz, Margarita D Apostolova, Chiara L Battistelli, Eric AJ Bleeker, Cecilia Bossa, Jacques Bouillard, Maria Dusinska, Paloma Gómez-Fernández, Roland Grafström, Maciej Gromelski, Yordan Handzhiyski, Nicklas Raun Jacobsen, Paula Jantunen, Keld Alstrup Jensen, Agnieszka Mech, José Maria Navas, Penny Nymark, Agnes G Oomen, Tomasz Puzyn, Kirsten Rasmussen, Christian Riebeling, Isabel Rodriguez-Llopis, Stefania Sabella, Juan Riego Sintés, Blanca Suarez-Merino, Speranta Tanasescu, Håkan Wallin, Andrea Haase *NanoImpact*, 100182 (2019)
 19. [Biotransformation and biological impact of graphene and graphene oxide during simulated oral ingestion](#) Daniela Guarnieri, Paola Sanchez-Moreno, Antonio Esau Del Rio Castillo, Francesco Bonaccorso, Francesca Gatto, Giuseppe Bardi, Cristina Martin, Ester Vazquez, Tiziano Catelani, Stefania Sabella, Pier Paolo Pompa *arXiv preprint arXiv:1903.08929* (2019)
 20. [Hydrochromic carbon dots as smart sensors for water sensing in organic solvents](#) Anitha Senthamizhan, Despina Fragouli, Brabu Balusamy, Bhushan Patil, Milan Palei, Stefania Sabella, Tamer Uyar, Athanassia Athanassiou *Nanoscale Advances* 1 (11), 4258-4267 (2019)
 21. D. Guarnieri, P. Sánchez-Moreno, A. E. D. R. Castillo, F. Bonaccorso, F. Gatto, G. Bardi, C. Martin, E. Vázquez, T. Catelani, S. Sabella,* P. P. Pompa “Biotransformation and Biological Interaction of Graphene and Graphene Oxide during Simulated Oral Ingestion” * Corresponding Authors, *Small*, 2018, Volume14, Issue24, <https://doi.org/10.1002/sml.201800227> (Cover Article)
 22. Pietroiusti A, Vecchione L, Malvindi MA, Aru C, Massimiani M, Camaioni A, Magrini A, Bernardini R, Sabella S, Pompa PP, Campagnolo L. Relevance to investigate different stages of pregnancy to highlight toxic effects of nanoparticles: The example of silica. *Toxicol Appl Pharmacol*. 2018, 1;342:60-68. doi: 10.1016/j.taap.2018.01.026.
 23. V. Stone, M. Führ, P.H. Feindt, H. Bouwmeester, S. Sabella, et al. “The Essential Elements of a Risk Governance Framework for Current and Future Nanotechnologies” *Risk Analysis* DOI: 10.1111/risa.12954, 2017
 24. Conference Paper, NanoBio&Med 2017 *Sanchez-Moreno P., Guarnieri D., Del Rio

