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Ruolo Professore di ruolo di I fascia
Dipartimento di Farmacia
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Formazione

1992 Laurea in Farmacia summa cum laude - Università degli Studi di Napoli Federico II
1996 Dottore di Ricerca in Scienze Farmaceutiche - Università degli Studi di Napoli Federico II
1998 Diploma di Specializzazione in Farmacia Ospedaliera - Università degli Studi di Napoli Federico II

Esperienze professionali

1996-1997 Borsa di studio post-dottorato, University of Paris XI, France
1998-1999 Borsa di studio post-dottorato, University of Napoli Federico II
1999-2005 Ricercatore Universitario presso il Dipartimento di Chimica Farmaceutica e Tossicologica - Università degli Studi di Napoli Federico II.
2005-2019 Professore di ruolo di II fascia, Dipartimento di Chimica Farmaceutica e Tossicologica poi Dipartimento di Farmacia- Università degli Studi di Napoli Federico II
2013 Abilitazione a Professore di I Fascia nel Settore Concorsuale 03/D2.
2019 Professore di ruolo di I fascia, Dipartimento di Chimica Farmaceutica e Tossicologica poi Dipartimento di Farmacia- Università degli Studi di Napoli Federico II

Attività Scientifica

L'attività scientifica è rivolta ad argomenti di tecnologia farmaceutica con particolare riguardo alle problematiche legate allo sviluppo di micro- nano-vettori per la veicolazione ed il direccionamento *small drugs*, proteine ed acidi nucleici. Tali sistemi sono sviluppati da polimeri già approvati per l'impiego in terapia o da materiali sviluppati *ad hoc* per rispondere a specifiche esigenze di *delivery*. Le ricerche in campo nanotecnologico si sono focalizzate sullo sviluppo di *nanocarriers* polimerici in grado di superare le barriere tumorali e di strategie per la veicolazione polmonare di farmaci. Le micro e nanotecnologie sono applicate anche alla bioattivazione di dispositivi medici e supporti 3D impiegati in medicina rigenerativa. A tale linea di ricerca si affianca lo sviluppo di piattaforme mucoadesive ingegnerizzate per la veicolazione buccale, locale o sistemica, di farmaci.

Ad oggi, l'attività di ricerca della Prof. Quaglia si è concretizzata in:

109 articoli scientifici e 8 review su invito in riviste ISI WoS con Impact Factor;

1 brevetto europeo;

3 contributi in libri;

1 capitolo di e-book.

>20 relazioni orali su invito (Congressi/Scuole Nazionali ed Internazionali e Seminari)

L'impatto scientifico di tale produzione ad oggi (Fonti: Scopus; JCR 2019, Thomson Reuters) può essere così riassunto:

- citazioni: 4164
- h-index: 36
- **40 Pubblicazioni Scientifiche (ISI) nel periodo 2015-2019 per un Impact Factor Medio = 4.3**

Premi

2018 Back cover in *Journal of Materials Chemistry B*, 2018, 6, 185–340.

2015 Inside Cover in *Nanoscale*, 2015, 7, 5643.

2001 "EURAND AWARD 2001 for outstanding novel research in oral drug delivery", 28th International Symposium on Controlled Release of Bioactive Materials, San Diego (USA).

1999 "CRS award in recognition of outstanding poster presentation", Drug Delivery for the third millennium symposium, Pisa (Italy).

Società scientifiche

Controlled Release Society, EUFEPS, European Association of Photochemistry Italian cyclodextrin association, Italian Association for Pharmaceutical Technology (membro della commissione per la valorizzazione della ricerca), Italian Chemical Society.

Comitati editoriali

Associate Editor for: Pharmaceutics (MDPI, IF 3.746), Nanomaterials (MDPI, IF 3.508), Biomedical Microdevices (Springer, IF 2.077), Journal of Pharmaceutics (Hindawi, open acces).

