

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome GENNARA
Cognome CAVALLARO
Recapiti Dipartimento STEBICEF
Telefono 091-23891953
091-23891931
E-mail gennara.cavallaro@unipa.it

FORMAZIONE TITOLI

Place of work

Lab of Biocompatibile Polymers

Dipartimento di Scienze e Tecnologie Biologiche, Chimiche e Farmaceutiche (STEBICEF)

Sezione di Chimica e Tecnologie Farmaceutiche

Università degli Studi di Palermo

Via Archirafi 32, 90123, Italia

tel 0039-09123891931, fax 0039-0916162646

E-mail: gennara.cavallaro@unipa.it

Personal information

Education

High School, Scientific Lyceum

University of Palermo, Faculty of Pharmacy: Degree in Pharmacy achieved on July 23rd, 1990.

PhD in Chemistry Sciences from University of Palermo in 1993.

Permanent positions

1998 - Associate Professor of Pharmaceutical Technologies at University of Palermo.

2006 - Full Professor in Pharmaceutical Technologies at University of Palermo.

ATTIVITA' DIDATTICA

Teaching

In the academic year 1997-1998, Contract Professor at the Faculty of Pharmacy of the University of Calabria for the teaching of "Technology Socioeconomics and Pharmaceutical Legislation" for the Degree Courses in Pharmacy and Pharmaceutical Chemistry and Technology.

From 1998, teaching assignments for the students of the Degree Course in Pharmaceutical Chemistry and Technology, of the Faculty of Pharmacy of the University of Palermo:

- "Technology Socioeconomics and Pharmaceutical Legislation II" (from A.A. 1998/1999 to 2011/2012);

- "Polymers of Pharmaceutical Interest" (from A.A. 2006/2007 to 2009/2010);

- "Advanced Pharmaceutical Technology" (from A.A. 2013/2014 to 2015/2016);

- "Pharmaceutical Forms Technology" (from A.A. 2011/2012 to now).

- "Pharmaceutical Forms Technology and Law of Medicines" (from A.A. 2012/2013 to now).

Other teaching assignments: - "Pharmaceutical Technologies" (from A.A. 2002/2003 to 2009/2010) for the Degree in Biotechnology (Biopharmaceutical profile), University of Palermo;

- "Socioeconomics" (from A.A. 2003/2004 to 2004/2005) for the Degree Course in Herbal Techniques, University of Palermo;

- "Functionalization Course of Materials for biomedical use" (A.A. 2015/2016) for the Master of Science in Material Engineering, University of Palermo.

From the A.A. 2000/2001 until now, teachings for students of the Specialization School in Hospital Pharmacy activated at the Faculty of Pharmacy of the University of Studies of Palermo, such as "Pharmaceutical Technology I" and "Pharmaceutical Technology II".

Supervisor for students in experimental graduation theses and in assisting numerous students to prepare compilation theses.

RICERCHE FINANZIATE

Funding projects

-Principal investigator for the University of PALERMO of PNRR Project: National Center for Gene Therapy and Drugs based on RNA Technology – Code of the project: CN00000041, SPOKE 8- Platforms for RNA/DNA delivery; WP 8.1 - Translational development of smart delivery platforms for NA delivery; Task 8.1.1 –Novel synthetic materials and nanoplatforms for NA delivery - From November 2022 to now.

- Since September 2014, Reference Investigator of the University of Palermo for the Project: Drug delivery: veicoli per un'innovazione sostenibile in the DISTRETTO BIOMEDICO AD ALTA TECNOLOGIA;

- FFR 2012/2013, Scientific coordinator of the research project entitled "Development of nanosystems for the delivery of pharmacologically active substances in anticancer therapy" in the framework of the FFR University Call (Fund Finalized for Research), University of Palermo;

- CARIPLO FUNDING 2011, Principal Investigator (PI) of the Research Unit of Palermo, in collaboration with University of Pavia and Milano Bicocca, in a funding project entitled: "Nanorods (NR) and gold asymmetric nanoparticles (NPA) coated with biocompatible polymer with binding functions for molecules and metal ions: pharmacological and thermal antimicrobial action activated by irradiation in the near IR";

- PRIN 2010-2011, PI of the Research Unit of Palermo in the Research National Project entitled: "Identification of optimal delivery systems for the Nucleic Acid Based Drugs and study of the action mechanisms in some models of human tumoral and inflammatory pathologies";

- PRIN 2006, PI of the Research Unit of Palermo in the Research National Project entitled: "Biocompatible polycations at polyaminoacidic structure for the gene therapy in oncology";

- CORI 2006, Scientific Coordinator of an annual International Collaboration Project with the Center of Drug Research Biotechnology (University of Monaco) entitled: "Biocompatible polyaminoacid-based polycations for gene therapy in oncology";

- PRIN 2002, PI of the Research Unit of Palermo in the Research National Project entitled: "Delivery and targeting of antitumor agents by polymeric vectors";

- PRIN 2000, PI of the Research Unit of Palermo in the Research National Project entitled: "Polyaminoacidic polymers as carrier in gene and antitumor therapy".

INCARICHI / CONSULENZE

Institutional roles

- from March 2009 to December 2010, Director of Chemistry and Pharmaceutical Technologies (CTF) Department, University of Palermo.
- From February 2011, Deputy Director of the Department of Molecular and Biomolecular Sciences and Technologies (STEMBIO).
- from 28 February 2011 to December 2012, Head of the Section of CTF of the STEMBIO Department.
- from February 2011 to December 2012, Member of the Giunta of STEMBIO Department.
- from February 2013 to December 2015, Head of Section of CTF Section of STEBICEF Department.
- from April 2014 to date, Member of the International Relations Committee of the University (CORI).
- Member of the Expert Evaluators Group (GEV area 03) for the 2011-2014 VQR exercise.
- In the academic year (A.A.) 2009/2010, Member of the Didactic Commission - Study Plans and Traineeships for students of the degree course in Biotechnology, University of Palermo.
- In the A.A. 2011/2012, Component (president) year 2012 Permanent Teaching Observatory (OPD) of the Degree Course in Chemistry and Pharmaceutical Technology (CTF).
- from the A.A. 2009/2010 to date, component of the Commission for the Professional Practical Training of degree courses in Pharmacy and CTF.
- In the A.A. 2011/2012, Competition Commission Member for the access test to the School of Specialization in Hospital Pharmacy, University of Palermo.
- Referent of the University of Palermo for the project: "Drug Delivery: Vehicles for a sustainable Innovation", PON03PE002161.
- Delegate of the STEBICEF Department Director for the Ordinary Functioning, Maintenance and Management of the Heritage of the STEBICEF Department.
- in the period from 23-03-1999 to 31-12-2015, member of the Faculty Board of the PhD in "Biologically Active Substances Technologies", University of Palermo.
- in the period from 01-01-2014 to date, member of the Faculty Board of the PhD in "Molecular and Biomolecular Sciences", University of Palermo.
- in the period from 01-02-2009 to date, Head of the Laboratory of Organic Chemical Processes, Synthesis and Characterization of Polymeric Materials, local 27, at the CTF Department (now STEBICEF).
- Member of Discipline Board of the University of Palermo from February 2018 to date.
- Reference Member of Material Area and Biocompatible Systems "Advanced Technologies Network Center" –AteN Center of the University of Palermo from 2018 to July 2020.
- Director of "Advanced Technologies Network Center" –AteN Center of the University of Palermo From July 2020 to September 2023.