- Castillo E., Bonaccorso F., *Gatto F., *Bardi G., Martin C., Vazquez E., Catelani T., * Sabella S., *Pompa P.P. "Biotransformation and biological impact of graphene-related materials during simulated oral ingestion" 2017
25. Bove P., Malvindi MM., Sabella S. "In vitro human digestion test to monitor the dissolution of silver nanoparticles" IOP Conf. Series: Journal of Physics: Conf. Series 1823384 doi:10.1088/1742-6596/838/1/012003.
 26. C. Carnovale, D. Guarnieri, I. De Angelis, F. Barone, S. Sabella, "Enhanced in vitro testing model for rapid risk assessment of ingested nanomaterials", Advanced Materials TechConnect, Briefs 2017, Environmental Health & Safety of Nanomaterials, Chapter 9 pp. 317 – 320.
 27. P. Bove, M.A.Malvindi, S.S.Kote, R.Bertorelli, M. Summa, S. Sabella "Dissolution test for risk assessment of nanoparticles: a pilot study" *Nanoscale*, 2017, 9, 6315 - 6326 ([cover article](#)).
 28. Negligible particle-specific toxicity mechanism of silver nanoparticles: the role of Ag⁺ ion release in the cytosol V De Matteis, MA Malvindi, A Galeone, V Brunetti, E De Luca, S Kote, Kshirsagar P., S. Sabella, Bardi G., *Pompa P.P. *Nanomedicine: Nanotechnology, Biology and Medicine* 11 (3), 731-739 (2015).
 29. V. Stone, S. Pozzi-Mucelli, L. Tran, K. Aschberger, S. Sabella, U. Vogel, C. Poland, D. Balharry, T. Fernandes, S. Gottardo, S. Hankin, M. G.J. Hartl, N. Hartmann, D. Hristozov, K.Hund-Rinke, H. Johnston, A. Marcomini, O Panzer, D. Roncato, A. T Saber, H. Wallin and J.J Scott-Fordsmand "A unified framework for nanosafety is needed" *NanoToday*, vol. 9, (no. 5), pp. 546–549, (2014).
 30. D. Guarnieri*, S. Sabella*, O. Muscetti, V. Belli, M.A. Malvindi, S. Fusco, E. De Luca, P.P. Pompa, and P.A. Netti "Transport across cell-membrane dictates nanoparticle fate and toxicity: a new paradigm in nanotoxicology" *Nanoscale* (2014, in press). DOI: 10.1039/C4NR02008A. (*equally contributing authors), b
 31. S Sabella, RP Carney, V Brunetti, MA Malvindi, N Al-Juffali, G Vecchio, S.M. Janes, O. M. Bakr, R. Cingolani, F. Stellacci, P.P. Pompa "A general mechanism for intracellular toxicity of metal-containing nanoparticles," *Nanoscale* 6 (12), 7052-7061, (2014). a
 32. Gamucci O, Bertero A., Malvindi M. A., Sabella S., Pompa P., Mazzolai B. and Bardi "Detection of fluorescent nanoparticle interactions with primary immune cell subpopulations by flow cytometry" *G. Journal of Visualized Experiments*, vol. 85, pp. e51345 2014
 33. S. Corvaglia, B. Sanavio, R.P.H. Enriquez, B. Sorce, A. Bosco, D. Scaini, S. Sabella, G. Scoles, P.P. Pompa, and L. Casalis "Atomic force microscopy based nanoassay: a new method to study α -Synuclein-dopamine bioaffinity interactions" *Scientific Reports* 4, 5366 (2014). DOI:10.1038/srep05366
 34. V. Stone, S. Pozzi-Mucelli, L. Tran, K. Aschberger, S. Sabella, U. Vogel, C. Poland, D. Balharry, T. Fernandes, S. Gottardo, S. Hankin, M. G.J. Hartl, N. Hartmann, D. Hristozov, K.Hund-Rinke, H. Johnston, A. Marcomini, O Panzer, D. Roncato, A. T Saber, H. Wallin and J.J Scott-Fordsmand "ITS-NANO - Prioritising nanosafety research to develop a stakeholder driven intelligent testing strategy", *Particle and fibre toxicology* 11 (1), 9, (2014). DOI:10.1186/1743-8977-11-9
 35. Gold nanoparticles based colorimetric nanodiagnosics for cancer and infectious diseases P Valentini, S Persano, P Cecere, S Sabella, PP Pompa *Colloidal Nanoparticles for Biomedical Applications IX* 8955, 89551E (2014)
 36. P. Valentini, R. Fiammengo, S. Sabella, M. Gariboldi, G. Maiorano, R. Cingolani, and P.P. Pompa "Gold nanoparticles-based colorimetric discrimination of point mutations in KRAS gene with picomolar sensitivity" *ACS Nano* 7, 5530–5538 (2013).
 37. In vivo nanotoxicology: Toxicoproteomics S Sabella, S Kote, PP Pompa *Nanotech* 2013 3, 151-154
 38. Rizzello L, Galeone A, Vecchio G, Brunetti V, Sabella S, Pompa PP "Molecular response of