Progetti di Ricerca finanziati

2015-2018 Strategies to drive chemotherapeutics to solid tumors: multifunctional nanoparticles from tailor-made block copolymers (IG 2014 Id.15764). Associazione italiana per la Ricerca sul cancro (Principal Investigator, 4 beneficiaries) € 254.000.

2013-2016 Advanced drug delivery strategies to overcome biological barriers in the body (OverBioBarriers) (2010H834LS). MIUR (Principal Investigator, 6 partners) € 600.000.

2011-2013 Polyethyleneimine-engineered respirable particles delivering a decoy oligonucleotide to NF-kB: a novel combination therapy for cystic fibrosis? (FFC#23/2011). Fondazione italiana Fibrosi cistica (Principal Investigator, 2 beneficiaries) € 40.000.

2010-2013 Novel multifunctional nanoparticles for combined photodynamic and conventional cancer therapy (MFAG #8843). Associazione italiana per la Ricerca sul cancro (Principal Investigator, 3 beneficiaries) € 150.000.

2007-2009 Particulate systems for the delivery of an oligonucleotide decoy to Nuclear Factor-kB: a potential strategy for treating cystic fibrosis (FFC#5/2007). Fondazione italiana Fibrosi cistica (Principal Investigator, 2 beneficiaries) € 45.000.

Revisore per riviste scientifiche internazionali

American Chemical Society (Langmuir, Biomacromolecules, ACS Nano, Nanoscale), Wiley (Macromolecular Bioscience, Advanced Functional Materials), Royal Society of Chemistry (Chemical Communications, RSC advances, Journal of Materials chemistry B), Elsevier (Acta Biomaterialia, Biomaterials, Journal of Controlled Release, European Journal of Pharmaceutical Sciences, European Journal of Pharmaceutics and Biopharmaceutics, Colloids and Surface B: biointerfaces, Journal of Colloids and Interface Science) Material Science and Engineering C), Springer (Journal of Inclusion Phenomena, Pharmaceutical Research).

Revisore in progetti scientifici nazionali ed internazionali

2016 e 2017 FAR Università di Modena e Reggio Emilia

2017 MIUR (Italy) FARE projects

2015 ETH (Switzerland) ETH post-doc fellowship program

2013 PRIN (Italy) Grant program 2012 line 1 and line 2

2012 Canceropole grand ouest (France) Grant program

2011 Agence nationale de la recherche (ANR), French Call for proposals DFG chemistry and Programme BLANC AAP Blanc - SVSE 1 - Physiologie, physiopathologie, santé publique.