ASSOCIAZIONI SCIENTIFICHE

Society membership

- Associazione Docenti e Ricercatori Tecnologia e Legislazione Farmaceutiche (ADRITELF).
- CRS Italy Chapter
- Società Chimica Italiana (SCI)
- Component of “**Centre for Polymer Therapeutics**” “Welsh School– University of Cardiff;-
- Component of the Scientific Board of Board of **Controlled Release Society (CRS) - Italy Chapter** from 2004 to 2015.
- **Component of the Consorzio Interuniversitario Nazionale per la Scienza e la Tecnologia dei Materiali (INSTM).**
- Component of the Scientific Board of **Controlled Release Society (CRS) - Italy Chapter** from 2019 to 2021.
- Component of the Scientific Board of Divisione di Tecnologia Farmaceutica della SCI (Società chimica italiana) from 2024 to date.
- Component of the Scientific Board of Società Italiana di Tecnologia e Legislazione Farmaceutiche (SITELF) 2024- to date.

PUBBLICAZIONE

Publications Published papers from 2013 to 2023 (to October 30, 2023)

Drago, S.E., Cabibbo, M., Craparo, E.F., Cavallaro, G. TAT decorated siRNA polyplexes for inhalation delivery in anti-asthma therapy (2023) 190, art. no. 106580, . DOI: 10.1016/j.ejps.2023.106580 DOCUMENT TYPE: Article

Mauro, N., Cillari, R., Andrea Utzeri, M., Costa, S., Giammona, G., Nicosia, A., Cavallaro, G. Controlled delivery of sildenafil by β -Cyclodextrin-decorated sulfur-doped carbon nanodots: a synergistic activation of ROS signaling in tumors overexpressing PDE-5(2023) 645, art. no. 123409, . DOI: 10.1016/j.ijpharm.2023.123409 DOCUMENT TYPE: Article

Terracina, A., Mauro, N., Le Balle, J., Popescu, R., Scopelliti, M., Buscarino, G., Utzeri, M.A., Cannas, M., Cavallaro, G., Messina, F., Sciortino, A. Fluorescent Boron Oxide Nanodisks as Biocompatible Multi-messenger Sensors for Ultrasensitive Ni²⁺ Detection (2023) 6 (7), pp. 6036-6045. DOI: 10.1021/acsanm.3c00383 DOCUMENT TYPE: Article

Craparo, E.F., Drago, S.E., Costabile, G., Ferraro, M., Pace, E., Scaffaro, R., Ungaro, F., Cavallaro, G. Sustained-Release Powders Based on Polymer Particles for Pulmonary Delivery of Beclomethasone Dipropionate in the Treatment of Lung Inflammation (2023) 15 (4), art. no. 1248, DOI: 10.3390/pharmaceutics15041248 DOCUMENT TYPE: Article

Mauro, N., Cillari, R., Gagliardo, C., Utzeri, M.A., Marrale, M., Cavallaro, G. Gadolinium-Doped Carbon Nanodots as

Potential Anticancer Tools for Multimodal Image-Guided Photothermal Therapy and Tumor Monitoring (2023) . DOI: 10.1021/acsanm.3c03583 DOCUMENT TYPE: Article

Varvarà, P., Calà, C., Maida, C.M., Giuffrè, M., Mauro, N., Cavallaro, G. Arginine-Rich Peptidomimetic Ampicillin/Gentamicin Conjugate To Tackle Nosocomial Biofilms: A Promising Strategy To Repurpose First-Line Antibiotics (2023) 9 (4), pp. 916-927. DOI: 10.1021/acsinfecdis.2c00579 DOCUMENT TYPE: Article

Craparo, E.F., Cabibbo, M., Emanuele Drago, S., Casula, L., Lai, F., Cavallaro, G. Inhalable polymeric microparticles as pharmaceutical porous powder for drug administration (2022) 628, art. no. 122325, . Cited 1 time. DOI: 10.1016/j.ijpharm.2022.122325 DOCUMENT TYPE: Article

Mauro, N., Utzeri, M.A., Cillari, R., Scialabba, C., Giammona, G., Cavallaro, G. Cholesterol-Inulin Conjugates for Efficient SN38 Nuclear Delivery: Nanomedicines for Precision Cancer Therapy (2022) 14 (19), art. no. 4857, DOI: 10.3390/cancers14194857 DOCUMENT TYPE: Article

Mauro, N., Andrea Utzeri, M., Sciortino, A., Cannas, M., Messina, F., Cavallaro, G., Giammona, G. Printable Thermo- and Photo-stable Poly(D,L-lactide)/Carbon Nanodots Nanocomposites via Heterophase MeltExtrusion Transesterification (2022) 443, art. no. 136525, DOI: 10.1016/j.cej.2022.136525 DOCUMENT TYPE: Article

Craparo, E.F., Cabibbo, M., Scialabba, C., Giammona, G., Cavallaro, G. Inhalable Formulation Based on Lipid-Polymer Hybrid Nanoparticles for the Macrophage Targeted Delivery of Roflumilast (2022) 23 (8), pp. 3439-3451. Cited 5 times. DOI: 10.1021/acs.biomac.2c00576 DOCUMENT TYPE: Article

Craparo, E.F., Drago, S.E., Quaglia, F., Ungaro, F., Cavallaro, G. Development of a novel rapamycin loaded nano- into micro-formulation for treatment of lung inflammation (2022) 12 (8), pp. 1859-1872. DOI: 10.1007/s13346-021-01102-5 DOCUMENT TYPE: Article

Tomasello, L., Fiorica, C., Mauceri, R., Martorana, A., Palumbo, F.S., Pitarresi, G., Pizzolanti, G., Campisi, G., Giordano, C., Cavallaro, G. Bioactive Scaffolds Based on Amine-Functionalized Gellan Gum for the Osteogenic Differentiation of Gingival Mesenchymal Stem Cells (2022) 4 (3), pp. 1805-1815. DOI: 10.1021/acsapm.1c01586 DOCUMENT TYPE: Article