- Escherichia coli adhering onto nanoscale topography” *Nanoscale Res Lett.* Oct 18;7(1):575, (2012).
39. Vecchio G, Galeone A, Brunetti V, Maiorano G, Sabella S, R. Cingolani, and P.P. Pompa (2012) Concentration-Dependent, Size-Independent Toxicity of Citrate Capped AuNPs in *Drosophila melanogaster*. *PLoS ONE* 7(1): e29980. doi:10.1371/journal.pone.0029980.
 40. G. Vecchio, A. Galeone, V. Brunetti, G. Maiorano, L. Rizzello, S. Sabella, R. Cingolani, and P.P. Pompa “Mutagenic effects of gold nanoparticles induce aberrant phenotypes in *Drosophila melanogaster*” *Nanomedicine : nanotechnology, biology, and medicine* 8, 1-7 (2012). DOI: 10.1016/j.nano.2011.11.001) *Cover Article*
 41. L. Rizzello, G. Vecchio, V. Brunetti, G. Maiorano, M.A. Malvindi, A. Galeone, S. Sabella, P.P. Pompa “Impact of nanomaterials on in vitro and in vivo systems: role of nanoscale features in nanotoxicology” *Proceedings of SPIE* 8232, 82320E (2012).
 42. S. Sabella, G. Maiorano, L. Rizzello, S. Kote, R. Cingolani, P.P. Pompa “Framing the nanobiointeractions by proteomics” *Proceedings of SPIE* 8232, 82320S (2012).
 43. S. Sabella, V. Brunetti, G. Vecchio, A. Galeone, G. Maiorano, R. Cingolani, and P.P. Pompa “Toxicity of citrate-capped AuNPs: an in vitro and in vivo assessment.” *J. Nanopart. Res.* 13, 6821-6835, (2011). DOI:10.1007/s11051-011-0590-x
 44. S. Sabella, A. Galeone, G. Vecchio, R. Cingolani, and P.P. Pompa “AuNPs are toxic in vitro and in vivo: a review” *J. Nanosci. Lett.* 1, 145-165 (2011).
 45. L. Rizzello, B. Sorce, S. Sabella, G. Vecchio, A. Galeone, V. Brunetti, R. Cingolani, and P.P. Pompa “Impact of nanoscale topography on genomics and proteomics of adherent bacteria” *ACS Nano* 5, 1865-76 (2011).
 46. B. Sanavio, S. Corvaglia, B. Sorce, S. Sabella, P.P. Pompa, G. Scoles, L. Casalis, “Controlled immobilization and nanoscale supramolecular assembly of intrinsically disordered proteins” *Eur. Biophys. J. Biophys. Lett.* 40 (S1), 57-58 (2011).
 47. S. Bayer, D. Fragouli, A. Attanasio, B. Sorce, G. Bertoni, R. Brescia, R. Di Corato, T. Pellegrino, M. Kalyva, S. Sabella, P. P. Pompa, R. Cingolani, and A. Athanassiou, "Water-Repellent Cellulose Fiber Networks with Multifunctional Properties," *ACS Applied Materials & Interfaces*, vol. 3, pp. 4024-4031, 2011.
 48. P.P. Pompa, G. Vecchio, A. Galeone, V. Brunetti, G. Maiorano, S. Sabella, and R. Cingolani “Physical assessment of toxicology at nanoscale: nano dose-metrics and toxicity factor” *Nanoscale* 3, 2889-97 (2011).
 49. P.P. Pompa, G. Vecchio, A. Galeone, V. Brunetti, S. Sabella, G. Maiorano, A. Falqui, G. Bertoni, and R. Cingolani “In vivo toxicity assessment of gold nanoparticles in *Drosophila melanogaster*” *Nano Research* (2011) 4, 405-413 DOI 10.1007/s12274-011-0095-z
 50. S. Sabella, G. Maiorano, B. Sorce, V. Brunetti, M. A. Malvindi, R. Cingolani and P. P. Pompa, “Cell Culture Media Elicit a Different Dynamic Formation of Protein-NP Complexes: Effects on the Cellular Response” *Conference Technical Proceedings, Nanotech* (2011), Vol 3, Chapter 7, Environment, Health & Safety, Pages 517 - 520.
 51. G. Vecchio, A. Galeone, V. Brunetti, G. Maiorano, M. A. Malvindi, S. Sabella, R. Cingolani, and P.P. Pompa, “In vivo nanotoxicity assessment: the role of size, surface coating, nanostructuration, and dose-metrics” *TechConnectWorldConference and Expo 2011*, June 13-16, Boston (MA), *Conference Technical Proceedings, Nanotech* (2011), Vol 3, Chapter 7, Environment, Health & Safety, Pages 509 – 512.
 52. S. Sabella, V. Brunetti, G. Maiorano, L. Rizzello, B. Sorce, G. Vecchio, A. Galeone, R. Cingolani, P.P. Pompa “Nanomaterials Can Influence Living Biological Systems with Nanometer Sensitivity” “*Conference Technical Proceedings, Nanotech* (2011), Vol 3, Chapter 3, Bio Nano Materials, Pages 167-170.
 53. S. Sabella, G. Vecchio, V. Brunetti, R. Cingolani, R. Rinaldi, and P.P. Pompa “Direct PCR analyses of real biological samples in a plastic microreactor” *J. Anal. Chem.* 66, 528-534 (2011).
 54. International Conference on Transparent Optical Networks Martiradonna L., Pisanello F., Stomeo T., *Qualtieri A., Vecchio G., S. Sabella, De Vittorio M., Pompa P.P. Silicon nitride photonic crystal nanocavities for biochip applications 2011
 55. G. Maiorano, S. Sabella*, B. Sorce, V. Brunetti, M.A. Malvindi, R. Cingolani, and P.P. Pompa “Effects of Cell Culture Media on the Dynamic Formation of Protein-NP Complexes and Influence on the Cellular Response” **Corresponding author, ACS Nano*, 4(12), 7481–7491 (2010).

