

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome GAETANO
Cognome GIAMMONA
Recapiti Lab of Biocompatible Polymers, Dpt. DIPARTIMENTO DI SCIENZE E TECNOLOGIE BIOLOGICHE CHIMICHE E FARMACEUTICHE "STEBICEF" IBF(Istituto di Biofisica)-CNR, Palermo (Italy); Via Archirafi, 32 - 90123 Palermo (Italy).
Phone: +3909123891928. PROFESSIONAL POSITION: Professor of Pharmaceutical Technologies -University of Palermo - Italy
E-mail gaetano.giammona@unipa.it

FORMAZIONE TITOLI

- Born in 1951 in Palermo, Italy.
- Degree in Chemistry in 1976 (Final mark: 110/110 with honors). - From 1.4.1978 to 31.7.1980 he holds a scholarship of the C.N.R. c/o the Institute of Applied Pharmaceutical Chemistry of the Faculty of Pharmacy-University of Palermo (Italy).
- Academic researcher in 1980 at the Faculty of Pharmacy of Palermo (Italy).
- Associate Professor in 1987 at the University of Catania (Italy).
- Since 2000, Full Professor of "Pharmaceutical Technology" at the Faculty of Pharmacy, University of Palermo.
- Co-founder in 1995 and Component, for about 10 years, of the Polymer Therapeutics group at the Shool of Pharmacy in London (UK).
- Co-founder of Controlled Release Society (CRS) Italy Chapter and Component for six years of the Executive Board.
- Director of the Department of Pharmaceutical Chemistry and Technologies (January 2000-October 2006);
- Component "Study Commission" for the -Institution of Parenteral and Enteral Nutrition Laboratories for Hospital and Home use- Sicily Region (Italy) - Health Department - (Decree no. 30953 of 24 December 1999) (until 30 June 2000);
- Reference member of the University of Palermo for participation in the CRUI-FARMINDUSTRIA "Technological Innovation" working group (years: 2003-2005);
- Component "Technical Table" University of Palermo (years:2006-2008)
- Component of the "Research Table" University of Palermo (years:2009-2015)
- Coordinator of the Teacher Committee of the PhD course in "Technologies of Biologically Active Substances" (University of Palermo, University of Catania and University of Bari - until 28.02.2013);
- Vice-academic Dean – Faculty of Pharmacy – University of Palermo, Italy until 31.12.2013
- Member (for three years) of the scientific committee of the "Science and Technology Park of Sicily (PSTS)";
- President of the National (Italy)Commission ASN – S.C. 03/D2; S.S.D. CIM/09 (Years: 2013-2014);
- Component of the Teacher Committee of the PhD course in "SCIENZE MOLECOLARI E BIOMOLECOLARI – ciclo XXXII";
- Component of the Teacher Committee of the PhD course in "Tecnologie e Scienze per la Salute dell'Uomo - ciclo XXXIII"
- Reference member, until March 2018, of Mediterranean Center for Human Health Advanced Biotechnologies (CHAB) of the University of Palermo-Italy;
- Member of the Industrial Liasom Office of the University of Palermo (Years: 2003-2018);
- Reference member of the University of Palermo of "Distretto ad Alta Tecnologia Biomedico Sicilia" –Italy(First, Member of the " Comitato di indirizzo Strategico" and then of the " Comitato di indirizzo Strategico-Scientifico");
- Guest editor for the Special Issue "Biomedical Applications of Poly(lactide) (PLA) and its Copolymers" published in Molecules (ISSN 1420-3049), from 12 January 2017 to 15 November 2017.
- Guest editor for the Special Issue "Polymer-Based systems for Controlled Release and Targeting of Drugs" published on Polymers (ISSN 2073-4360), from 20 June 2018 to 20 September 2019.
- He has been member of several organizing committees of PhD summer schools as chair or co-chair and National and International Conferences.
- He has taken part in the scientific committee of National and International Conferences.
- Scientific manager of the Laboratory of Biocompatible Polymers
- Associated at the institute of IBF (biophysical institute)- CNR (National Research Council), Palermo, ITALY.

ATTIVITA' DIDATTICA

University of Catania:

"Chimica dei Prodotti Cosmetici" dal 10.8.1987 al 31.10.1991.