Mauro, N., Utzeri, M.A., Sciortino, A., Messina, F., Cannas, M., Popescu, R., Gerthsen, D., Buscarino, G., Cavallaro, G., Giammona, G. Decagram-Scale Synthesis of Multicolor Carbon Nanodots: Self-Tracking Nanoheaters with Inherent and Selective Anticancer Properties (2022) 14 (2), pp. 2551-2563. DOI: 10.1021/acsami.1c19599 DOCUMENT TYPE: Article

Sciascia, L., Calabrese, I., Cavallaro, G., Merli, M., Scialabba, C., Liveri, M.L.T. Modified montmorillonite as drug delivery agent for enhancing antibiotic therapy (2021) 11 (12), art. no. 1315, . Cited 2 times. DOI: 10.3390/min11121315 DOCUMENT TYPE: Article

Lombardo, M.E., Carfi Pavia, F., Craparo, E.F., Capuana, E., Cavallaro, G., Brucato, V., La Carrubba, V. Novel dual-flow perfusion bioreactor for in vitro pre-screening of nanoparticles delivery: design, characterization and testing (2021) 44 (11), pp. 2361-2374. DOI: 10.1007/s00449-021-02609-4 DOCUMENT TYPE: Article

Drago, S.E., Craparo, E.F., Luxenhofer, R., Cavallaro, G. Development of polymer-based nanoparticles for zileuton delivery to the lung: PMeOx and PMeOzi surface chemistry reduces interactions with mucins (2021) 37, art. no. 102451, DOI: 10.1016/j.nano.2021.102451 DOCUMENT TYPE: Article

Craparo, E.F., Musumeci, T., Bonaccorso, A., Pellitteri, R., Romeo, A., Naletova, I., Cucci, L.M., Cavallaro, G., Satriano, C. Mpeg-plga nanoparticles labelled with loaded or conjugated rhodamine-b for potential nose-to-brain delivery (2021) 13 (9), art. no. 1508, DOI: 10.3390/pharmaceutics13091508 DOCUMENT TYPE: Article

Mauro, N., Utzeri, M.A., Drago, S.E., Nicosia, A., Costa, S., Cavallaro, G., Giammona, G. Hyaluronic acid dressing of hydrophobic carbon nanodots: A self-assembling strategy of hybrid nanocomposites with theranostic potential (2021) 267, art. no. 118213, DOI: 10.1016/j.carbpol.2021.118213 DOCUMENT TYPE: Article

Mauro, N., Utzeri, M.A., Varvarà, P., Cavallaro, G. Functionalization of metal and carbon nanoparticles with potential in cancer theranostics (2021) 26 (11), art. no. 3085, DOI: 10.3390/molecules26113085 DOCUMENT TYPE: Article

Cavallaro, G., Sardo, C., Craparo, E.F., Giammona, G. Development of new targeted inulin complex nanoaggregates for sirna delivery in antitumor therapy (2021) 26 (6), art. no. 1713. DOI: 10.3390/molecules26061713 DOCUMENT TYPE: Article

Perrone, F., Craparo, E.F., Cemazar, M., Kamensek, U., Drago, S.E., Dapas, B., Scaggiante, B., Zanconati, F., Bonazza, D., Grassi, M., Truong, N., Pozzato, G., Farra, R., Cavallaro, G., Grassi, G. Targeted delivery of siRNAs against hepatocellular carcinoma-related genes by a galactosylated polyaspartamide copolymer (2021) 330, pp. 1132-1151. DOI: 10.1016/j.jconrel.2020.11.020 DOCUMENT TYPE: Article

Craparo, E.F., Cabibbo, M., Conigliaro, A., Barreca, M.M., Musumeci, T., Giammona, G., Cavallaro, G. Rapamycin-loaded polymeric nanoparticles as an advanced formulation for macrophage targeting in atherosclerosis (2021) 13 (4), art. no. 503, DOI: 10.3390/pharmaceutics13040503 DOCUMENT TYPE: Article

Varvarà, P., Tranchina, L., Cavallaro, G., Licciardi, M. Preparation and characterization of gold nanorods coated with gellan gum and lipoic acid (2020) 10 (23), art. no. 8322, pp. 1-18. DOI: 10.3390/app10238322 DOCUMENT TYPE: Article

Mauro, N., Utzeri, M.A., Buscarino, G., Sciortino, A., Messina, F., Cavallaro, G., Giammona, G. Pressure-dependent tuning of photoluminescence and size distribution of carbon nanodots for theranostic anticancer applications (2020) 13 (21), art. no. 4899, pp. 1-16. DOI: 10.3390/ma13214899 DOCUMENT TYPE: Article

Mauro, N., Utzeri, M.A., Drago, S.E., Buscarino, G., Cavallaro, G., Giammona, G. Carbon nanodots as functional excipient to develop highly stable and smart PLGA nanoparticles useful in cancer theranostics (2020) 12 (11), art. no. 1012, pp. 1-15. DOI: 10.3390/pharmaceutics12111012 DOCUMENT TYPE: Article

Nicosia, A., Cavallaro, G., Costa, S., Utzeri, M.A., Cuttitta, A., Giammona, G., Mauro, N. Carbon nanodots for on demand chemophotothermal therapy combination to elicit necroptosis: Overcoming apoptosis resistance in breast cancer cell lines (2020) 12 (11), art. no. 3114, pp. 1-23. DOI: 10.3390/cancers12113114 DOCUMENT TYPE: Article

Puleio, R., Licciardi, M., Varvarà, P., Scialabba, C., Cassata, G., Cicero, L., Cavallaro, G., Giammona, G. Effect of actively targeted copolymer coating on solid tumors eradication by gold nanorods-induced hyperthermia (2020) 587, art. no. 119641, DOI: 10.1016/j.jipharm.2020.119641 DOCUMENT TYPE: Article

Craparo, E.F., Drago, S.E., Giammona, G., Cavallaro, G. Production of polymeric micro- and nanostructures with tunable properties as pharmaceutical delivery systems (2020) 200, art. no. 122596, DOI: 10.1016/j.polymer.2020.122596 DOCUMENT TYPE: Article

Porsio, B., Lentini, L., Ungaro, F., Di Leonardo, A., Quaglia, F., Giammona, G., Cavallaro, G. Inhalable nano into micro dry powders for ivacaftor delivery: The role of mannitol and cysteamine as mucus-active agents (2020) 582, art. no. 119304, DOI: 10.1016/j.jipharm.2020.119304 DOCUMENT TYPE: Article