56. V. Brunetti, G. Maiorano, L. Rizzello, B. Sorcie, S. Sabella, R. Cingolani and P. P. Pompa “Neurons sense nanoscale roughness with nanometer sensitivity”, *Proc. Natl. Acad. Sci. USA*, 107(14) (2010) 6264–6269.
57. L. Martiradonna, F. Pisanello, T. Stomeo, A. Qualtieri, G. Vecchio, S. Sabella, R. Cingolani, M. De Vittorio, P. P. Pompa “Spectral tagging by integrated photonic crystal resonators for highly sensitive and parallel detection in biochips” *APL*, 96, (2010), 113702.
58. F. Pisanello, L. Martiradonna, P.P. Pompa, T. Stomeo, A. Qualtieri, G. Vecchio, S. Sabella, and M. De Vittorio “Parallel and high sensitive photonic crystal cavity assisted readout for DNA-chips” *Microelectronics Engineering*, 87 (2010) 5, 747.
59. S. Sabella, S. Shiv Shankar, G. Vecchio, V. Brunetti, L. Rizzello, A. Qualtieri, L. Martiradonna, R. Cingolani, and P.P. Pompa “Room-temperature metal stamping by microfluidics”, *Materials Letters* 64 (2010) 41–44
60. G. Vecchio*, S. Sabella*, L. Tagliaferro, P. Menegazzi, M.P. Di Bello, V. Brunetti, R. Rinaldi, R. Cingolani and P.P. Pompa “Modular plastic chip for a one shot HPV diagnostic analysis” *Analytical Biochemistry* 397 (2010) 53–59 (* equally contributing authors).
61. S. Sabella, G. Vecchio, P.P. Pompa, G. Maruccio, L. Sanarica, A. Della Torre, G. De Bellis, G. Caramenti, C. Consolandi, M. Severgnini, R. Cingolani and R. Rinaldi, “Disposable plastic microreactors for genomic analyses”, *Biomed Microdevices* (2009) 11:1289–1295
62. S. Sabella, V. Brunetti, G. Vecchio, R. Rinaldi, R. Cingolani, and P.P. Pompa, “Nanoscale parallel patterning of functional biomolecules, organic fluorophores and colloidal nanocrystals” *Nanoscale Res Lett* (2009) 4:1222–1229.
63. B. Sorcie, S. Sabella*, M. Sandal, B. Samorì, A. Santino, R. Cingolani, R. Rinaldi, and P.P. Pompa “Single molecule mechanical unfolding of amyloidogenic β_2 -microglobulin: Force-Spectroscopy approach”, *ChemPhysChem* 2009, 10, 1471 – 1477 (* equally contributing authors).
64. S. Sabella, G. Vecchio, R. Cingolani, R. Rinaldi, and P. P. Pompa, “Real-Time PCR in a Plastic Chip Based on Solid State FRET”, *Langmuir* 2008, 24, 13266-13269.
65. E. De Lorenzi, R. Colombo, S. Sabella, D.B. Corlin, and N.H.H. Heegaard “The influence of Cu^{2+} on the unfolding and refolding of intact and proteolytically processed β_2 -microglobulin” *Electrophoresis*, 2008, 29, 1734–1740.
66. L.L. del Mercato, P.P. Pompa, G. Maruccio, A. Della Torre, S. Sabella, A.M. Tamburro, R. Cingolani, and R. Rinaldi “Charge transport and intrinsic fluorescence in amyloid-like fibrils” *Proc. Natl. Acad. Sci. USA*, 2007, 104, 46, 18019-18024.
67. Quaglia, M. Carazzone C., Sabella, S., Colombo R., Giorgetti, S., Bellotti, V., De Lorenzi, E. “Search of ligands for the amyloidogenic protein beta2microglobulin by capillary electrophoresis and other techniques” *Electrophoresis*, 2005 Nov;26(21):4055-63.
68. Sabella, S.; Quaglia, M.; Lanni, C.; Racchi, M.; Govoni, S.; Caccialanza, G.; Calligaro, A.; Bellotti, V.; De Lorenzi, E. “Capillary electrophoresis studies on the aggregation process of β -amiloid $\text{A}\beta$ 1-42 and $\text{A}\beta$ 1-40 peptides” *Electrophoresis*, 2004, 25, 3186.