Contributi su riviste 2015-2019

* corresponding author

- 1 Conte, C., G. Dal Poggetto, J.S. B. D. Esposito, F. Ungaro, P. Laurienzo, D. Boraschi, and **F. Quaglia***
Surface Exposure of PEG and Amines on Biodegradable Nanoparticles as a Strategy to Tune Their Interaction with Protein-Rich Biological Media
Nanomaterials (Basel), 9 (2019) 1354
- 2 Fraix, A., O. Catanzano, I. Di Bari, C. Conte, M. Seggio, C. Parisi, A. Nostro, G. Ginestra, **F. Quaglia***, and S. Sortino
Visible light-activatable multicargo microemulsions with bimodal photobactericidal action and dual colour fluorescence
J Mater Chem B, 7 (2019) 5257-5264.
- 3 Costabile, G., R. Provenzano, A. Azzalin, V.C. Scoffone, L.R. Chiarelli, V. Rondelli, I. Grillo, T. Zinn, A. Lepioshkin, S. Savina, A. Miro, **F. Quaglia**, V. Makarov, T. Coenye, P. Brocca, G. Riccardi, S. Buroni, and F. Ungaro
PEGylated mucus-penetrating nanocrystals for lung delivery of a new FtsZ inhibitor against Burkholderia cenocepacia infection
Nanomedicine, 23 (2019) 102113.
- 4 Seggio, M., A. Nostro, G. Ginestra, **F. Quaglia***, and S. Sortino
Contact lenses delivering nitric oxide under daylight for reduction of bacterial contamination
International Journal of Molecular Sciences, 20 (2019) 3735
- 5 Conte, C., F. Moret, D. Esposito, G. Dal Poggetto, C. Avitabile, F. Ungaro, A. Romanelli, P. Laurienzo, E. Reddi, **F. Quaglia***
Biodegradable nanoparticles exposing a short anti-FLT1 peptide as antiangiogenic platform to complement docetaxel anticancer activity
Materials Science and Engineering C, 102 (2019) 876-886.
- 6 Casciaro, B., I. D'Angelo, X. Zhang, M.R. Loffredo, G. Conte, F. Cappiello, F. Quaglia, Y.P.P. Di, F. Ungaro, M.L. Mangoni
Poly(lactide- co-glycolide) Nanoparticles for Prolonged Therapeutic Efficacy of Esculentin-1a-Derived Antimicrobial Peptides against Pseudomonas aeruginosa Lung Infection: In Vitro and in Vivo Studies
Biomacromolecules, 20 (2019) 1876-1888.
- 7 Esposito, D., C. Conte, G. Dal Poggetto, A. Russo, A. Barbieri, F. Ungaro, C. Arra, G. Russo, P. Laurienzo, **F. Quaglia***
Biodegradable nanoparticles bearing amine groups as a strategy to alter surface features, biological identity and accumulation in a lung metastasis model
Journal of Materials Chemistry B, 6 (2018) 5922-5930.
- 8 A. Venuta, F. Moret, G. Dal Poggetto, D. Esposito, A. Fraix, C. Avitabile, F. Ungaro, M. Malinconico, S. Sortino, A. Romanelli, P. Laurienzo, E. Reddi, **F. Quaglia***
Shedding light on surface exposition of poly(ethylene glycol) and folate targeting units on nanoparticles of poly(epsilon-caprolactone) diblock copolymers: Beyond a paradigm
European Journal of Pharmaceutical Sciences, 111 (2018) 177-185.
- 9 D.S. Pellosi, I. d'Angelo, S. Maiolino, E. Mitidieri, R. d'Emmanuele di Villa Bianca, R. Sorrentino, **F. Quaglia***, F. Ungaro
In vitro/in vivo investigation on the potential of Pluronic® mixed micelles for pulmonary drug delivery,
European Journal of Pharmaceutics and Biopharmaceutics, 130 (2018) 30-38.