De Mohac, L.M., Caruana, R., Cavallaro, G., Giammona, G., Licciardi, M. Spray-Drying, Solvent-Casting and Freeze-Drying Techniques: a Comparative Study on their Suitability for the Enhancement of Drug Dissolution Rates (2020) 37 (3), art. no. 57, DOI: 10.1007/s11095-020-2778-1 DOCUMENT TYPE: Article

Craparo, E.F., Drago, S.E., Mauro, N., Giammona, G., Cavallaro, G. Design of new polyaspartamide copolymers for siRNA delivery in antiasthmatic therapy (2020) 12 (2), art. no. 89, DOI: 10.3390/pharmaceutics12020089 DOCUMENT TYPE: Article

Mauro, N., Scialabba, C., Agnello, S., Cavallaro, G., Giammona, G. Folic acid-functionalized graphene oxide nanosheets via plasma etching as a platform to combine NIR anticancer phototherapy and targeted drug delivery (2020) 107, art. no. 110201, DOI: 10.1016/j.msec.2019.110201 DOCUMENT TYPE: Article

Di Prima, G., Licciardi, M., Carfi Pavia, F., Lo Monte, A.I., Cavallaro, G., Giammona, G. Microfibrillar polymeric ocular inserts for triamcinolone acetate delivery (2019) 567, art. no. 118459, DOI: 10.1016/j.ijpharm.2019.118459 DOCUMENT TYPE: Article

De Mohac, L.M., Caruana, R., Pavia, F.C., Cavallaro, G., Giammona, G., Licciardi, M. Multicomponent solid dispersion as a formulation strategy to improve drug permeation: A case study on the anticancer irinotecan (2019) 52, pp. 346-354. DOI: 10.1016/j.jddst.2019.04.040 DOCUMENT TYPE: Article

Scialabba, C., Sciortino, A., Messina, F., Buscarino, G., Cannas, M., Roscigno, G., Condorelli, G., Cavallaro, G., Giammona, G., Mauro, N. Highly Homogeneous Biotinylated Carbon Nanodots: Red-Emitting Nanoheaters as Theranostic Agents toward Precision Cancer Medicine (2019) 11 (22), pp. 19854-19866. DOI: 10.1021/acsami.9b04925 DOCUMENT TYPE: Article

Sardo, C., Di Domenico, E.G., Porsio, B., De Rocco, D., Santucci, R., Ascenzioni, F., Giammona, G., Cavallaro, G. Nanometric ion pair complexes of tobramycin forming microparticles for the treatment of *Pseudomonas aeruginosa* infections in cystic fibrosis (2019) 563, pp. 347-357. DOI: 10.1016/j.ijpharm.2019.03.060 DOCUMENT TYPE: Article

Sardo, C., Craparo, E.F., Porsio, B., Giammona, G., Cavallaro, G. Combining inulin multifunctional polycation and magnetic nanoparticles: Redox-responsive siRNA-loaded systems for magnetofection (2019) 11 (5), art. no. 889, DOI: 10.3390/polym11050889 DOCUMENT TYPE: Article

Licciardi, M., Scialabba, C., Puleio, R., Cassata, G., Cicero, L., Cavallaro, G., Giammona, G. Smart copolymer coated SPIONs for colon cancer chemotherapy (2019) 556, pp. 57-67. DOI: 10.1016/j.ijpharm.2018.11.069 DOCUMENT TYPE: Article

Mauro, N., Di Prima, G., Varvarà, P., Licciardi, M., Cavallaro, G., Giammona, G. Core-Shell Arginine-Containing Chitosan Microparticles for Enhanced Transcorneal Permeation of Drugs (2019) 108 (2), pp. 960-969. DOI: 10.1016/j.xphs.2018.09.034 DOCUMENT TYPE: Article

Mauro, N., Scialabba, C., Puleio, R., Varvarà, P., Licciardi, M., Cavallaro, G., Giammona, G. SPIONs embedded in polyamino acid nanogels to synergistically treat tumor microenvironment and breast cancer cells (2019) 555, pp. 207-219. DOI: 10.1016/j.ijpharm.2018.11.046 DOCUMENT TYPE: Article

Botto, C., Augello, G., Amore, E., Emma, M.R., Azzolina, A., Cavallaro, G., Cervello, M., Bondi, M.L. Cationic solid lipid nanoparticles as non viral vectors for the inhibition of hepatocellular carcinoma growth by RNA interference (2018) 14 (5), pp. 1009-1016. DOI: 10.1166/jbn.2018.2557 DOCUMENT TYPE: Article

Mauro, N., Schillaci, D., Varvarà, P., Cusimano, M.G., Geraci, D.M., Giuffrè, M., Cavallaro, G., Maida, C.M., Giammona, G. Branched High Molecular Weight Glycopolymer with Broad-Spectrum Antimicrobial Activity for the Treatment of Biofilm Related Infections (2018) 10 (1), pp. 318-331. DOI: 10.1021/acsami.7b16573 DOCUMENT TYPE: Article

Porsio, B., Craparo, E.F., Mauro, N., Giammona, G., Cavallaro, G. Mucus and Cell-Penetrating Nanoparticles Embedded in Nano-into-Micro Formulations for Pulmonary Delivery of Ivacaftor in Patients with Cystic Fibrosis (2018) 10 (1), pp. 165-181. DOI: 10.1021/acsami.7b14992 DOCUMENT TYPE: Article

Porsio, B., Cusimano, M.G., Schillaci, D., Craparo, E.F., Giammona, G., Cavallaro, G. Nano into Micro Formulations of Tobramycin for the Treatment of *Pseudomonas aeruginosa* Infections in Cystic Fibrosis (2017) 18 (12), pp. 3924-3935. DOI: 10.1021/acs.biomac.7b00945 DOCUMENT TYPE: Article

Craparo, E.F., D'Apolito, R., Giammona, G., Cavallaro, G., Tomaiuolo, G. Margination of fluorescent polylactic acid-polyaspartamide based nanoparticles in microcapillaries in vitro: The effect of hematocrit and pressure (2017) 22 (11), art. no. 1845, DOI: 10.3390/molecules22111845 DOCUMENT TYPE: Article

Craparo, E.F., Ferraro, M., Pace, E., Bondi, M.L., Giammona, G., Cavallaro, G. Polyaspartamide-based nanoparticles

loaded with fluticasone propionate and the in vitro evaluation towards cigarette smoke effects (2017) 7 (8), art. no. 222, DOI: 10.3390/nano7080222 DOCUMENT TYPE: Article