University of Palermo:

Corso di Laurea in Chimica e Tecnologia Farmaceutiche:

"Veicolazione e Direzionamento dei Farmaci" negli aa.aa. 1995/96 e 1996/97;

"Preformulazione e Formulazione Farmaceutiche" nell'a.a. 1995/96;

“Polimeri di Interesse Farmaceutico” nell’a.a. 1996/97;

“Tecnologia Socioeconomia e Legislazione Farmaceutiche I” dall’a.a 1994/95 all’a.a. 2010/2011;

“Tecnologia Socioeconomia e Legislazione Farmaceutiche Modulo I” dall’a.a. 2011/2012 all’a.a. 2014/2015;

Corso di Laurea in Tecniche Erboristiche – Sede distaccata di Bivona (AG):

Tecnologie Farmaceutiche aa.aa 2003/2004 e 2004/2005

Corso di Laurea in Farmacia:

“Tecnologia Socioeconomia e Legislazione Farmaceutiche I” dall’ a.a. 1997/98 fino all’a.a. 2018/2019;

“Tecnologia Farmaceutica” dall’a.a. 2019/2020 a tutt’oggi

Prof. G. Giammona in the aa. aa. 1995/96 and 1996/97 he also taught Biopharmaceuticals and Pharmacokinetics I and from the 2001/2002 academic year to the 2007/2008 academic year the courses of Pharmaceutical Technology II and Drug Delivery and Targeting for **the school of Specialization in Hospital Pharmacy activated at the Faculty of Pharmacy of the University of Palermo.**

RICERCHE FINANZIATE

APPROVED RESEARCH PROJECTS

- Various PRIN (40%; ex-40%; PRIN);

-CHIMICA FINE of CNR-Italy;

-Strategic Projects of CNR-Italy;

-FIRB 2001: Cod.Prog.: RBAUO1P778;

-Several Contracts with Pharmaceutical Companies (**SIFI-SIGMA.TAU-ICI-FIDIA-I.F.I.-NOVAGENIT-NEMYSIS Ltd**);

-Progetto CARIPLO 2010 dal titolo: "Gold nanorods (NR) and asymmetric nanoparticles (ANP) capped with a biocompatible polymer bearing binding groups for molecules and metal cations: pharmacological and thermal antimicrobial action activated by near-IR irradiation";

-PON 2007-2013 - Codice progetto: PON0101287 Titolo del progetto: “SIB: soluzioni avanzate basate su biomateriali a matrici composite complesse per la riparazione e la rigenerazione della cartilagine articolare mediante tecniche minimvasive” ;

- PON 2007-2013 - Codice progetto: PON02003552964193 Titolo del progetto: Sviluppo di Micro e Nano-Tecnologie e Sistemi Avanzati per la Salute dell'uomo – HIPPOCRATES -FFR;

- PON 2007-2013 - Codice progetto: PON03PE002161 Titolo del progetto: "DRUG DELIVERY: VEICOLI PER UN'INNOVAZIONE SOSTENIBILE".

-AZIONE 1.1.5 – P.O. FESR 2014-2020 Regione Siciliana-“Micro e nanosistemi innovativi per la cura efficace del Tumore al Fegato” acronimo LiverSmartDrug (LSD) (Codice progetto 087219090463), CODICE IRIS: 2017 – NAZ – 0042;

- PON 2014-2020: Titolo del progetto:“BONE++ - Sviluppo di Micro e Nanotecnologie per la Predittività, la Diagnosi, la Terapia e i Trattamenti Rigenerativi delle Alterazioni Patologiche dell’Osso e Osteo-Articolari “ Codice progetto: ARS0100693.

ASSOCIAZIONI SCIENTIFICHE

-Member of “Associazione Docenti e Ricercatori Italiani di Tecnologie e Legislazione

Farmaceutiche” (A.D.R.I.T.E.L.F.);

-Component of “National Interuniversity Consortium of Materials Science and Technology (INSTM)”.