- 10 E. Gaio, C. Conte, D. Esposito, G. Miotto, **F. Quaglia**, F. Moret, E. Reddi
Co-delivery of Docetaxel and Disulfonate Tetraphenyl Chlorin in One Nanoparticle Produces Strong Synergism between Chemo- and Photodynamic Therapy in Drug-Sensitive and -Resistant Cancer Cells, *Molecular pharmaceutics*, 15 (2018) 4599-4611.
- 11 I. D'Angelo, G. Costabile, E. Durantie, P. Brocca, V. Rondelli, A. Russo, G. Russo, A. Miro, **F. Quaglia**, A. Petri-Fink, B. Rothen-Rutishauser, F. Ungaro
Hybrid lipid/polymer nanoparticles for pulmonary delivery of siRNA: Development and fate upon in vitro deposition on the human epithelial airway barrier
Journal of Aerosol Medicine and Pulmonary Drug Delivery, 31 (2018) 170-181.
- 12 C. Conte, F. Mastrotto, V. Taresco, A. Tchoryk, **F. Quaglia**, S. Stolnik, C. Alexander
Enhanced uptake in 2D-and 3D-lung cancer cell models of redox responsive PEGylated nanoparticles with sensitivity to reducing extra- and intracellular environments
Journal of Controlled Release, 277 (2018) 126-141.
- 13 C. Conte, A. Fraix, H. Thomsen, F. Ungaro, V. Cardile, A.C.E. Graziano, M.B. Ericson, **F. Quaglia***, S. Sortino
Monitoring the release of a NO photodonor from polymer nanoparticles via Forster resonance energy transfer and two-photon fluorescence imaging
Journal of Materials Chemistry B, 6 (2018) 249-256.
- 14 O. Catanzano, V. D'Esposito, P. Formisano, J.S. Boateng, **F. Quaglia***
Composite Alginate-Hyaluronan Sponges for the Delivery of Tranexamic Acid in Postextractive Alveolar Wounds
Journal of Pharmaceutical Sciences, 107 (2018) 654-661.
- 15 F. Ungaro, O. Catanzano, I. d'Angelo, L. Diaz-Gomez, A. Concheiro, A. Miro, C. Alvarez-Lorenzo, **F. Quaglia**
Microparticle-embedded fibroin/alginate beads for prolonged local release of simvastatin hydroxyacid to mesenchymal stem cells
Carbohydrate Polymers, 175 (2017) 645-653.
- 16 D.S. Pellosi, I.R. Calori, L.B. de Paula, N. Hioka, **F. Quaglia**, A.C. Tedesco
Multifunctional theranostic Pluronic mixed micelles improve targeted photoactivity of Verteporfin in cancer cells
Materials Science & Engineering. C, Materials for biological applications, 71 (2017) 1-9.
- 17 I. d'Angelo, A. Fraix, F. Ungaro, **F. Quaglia**, A. Miro
Poly(ethylene oxide)/hydroxypropyl-beta-cyclodextrin films for oromucosal delivery of hydrophilic drugs
International Journal of Pharmaceutics, 531 (2017) 606-613.
- 18 O. Catanzano, V. D'Esposito, G. Pulcrano, S. Maiolino, M.R. Ambrosio, M. Esposito, A. Miro, F. Ungaro, P. Formisano, M.R. Catania, **F. Quaglia***
Ultrasmall silver nanoparticles loaded in alginate-hyaluronic acid hybrid hydrogels for treating infected wounds
International Journal of Polymeric Materials and Polymeric Biomaterials, 66 (2017) 626-634.
- 19 A. Russo, D.S. Pellosi, V. Pagliara, M.R. Milone, B. Pucci, W. Caetano, N. Hioka, A. Budillon, F. Ungaro, G. Russo, **F. Quaglia**
Biotin-targeted Pluronic(R) P123/F127 mixed micelles delivering niclosamide: A repositioning strategy to treat drug-resistant lung cancer cells,
International Journal of Pharmaceutics, 511 (2016) 127-139.
- 20 A. Russo, S. Maiolino, V. Pagliara, F. Ungaro, F. Tatangelo, A. Leone, G. Scalia, A. Budillon, **F. Quaglia***, G. Russo
Enhancement of 5-FU sensitivity by the proapoptotic rpL3 gene in p53 null colon cancer cells through combined polymer nanoparticles,
Oncotarget, 7 (2016) 79670-79687.
- 21 **F. Quaglia**, S. Sortino
Polymer Nanoparticles for Cancer Photodynamic Therapy Combined with Nitric Oxide Photorelease and Chemotherapy
In: G. Bergamini, S. Silvi (Eds.) *Applied Photochemistry: When Light Meets Molecules*, Springer International Publishing, Cham, 2016, pp. 397-426.