Cavallaro, G., Sardo, C., Craparo, E.F., Porsio, B., Giammona, G. Polymeric nanoparticles for siRNA delivery: Production and applications (2017) 525 (2), pp. 313-333. DOI: 10.1016/j.ijpharm.2017.04.008 DOCUMENT TYPE: Article

Cavallaro, G., Farra, R., Craparo, E.F., Sardo, C., Porsio, B., Giammona, G., Perrone, F., Grassi, M., Pozzato, G., Grassi, G., Dapas, B. Galactosylated polyaspartamide copolymers for siRNA targeted delivery to hepatocellular carcinoma cells (2017) 525 (2), pp. 397-406. DOI: 10.1016/j.ijpharm.2017.01.034 DOCUMENT TYPE: Article

Li Volsi, A., Scialabba, C., Vetri, V., Cavallaro, G., Licciardi, M., Giammona, G. Near-Infrared Light Responsive Folate Targeted Gold Nanorods for Combined Photothermal-Chemotherapy of Osteosarcoma (2017) 9 (16), pp. 14453-14469. DOI: 10.1021/acsami.7b03711 DOCUMENT TYPE: Article

Sardo, C., Bassi, B., Craparo, E.F., Scialabba, C., Cabrini, E., Dacarro, G., D'Agostino, A., Taglietti, A., Giammona, G., Pallavicini, P., Cavallaro, G. Gold nanostar-polymer hybrids for siRNA delivery: Polymer design towards colloidal stability and in vitro studies on breast cancer cells (2017) 519 (1-2), pp. 113-124. DOI: 10.1016/j.ijpharm.2017.01.022 DOCUMENT TYPE: Article

Triolo, D., Craparo, E.F., Porsio, B., Fiorica, C., Giammona, G., Cavallaro, G. Polymeric drug delivery micelle-like nanocarriers for pulmonary administration of beclomethasone dipropionate (2017) 151, pp. 206-214. DOI: 10.1016/j.colsurfb.2016.11.025 DOCUMENT TYPE: Article

Bondì, M.L., Emma, M.R., Botto, C., Augello, G., Azzolina, A., Di Gaudio, F., Craparo, E.F., Cavallaro, G., Bachvarov, D., Cervello, M. Biocompatible Lipid Nanoparticles as Carriers to Improve Curcumin Efficacy in Ovarian Cancer Treatment (2017) 65 (7), pp. 1342-1352. DOI: 10.1021/acs.jafc.6b04409 DOCUMENT TYPE: Article

Mauro, N., Volsi, A.L., Scialabba, C., Licciardi, M., Cavallaro, G., Giammona, G. Photothermal Ablation of Cancer Cells Using Folate-Coated Gold/ Graphene Oxide Composite (2017) 14 (3), pp. 433-443. DOI: 10.2174/1567201813666160520113804 DOCUMENT TYPE: Article

Craparo, E.F., Porsio, B., Schillaci, D., Cusimano, M.G., Spigolon, D., Giammona, G., Cavallaro, G. Polyanion-tobramycin nanocomplexes into functional microparticles for the treatment of *Pseudomonas aeruginosa* infections in cystic fibrosis (2017) 12 (1), pp. 25-42. DOI: 10.2217/nnm-2016-0262 DOCUMENT TYPE: Article

Craparo, E.F., Di Gioia, S., Trapani, A., Cellamare, S., Belgiovine, G., Mandracchia, D., Giammona, G., Cavallaro, G., Conese, M. Realization of polyaspartamide-based nanoparticles and in vivo lung biodistribution evaluation of a loaded glucocorticoid after aerosolization in mice (2016) 510 (1), pp. 263-270. DOI: 10.1016/j.ijpharm.2016.06.042 DOCUMENT TYPE: Article

Sardo, C., Craparo, E.F., Porsio, B., Giammona, G., Cavallaro, G. Improvements in Rational Design Strategies of Inulin Derivative Polycation for siRNA Delivery (2016) 17 (7), pp. 2352-2366. DOI: 10.1021/acs.biomac.6b00281 DOCUMENT TYPE: Article

Craparo, E.F., Porsio, B., Sardo, C., Giammona, G., Cavallaro, G. Pegylated Polyaspartamide-Polylactide-Based Nanoparticles Penetrating Cystic Fibrosis Artificial Mucus (2016) 17 (3), pp. 767-777. DOI: 10.1021/acs.biomac.5b01480 DOCUMENT TYPE: Article

Di Gioia, S., Sardo, C., Castellani, S., Porsio, B., Belgiovine, G., Carbone, A., Giammona, G., Cavallaro, G., Conese, M. From genesis to revelation: The role of inflammatory mediators in chronic respiratory diseases and their control by nucleic acid-based drugs (2016) 13, DOI: 10.2174/1567201813666160824142843 DOCUMENT TYPE: Review

Cavallaro, G., Sardo, C., Scialabba, C., Licciardi, M., Giammona, G. Smart inulin-based polycationic nanodevices for siRNA delivery (2016) 13, DOI: 10.2174/1567201813666160811145855 DOCUMENT TYPE: Review

Mauro, N., Li Volsi, A., Scialabba, C., Licciardi, M., Cavallaro, G., Giammona, G. Photothermal ablation of cancer cells using folate-coated gold/ graphene oxide composite (2016) 13, pp. 433-443. DOI: 10.2174/1567201813666160520113804 DOCUMENT TYPE: Article

Licciardi, M., Paolino, D., Mauro, N., Cosco, D., Giammona, G., Fresta, M., Cavallaro, G., Celia, C. Cationic Supramolecular Vesicular Aggregates for Pulmonary Tissue Selective Delivery in Anticancer Therapy (2016) pp. 1734-1744. DOI: 10.1002/cmdc.201600070 DOCUMENT TYPE: Article

Licciardi, M., Li Volsi, A., Mauro, N., Scialabba, C., Cavallaro, G., Giammona, G. Preparation and Characterization of Inulin Coated Gold Nanoparticles for Selective Delivery of Doxorubicin to Breast Cancer Cells (2016) 2016, art. no. 2078315, DOI: 10.1155/2016/2078315 DOCUMENT TYPE: Article

Cavallaro, G., Craparo, E.F., Sardo, C., Lamberti, G., Barba, A.A., Dalmoro, A. PHEA-PLA biocompatible nanoparticles by technique of solvent evaporation from multiple emulsions (2015) 495 (2), pp. 719-727. DOI: 10.1016/j.ijpharm.2015.09.050 DOCUMENT TYPE: Article

Licciardi, M., Li Volsi, A., Sardo, C., Mauro, N., Cavallaro, G., Giammona, G. Inulin-Ethylenediamine Coated SPIONs Magnetoplexes: A Promising Tool for Improving siRNA Delivery (2015) 32 (11), pp. 3674-3687. DOI: 10.1007/s11095-015-1726-y DOCUMENT TYPE: Article