PATENTS:

1. Sabella, M.A. Malvindi, E. Torino, P.P. Pompa, R. Cingolani, P. Netti “Albumin Nanoparticles Encapsulating Gadolinium And Method Of Synthesis Thereof” Patent EP3233135B1
2. P.P. Pompa, S. Sabella, R. Cingolani “Device And Method For Determining The Dissolution Kinetics Of Colloidal Nanoparticles” Patents EP2885622, IT0001413157
3. A. Athanassiou, I.S. Bayer, I. Liakos, L. Rizzello, R. Cingolani, S. Sabella, and P.P. Pompa “Polymeric composite materials with antimicrobial and biodegradable properties and uses thereof” Patents US9931444, JP6157582, CA2866782, (EP pending).
4. S. Sabella, P.P. Pompa, G. Maruccio, G. Vecchio, R. Cingolani, and R. Rinaldi “Integrated plastic microdevice for quantitative analyses of real-time PCR” Patent ITTO20080810.
5. K. Aoki, M. De Vittorio, T. Stomeo, F. Pisanello, A. Massaro, L. Martiradonna, S.

Sabella, R. Rinaldi, Y. Arakawa, R. Cingolani, and P.P. Pompa “Method of identifying a target analyte using photonic crystal resonators, and related device” Patent US8029994.

6. P.P. Pompa, S. Sabella, R. Rinaldi, R. Cingolani, and F. Calabi “A method and a microdevice for the identification and/or quantification of an analyte in a biological sample with optical detection systems based on FRET processes” Patent EP2122352.

▪

Dati personali Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".