- 22 D.S. Pellosi, A.L. Tessaro, F. Moret, E. Gaio, E. Reddi, W. Caetano, **F. Quaglia**, N. Hioka
Pluronic mixed micelles as efficient nanocarriers for benzoporphyrin derivatives applied to photodynamic therapy in cancer cells
Journal of Photochemistry and Photobiology A: Chemistry, 314 (2016) 143-154.
- 23 D.S. Pellosi, F. Moret, A. Fraix, N. Marino, S. Maiolino, E. Gaio, N. Hioka, E. Reddi, S. Sortino, **F. Quaglia**
Pluronic(R) P123/F127 mixed micelles delivering sorafenib and its combination with verteporfin in cancer cells
International Journal of Nanomedicine, 11 (2016) 4479-4494.
- 24 N. Marino, M. Perez-Lloret, A.R. Blanco, A. Venuta, **F. Quaglia***, S. Sortino
Photo-antimicrobial polymeric films releasing nitric oxide with fluorescence reporting under visible light
Journal of Materials Chemistry B, 4 (2016) 5138-5143.
- 25 I. d'Angelo, B. Perfetto, G. Costabile, V. Ambrosini, P. Caputo, A. Miro, R. d'Emmanuele di Villa Bianca, R. Sorrentino, G. Donnarumma, **F. Quaglia***, F. Ungaro
Large Porous Particles for Sustained Release of a Decoy Oligonucleotide and Poly(ethylenimine): Potential for Combined Therapy of Chronic Pseudomonas aeruginosa Lung Infections
Biomacromolecules, 17 (2016) 1561-1571.
- 26 G. Costabile, I. d'Angelo, R.D. di Villa Bianca, E. Mitidieri, B. Pompili, P. Del Porto, L. Leoni, P. Visca, A. Miro, **F. Quaglia**, F. Imperi, R. Sorrentino, F. Ungaro
Development of inhalable hyaluronan/mannitol composite dry powders for flucytosine repositioning in local therapy of lung infections
Journal of Controlled Release, 238 (2016) 80-91.
- 27 C. Conte, A. Scala, G. Siracusano, G. Sortino, R. Pennisi, A. Piperno, A. Miro, F. Ungaro, M.T. Sciortino, **F. Quaglia***, A. Mazzaglia
Nanoassemblies based on non-ionic amphiphilic cyclodextrin hosting Zn(II)-phthalocyanine and docetaxel: Design, physicochemical properties and intracellular effects
Colloids and Surfaces B: Biointerfaces, 146 (2016) 590-597.
- 28 C. Conte, S. Maiolino, D.S. Pellosi, A. Miro, F. Ungaro, **F. Quaglia***
Polymeric Nanoparticles for Cancer Photodynamic Therapy
Topics in current chemistry, 370 (2016) 61-112.
- 29 C. Conte, I. Fotticchia, P. Tirino, F. Moret, B. Pagano, R. Gref, F. Ungaro, E. Reddi, C. Giancola, **F. Quaglia***
Cyclodextrin-assisted assembly of PEGylated polyester nanoparticles decorated with folate
Colloids and surfaces. B, Biointerfaces, 141 (2016) 148-157.
- 30 H. Unan, I. d'Angelo, E. Pagano, F. Borrelli, A. Izzo, F. Ungaro, **F. Quaglia**, E. Bilensoy
Core-shell hybrid nanocapsules for oral delivery of camptothecin: formulation development, in vitro and in vivo evaluation
Journal of Nanoparticle Research, 17 (2015) 1-13.
- 31 A. Petrizzo, C. Conte, M. Tagliamonte, M. Napolitano, K. Bifulco, V. Carriero, A. De Stradis, M.L. Tornesello, F.M. Buonaguro, **F. Quaglia**, L. Buonaguro
Functional characterization of biodegradable nanoparticles as antigen delivery system
Journal of experimental & clinical cancer research, 34 (2015) 114.
- 32 S. Maiolino, A. Russo, V. Pagliara, C. Conte, F. Ungaro, G. Russo, **F. Quaglia***
Biodegradable nanoparticles sequentially decorated with Polyethyleneimine and Hyaluronan for the targeted delivery of docetaxel to airway cancer cells
Journal of Nanobiotechnology, 13 (2015) 29.
- 33 S. Maiolino, F. Moret, C. Conte, A. Fraix, P. Tirino, F. Ungaro, S. Sortino, E. Reddi, **F. Quaglia***
Hyaluronan-decorated polymer nanoparticles targeting the CD44 receptor for the combined photo/chemotherapy of cancer
Nanoscale, 7 (2015) 5643-5653.
- 34 I. D'Angelo, **F. Quaglia**, F. Ungaro
PLGA carriers for inhalation: Where do we stand, where are we headed?
Therapeutic delivery, 6 (2015) 1139-1144.