Pallavicini, P., Cabrini, E., Cavallaro, G., Chirico, G., Collini, M., D'Alfonso, L., Dacarro, G., Donà, A., Marchesi, N., Milanese, C., Pascale, A., Sironi, L., Taglietti, A. Gold nanostars coated with neutral and charged polyethylene glycols: A comparative study of in-vitro biocompatibility and of their interaction with SH-SY5Y neuroblastoma cells (2015) 151, pp. 123-131. DOI: 10.1016/j.jinorgbio.2015.05.002 DOCUMENT TYPE: Article

Di Gioia, S., Trapani, A., Castellani, S., Carbone, A., Belgiovine, G., Craparo, E.F., Puglisi, G., Cavallaro, G., Trapani, G., Conese, M. Nanocomplexes for gene therapy of respiratory diseases: Targeting and overcoming the mucus barrier (2015) 34, pp. 8-24. DOI: 10.1016/j.pupt.2015.07.003 DOCUMENT TYPE: Article

Mauro, N., Scialabba, C., Cavallaro, G., Licciardi, M., Giammona, G. Biotin-containing reduced graphene oxide-based nanosystem as a multieffect anticancer agent: Combining hyperthermia with targeted chemotherapy (2015) 16 (9), pp. 2766-2775. DOI: 10.1021/acs.biomac.5b00705 DOCUMENT TYPE: Article

Craparo, E.F., Porsio, B., Bondi, M.L., Giammona, G., Cavallaro, G. Evaluation of biodegradability on polyaspartamide-polylactic acid based nanoparticles by chemical hydrolysis studies (2015) 119, pp. 56-67. DOI: 10.1016/j.polyimdegadstab.2015.05.003 DOCUMENT TYPE: Article

Craparo, E.F., Porsio, B., Mauro, N., Giammona, G., Cavallaro, G. Polyaspartamide-Polylactide Graft Copolymers with Tunable Properties for the Realization of Fluorescent Nanoparticles for Imaging (2015) 36 (15), pp. 1409-1415. DOI: 10.1002/marc.201500154 DOCUMENT TYPE: Article

Sardo, C., Farra, R., Licciardi, M., Dapas, B., Scialabba, C., Giammona, G., Grassi, M., Grassi, G., Cavallaro, G. Development of a simple, biocompatible and cost-effective Inulin-Diethylenetriamine based siRNA delivery system (2015) 75, pp. 60-71. DOI: 10.1016/j.ejps.2015.03.021 DOCUMENT TYPE: Article

Di Gioia, S., Sardo, C., Belgiovine, G., Triolo, D., D'Apolito, M., Castellani, S., Carbone, A., Giardino, I., Giammona, G., Cavallaro, G., Conese, M. Cationic polyaspartamide-based nanocomplexes mediate siRNA entry and down-regulation of the pro-inflammatory mediator high mobility group box 1 in airway epithelial cells (2015) 491 (1-2), art. no. 14969, pp. 359-366. DOI: 10.1016/j.ijpharm.2015.06.017 DOCUMENT TYPE: Article

Craparo, E.F., Licciardi, M., Conigliaro, A., Palumbo, F.S., Giammona, G., Alessandro, R., De Leo, G., Cavallaro, G. Hepatocyte-targeted fluorescent nanoparticles based on a polyaspartamide for potential theranostic applications (2015) 70, pp. 257-270. DOI: 10.1016/j.polymer.2015.06.009 DOCUMENT TYPE: Article

Barba, A.A., Lamberti, G., Sardo, C., Dapas, B., Abrami, M., Grassi, M., Farra, R., Tonon, F., Forte, G., Musiani, F., Licciardi, M., Pozzato, G., Zanonati, F., Scaggiante, B., Grassi, G., Cavallaro, G. Novel lipid and polymeric materials as delivery systems for nucleic acid based drugs (2015) 16 (6), pp. 427-452. DOI: 10.2174/1389200216666150812142557 DOCUMENT TYPE: Article

Paolino, D., Licciardi, M., Celia, C., Giammona, G., Fresta, M., Cavallaro, G. Bisphosphonate-polyaspartamide conjugates as bone targeted drug delivery systems (2015) 3 (2), pp. 250-259. DOI: 10.1039/c4tb00955j DOCUMENT TYPE: Article

Sardo, C., Craparo, E.F., Fiorica, C., Giammona, G., Cavallaro, G. Inulin derivatives obtained via enhanced microwave synthesis for nucleic acid based drug delivery (2015) 16 (14), pp. 1650-1659. DOI: 10.2174/138945011614151119130426 DOCUMENT TYPE: Article

Abbiati, R.A., Cavallaro, G., Craparo, E.F., Manca, D. Sorafenib in mice -A Pharmacokinetic study (2015) 43, pp. 283-288. DOI: 10.3303/CET1543048 DOCUMENT TYPE: Article

Bondi, M.L., Ferraro, M., Di Vincenzo, S., Gerbino, S., Cavallaro, G., Giammona, G., Botto, C., Gjomarkaj, M., Pace, E. Effects in cigarette smoke stimulated bronchial epithelial cells of a corticosteroid entrapped into nanostructured lipid carriers (2014) 12 (1), art. no. 46, DOI: 10.1186/s12951-014-0046-4 DOCUMENT TYPE: Article

Sardo, C., Nottelet, B., Triolo, D., Giammona, G., Garric, X., Lavigne, J.-P., Cavallaro, G., Coudane, J. When functionalization of PLA surfaces meets thiol-yne photochemistry: Case study with antibacterial polyaspartamide derivatives (2014) 15 (11), pp. 4351-4362. DOI: 10.1021/bm5013772 DOCUMENT TYPE: Article

Licciardi, M., Scialabba, C., Sardo, C., Cavallaro, G., Giammona, G. Amphiphilic inulin graft co-polymers as self-assembling micelles for doxorubicin delivery (2014) 2 (27), pp. 4262-4271. DOI: 10.1039/c4tb00235k DOCUMENT TYPE: Article

Cavallaro, G., Licciardi, M., Amato, G., Sardo, C., Giammona, G., Farra, R., Dapas, B., Grassi, M., Grassi, G. Synthesis and characterization of polyaspartamide copolymers obtained by ATRP for nucleic acid delivery (2014) 466 (1-2), pp. 246-257. DOI: 10.1016/j.ijpharm.2014.03.026 DOCUMENT TYPE: Article