PUBBLICAZIONE

List of publications 2020

1. 2020. Fiorica C., Palumbo F. S., Pitarresi G., Puleio R., Condorelli L., Collura G., Giammona G. A hyaluronic acid/cyclodextrin based injectable hydrogel for local doxorubicin delivery to solid tumors. Int. Journal of Pharmaceutics, vol. 589, article number: 119879.
2. 2020. Mauro N., Fiorica C., Giuffrè M. , Calà C., Maida C. M., Giammona G. A self-sterilizing fluorescent Nanocomposite as versatile material with broad-spectrum Antibiofilm features. Materials Science and Engineering. C, Biomimetic materials, Sensors and Systems, 111308, ISSN: 0928-4931, doi: 10.1016/j.msec.2020.111308.
3. 2020. 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. Pharmaceutics, vol. 12, p. 1-15.
4. 2020. Craparo E. F., Drago S. E., Mauro N., Giammona G., Cavallaro G. Design of New Polyaspartamide Copolymers for siRNA Delivery in Antiasthmatic Therapy. Pharmaceutics, vol. 12, p. 1-22.
5. 2020. 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. International Journal of Pharmaceutics, vol. 587, p. 1-13.
6. 2020. 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. Materials Science and Engineering. C, Biomimetic Materials, Sensors and Systems, vol. 107, article number: 110201.
 7. 2020. Palumbo F. S., Federico S., Pitarresi G., Fiorica C., Giammona G. Gellan gum-based delivery systems of therapeutic agents and cells. Carbohydrate Polymers, vol. 229, p. 1-19.
 8. 2020. Bongiovì F., Fiorica C., Palumbo F. S., Pitarresi G., Giammona G. Hyaluronic acid based nanohydrogels fabricated by microfluidics for the potential targeted release of Imatinib: Characterization and preliminary evaluation of the antiangiogenic effect. International Journal of Pharmaceutics, vol. 573, p. 1-8.
 9. 2020. 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. International Journal of Pharmaceutics, vol. 582, p. 1-12.
 10. 2020. De Mohac L. M., Bahijja Raimi-Abraham, Caruana R., Giammona G., Licciardi M. Multicomponent solid dispersion a new generation of solid dispersion produced by spray-drying. Journal of Drug Delivery Science and Technology, vol. 57, p. 1-6.
 11. 2020. Pitarresi G., Martorana A., Palumbo F. S., Fiorica C., Giammona G. New gellan gum-graft-poly(D,L-lactide-co-glycolide) copolymers as promising bioinks: Synthesis and characterization. International Journal of Biological Macromolecules, vol. 162, p. 1653-1667.
 12. 2020. Gazzetto M., Sciortino A., Nazari M., Rohwer E., Giammona G., Mauro N., Feurer T., Messina F., Cannizzo A.. Photocycle of Excitons in Nitrogen-Rich Carbon Nanodots: Implications for Photocatalysis and Photovoltaics. ACS Applied Nano Materials, vol. 3, p. 6925-6934.
 13. 2020. Fiorica C., Pitarresi G., Palumbo F. S., Mauro N., Federico S., Giammona G. Production and physicochemical characterization of a new amine derivative of gellan gum and rheological study of derived hydrogels. Carbohydrate Polymers, vol. 236, p. 1-11.
 14. 2020. Craparo E. F., Drago S. E., Giammona G., Cavallaro G.. Production of polymeric micro- and nanostructures with tunable properties as pharmaceutical delivery systems. Polymer, vol. 200, p. 1-9.
 15. 2020. 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. Pharmaceutical Research, vol. 37, p. 1-11.
 16. 2020 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. Materials, Vol. 13(21), p. 1-16

ATTIVITA' SCIENTIFICHE

Scientific production

At March 2021: Author of over than 327 scientific publications (h-index: 45), n. 23 national and international patents, n. 7 book chapter and several presentations (over than 300) at national and international congresses.

AMBITI DI RICERCA

Field of expertise

- Synthesis and characterization of novel biocompatible polymers for use in biomedical field; these studies afforded the preparation of a new plasma substitute with a protein-like structure;
- Preparation of micro- and nanostructures for targeting and modified release of bioactive molecules (macromolecular prodrugs; polymeric micelles; polymeric micro- and nanoparticles; lipid nanoparticles –SLN, NLC and LDC -);
- Gene therapy;
- Hydrogels, also stimuli-sensitive (microparticles, films, sponges, etc.) for modified release of bioactive molecules;
- Preparation of scaffolds for tissue engineering.

Prof. Gaetano Giammona presented his studies in many national and international meetings, and pharmaceutical companies.

ALTRÉ ATTIVITA'

Prizes and Recognitions

-36e SALON INTERNATIONAL DES INVENTIONS DES TECHNIQUES ET PRODUITS NOUVEAUX GENEVA PALEXPO, Geneve, 2-6 Avril 2008.

prix de la delegation italienne du salon pour le invention: Vecteurs colloidaux pour la liberation orale des proteines et de peptides.

Inventors : M. Licciardi, G. Giammona, G. Cavallaro, G. Pitarresi

-36e SALON INTERNATIONAL DES INVENTIONS DES TECHNIQUES ET PRODUITS NOUVEAUX GENEVA PALEXPO, Geneve, 2-6 Avril 2008

MEDAILLE D'OR AVEC LES FELICITATIONS DU JURY INTERNATIONAL DU SALON POUR LE INVENTION: Vecteurs colloidaux pour la liberation orale des proteines et de peptides.

Inventors : M. Licciardi, G. Giammona, G. Cavallaro, G. Pitarresi