Craparo, E.F., Sardo, C., Serio, R., Zizzo, M.G., Bondi, M.L., Giammona, G., Cavallaro, G. Galactosylated polymeric carriers for liver targeting of sorafenib (2014) 466 (1-2), pp. 172-180. DOI: 10.1016/j.ijpharm.2014.02.047 DOCUMENT TYPE: Article

Trapani, A., Di Gioia, S., Castellani, S., Carbone, A., Cavallaro, G., Trapani, G., Conese, M. Nanocarriers for respiratory diseases treatment: Recent advances and current challenges (2014) 14 (9), pp. 1133-1147. DOI: 10.2174/1568026614666140329225817 DOCUMENT TYPE: Article

Cavallaro, G., Triolo, D., Licciardi, M., Giammona, G., Chirico, G., Sironi, L., Dacarro, G., Donà, A., Milanese, C., Pallavicini, P. Amphiphilic copolymers based on poly[(hydroxyethyl)-d, l-aspartamide]: A suitable functional coating for biocompatible gold nanostars (2013) 14 (12), pp. 4260-4270. DOI: 10.1021/bm401130z DOCUMENT TYPE: Article

Licciardi, M., Scialabba, C., Fiorica, C., Cavallaro, G., Cassata, G., Giammona, G. Polymeric nanocarriers for magnetic targeted drug delivery: Preparation, characterization, and in vitro and in vivo evaluation (2013) 10 (12), pp. 4397-4407. DOI: 10.1021/mp300718b DOCUMENT TYPE: Article

Craparo, E.F., Triolo, D., Pitarresi, G., Giammona, G., Cavallaro, G. Galactosylated micelles for a ribavirin prodrug targeting to hepatocytes (2013) 14 (6), pp. 1838-1849. DOI: 10.1021/bm4002409 DOCUMENT TYPE: Article

Licciardi, M., Scialabba, C., Cavallaro, G., Sangregorio, C., Fantechi, E., Giammona, G. Cell uptake enhancement of folate targeted polymer coated magnetic nanoparticles (2013) 9 (6), pp. 949-964. DOI: 10.1166/jbn.2013.1606 DOCUMENT TYPE: Article

Craparo, F.F., Teresi, G., Licciardi, M., Bondi, M.L., Cavallaro, G. Novel composed galactosylated nanodevices containing a flavin-producing as hepatic cell-targeted carriers for HCV treatment (2013) 9 (6), pp. 1107-1122. DOI: 10.1166/jph.2013.1608 DOCUMENT TYPE: Article

Licciardi, M., Pitarresi, G., Cavallaro, G., Giammona, G. Nanoaggregates based on new poly-hydroxyethyl-aspartamide copolymers for oral insulin absorption (2013) 10 (5), pp. 1644-1654. DOI: 10.1021/mp300226d DOCUMENT TYPE: Article

Licciardi, M., Pasut, G., Amato, G., Scialabba, C., Mero, A., Montopoli, M., Cavallaro, G., Schiavon, O., Giammona, G. PHEA-graft-polymethacrylate supramolecular aggregates for protein oral delivery (2013) 84 (1), pp. 21-28. DOI: 10.1016/j.ejpb.2012.12.011 DOCUMENT TYPE: Article

Calabrese, I., Cavallaro, G., Scialabba, C., Licciardi, M., Merli, M., Sciascia, L., Turco Liveri, M.L. Montmorillonite nanodevices for the colon metronidazole delivery (2013) 457 (1), pp. 224-236. DOI: 10.1016/j.ijpharm.2013.09.017 DOCUMENT TYPE: Article

ATTIVITA' SCIENTIFICHE

Publications (for details see the complete list)

Bibliometric index:

SCOPUS October 2024 Number of Publications: 208

H Index : 43

8 Books and book chapters

Invited speaker

-On April 2001, she gave an invitation lecture, entitled: "Nuove Norme per la Somministrazione di Farmaci Analgesici Oppiacei nella Terapia del Dolore" (legge 8 febbraio 2001, n. 12) in the framework of the Professional Update Course organized by the UTIFARMA-Palermo.

- On 12-13 October 2002, participated in the 1st and 2nd ed. of the conference entitled: "La Farmacopea Ufficiale Italiana XI edizione e le Norme di Buona Preparazione in farmacia", held in Palermo, holding an invitation lecture entitled: "Le norme di buona preparazione e la certificazione delle preparazioni in farmacia" in the context of the E.C.M events organized by AGIFAR and S.I.F.A.P.

- On 30 November – 2nd December 2002 participated in the updating course on the subject: "Approcci Tecnologici per la Somministrazione dei Farmaci Attraverso Varie Vie", held in Agrigento, holding an invitation lecture entitled: "La via orale e i diversi approcci per il rilascio controllato", in the context of the E.C.M events organized by Ordine dei Farmacisti della Provincia di Agrigento and A.D.R.I.T.E.L.F.

- On 19 December 2002 participated in the updating course on the subject: "La Farmacopea Ufficiale Italiana XI edizione e le Norme di Buona Preparazione in farmacia", held in Catania, holding an invitation lecture entitled: "Le norme di buona preparazione e la certificazione delle preparazioni in farmacia" in the context of the E.C.M events organized by AGIFAR and S.I.F.A.P.

- 8 - 11 November 2003 participated, upon invitation, in the NATO ADVANCED RESEARCH WORKSHOP "Macromolecular approaches to advanced biomaterials engineering systems", in SOFIA, in Bulgaria, holding an invitation lecture entitled: "Soluble and water-swellaable polyaminoacidic constructs for drug delivery".

- 20 - 22 February 2004 participated in the Workshop organised by CRS – Italian Chapter in Padova entitled: Drug Targeting, holding an invitation lecture entitled: "Polymeric and micellar carriers of a polyaspartamide for drug targeting".

- 10 - 16 September 2005, participated as invited speaker at the 5th Course of the Advanced Doctoral School in Technology-Pharmaceutical Disciplines entitled "Innovative Technologies for Drug Delivery" held in Arcavacata di Rende (Cs), presenting a lecture entitled: "Coniugati polimerici della poliaspartammide: aspetti sintetici ed applicativi".

- 17 April 2007, participated as invited speaker to the inaugural session of C.I.B.A. Centro Interdipartimentale di Biotecnologie Applicate, in Palermo, holding an invitation lecture entitled: "Biotecnologie in Nanomedicina".

- 30 September - 3 October 2007 participated as invited speaker to the international congress in Naples, entitled: Innovation in Drug Delivery: From Biomaterials to Devices, holding an invitation lecture entitled: "Interpolyelectrolyte complexes based on polyaminoacids for gene and oligonucleotide delivery".

- 24 - 29 August 2008 participated in Palermo as teacher to the Third International Summer School in Advanced Biotechnology, holding an invitation lecture entitled: "Non viral colloidal vectors based on polyaminoacids for gene therapy".

- 14 - 17 September 2008 participated, as invited speaker to the convention 2008 GRICU - Ingegneria chimica: le nuove sfide, in Le Castella (Crotone) holding an invitation lecture entitled: "Impiego di vettori policationici a base poliamminoacidica per la veicolazione di siRNA nel trattamento della in-stent restenosi".

- 17 - 19 September 2013 participated, as invited speaker to the NANOMED Workshop "Dalla Nanomedicina al Brain Imaging. Le nuove frontiere delle Nanobiotecnologie", in the Parco Scientifico e Tecnologico della Sardegna, Pula (Cagliari) holding an invitation lecture entitled: "Polyaminoacid Presentations as based polyplexes for gene delivery".

- 25-28 September 2016 participated as invited speaker at the 4th Conference on Innovation in Drug Delivery: Site Specific Drug Delivery, Antibes – Juan Les Pins, (France).

- 16 -18 May 2018, Invited Speaker in the "Advanced Functional Polymers for Medicine (AFPM) 2018 Conference", in Montpellier, France. Title: Tailor-made Functionalized Polymers for nanomedicine applications.

- 12-14 September 2018, Invited Speaker in the Nanomedicine 2018, University "La Sapienza" Roma, with the talk: Nano into macro- formulations based on functionalized polymers for pulmonary drug delivery.

- October 2018, Invited Speaker in the CRS Italy Chapter Annual workshop 2018, Padova, with the talk : "Tailor-made functionalized polymers for nanomedicine" - October 2021, Invited Speaker by the Fondazione Ca' Granda Ospedale Maggiore Policlinico di Milano, with the Lecture : "Dai profarmaci alla teranostica: i polimeri protagonisti in Nanomedicina".

- 11-13 September 2023, XXIII Simposio ADRITELF, IV Convegno della Divisione di Tecnologia Farmaceutica – SCI, TRIESTE, Key notes lectures with the entitled "Tailor made biocompatible polymers for nanomedicine, theranostics and regenerative medicine."

AMBITI DI RICERCA

Research lines

Synthesis and characterization of new biocompatible polymers

Production of polymeric, oligosaccharide or lipid systems

Controlled and targeted release of biologically active substances (drugs, genes, proteins)

Drug Delivery Systems and Targeting – DDST for cancer therapy

Nanomedicine: polymeric micelles, polymeric nanoparticles, macromolecular prodrugs

Gene therapy: the production of cationic polymers as complexing agent for genetic material

Solid lipid nanoparticles (SLN), Nanostructured Lipid Carriers (NLC), Lipid Drug Conjugates (LDC)

Microparticles for inhalatory therapy

Nanotechnologies for Theranostics

Tissue engineering

ALTRE ATTIVITA

PATENTS:

INVENTORS: GIAMMONA G, CAVALLARO G, LICCIARDI M, CIVIALE C, PALADINO M.G, MAZZONE M.G. (2006). Composizione farmaceutica oftalmica contenente copolimeri anfifilici della poliaspartammide. MI2006A000494. SIFI S.P.A.

INVENTORS: GIAMMONA G, CAVALLARO G, LICCIARDI M, CIVIALE C, PALADINO M.G, MAZZONE M.G. (2007). An ophthalmic pharmaceutical composition containing amphiphilic polyaspartamide copolymers. WO 2007/108031. SIFI S.P.A.

INVENTORS: LICCIARDI M, GIAMMONA G, CAVALLARO G, PITARRESI G. (2007). Vettori colloidali a struttura poliamminoacidica per il rilascio orale di peptidi e proteine e relativo metodo di produzione. RM2007A000327. Università degli Studi di Palermo.

INVENTORS: LICCIARDI M, GIAMMONA G, CAVALLARO G, PITARRESI G (2008). Colloidal vectors with polyaminoacid structure for oral release of peptides and proteins and method for their production. PCT/IT2008/000376. Università degli Studi di Palermo

INVENTORS: FRESTAMASSIMO, GIAMMONA GAETANO, CAVALLARO GENNARA, LICCIARDI, MARIANO, PAOLINO DONATELLA (2011). Vettori polimerici della poliaspartammide coniugati a bisfosfonati per il direccionamento di farmaci alle ossa (2011), FI2011A000012, Università di Palermo (50 %) e Università Magna Graecia di Catanzaro (50 %).

INVENTORS: FRESTAMASSIMO, GIAMMONA GAETANO, CAVALLARO GENNARA, LICCIARDI, MARIANO, PAOLINO DONATELLA (2011). Bisphosphonate-polyaspartamide conjugates as polymeric carriers for drug targeting to bones, 2012, WO2012098222 A1, Università di Palermo (50 %) e Università Magna Graecia di Catanzaro (50 %).

INVENTORS: A. BLANCO, G. CAVALLARO, G. GIAMMONA, M. LICCIARDI, G. PITARRESI, D. TROMBETTA. Amphiphilic copolymers their preparation and use for the delivery of drugs. International Application Number: PCT/EP2014/071648

INVENTORS: A. BLANCO, M.L. BONDÌ, G. CAVALLARO, G.M.L. CONSOLI, E.F. CRAPARO, G. GIAMMONA, M. LICCIARDI, G. PITARRESI. Silibinina per il trattamento delle patologie oculari neurodegenerative e formulazioni comprendenti nanostrutture per la sua veicolazione Brevetto Italiano N° FI2014A000230 (depositato il 9 Ottobre 2014)

INVENTORS: VARRICA Gloria, BERETTA Lorenzo, CAVALLARO Gennara, Fiorica Calogero, Citernersi Ugo Raffaello, I.R.A. Istituto di ricerche applicate, Domanda numero: 102020000004093, Data di presentazione: 27/02/2020, "Idrogeli Ibridi di acido ialuronico reticolato e processo di produzione."

INVENTORS: GIAMMONA Gaetano, MAURO Nicolò, CAVALLARO Gennara, MESSINA Fabrizio, SCIORTINO Alice, BUSCARINO Gianpiero, MARRALE Maurizio, GAGLIARDO Cesare, Domanda numero: 102020000028445 Data di presentazione: 25/11/2020, "Nanosistema per la diagnosi ed il trattamento fototermico di tumori" INVENTORS: GIAMMONA Gaetano, MAURO Nicolò, CAVALLARO Gennara, MESSINA Fabrizio, SCIORTINO Alice, BUSCARINO Gianpiero, MARRALE Maurizio, GAGLIARDO Cesare, Domanda di brevetto internazionale n. PCT/IB2021/060873 del 23/11/2021, "Nanosystem for diagnosis and photothermal treatment of tumors"