



Position: Associate Professor
 Faculty: School of Pharmacy
 Email: co...@edu.mo
 /Tel: (853) ...
 /Office: E213B
 /Address: E 213D
 /E213D Building E, Avenida ... Long, Taipa, Macau

Investigator
 Teaching activity: Medicinal chemistry and laboratory; Basic Chemistry and laboratory;
 Fundamental Chemistry for Pharmaceutics and laboratory; analytical chemistry laboratory.

MOA, Research interest: Anti-infectious disease, parasitic disease, organic
 Chemistry; anti-cancer and anti-inflammatory drug development, natural compounds, MOA,
 Material Chemistry.

va Ionst
 /Research project
 e FIP
 FDCT 0087/2020/A "Investigation of ozonide
 analogs for overcoming drug resistance and Study of mechanism of action" August 2020 - August
 2021- Principal Investigator
 NORD-PO
 FDCT 0096/2020/A nr 1, 2, 3- (NCP,
 (NCP)) "Synthesis of novel 1,2,3,4-tetrahydropyridin-5(1H)-one



2017- 2021 Lecturer at School of Pharmacy Macau University of Science and Technology, Macau
Courses: Basic Chemistry BA PZ003 / Pharmaceutical Chemistry BA PZ007/ Medicinal
Chemistry BA PZ023 / Analytical Chemistry BA PZ013

2009- 2017, Postdoctorals Fellowship

State Key Laboratory of Quality Research in Chinese Medicine Fellowship, Macau University
Science and Technology

Department of Science of Materials, University of Milan Bicocca, Milan, Italy

School of Pharmacy, University of Milan, Milan, Italy

CISI (Center for biomolecular interdisciplinary studies and industrial applications), Milan, Italy

National Research Council ISTM- CNR Milan, Italy

/ Publication

- 1) **Coghi P#**, Yun XY, Ng JPL, Law BYK, Memo M, Gianoncelli A, Wong VKW, Ribaud G*. Exploring SARS-CoV-2 Delta variant spike protein receptor-binding domain (RBD) as a target for tanshinones and antimalarials. *Nat Prod Res.* **2022** Mar 25:1-6.
- 2) 4-(4-(((1H-benzo[d][1,2,3]triazol-1-yl)oxy)methyl)-1H-1,2,3-triazol-1-yl)-7-chloroquinoline. Leong Ka Fai, Margrate Anyanwu, Jiang Ai, Yuhan Xie, Alessandra Gianoncelli, Giovanni Ribaud * and **Paolo Coghi *** (accepted Molbank)
- 3) Zhu Yunghai#, Prommana , Parichat; Hosmane, Narayan; **Coghi, Paolo**; Uthaipibull, Chairat* ; Zhang, Yingjun. Functionalized Boron Nanoparticles as Potential Promising Antimalarial Agents. (*ACS Omega*, January **2022**) <https://doi.org/10.1021/acsomega.1c05888>
- 4) Ng, J.P.L.#.; Tiwari, M.K.; Nasim, A.A.; Zhang, R.L.; Qu, Y.; Sharma, R.; Law, B.Y.K.; Yadav*, D.K.; Chaudhary*, S.; **Coghi, P. ***; Wong, V.K.W*. Biological Evaluation in Resistant Cancer Cells and Study of Mechanism of Action of Arylviny-1,2,4-Trioxanes. *Pharmaceuticals* **2022**, *15*, 360. <https://doi.org/10.3390/ph15030360>
- 5) XiaoYun Yun#, Yuhan Xie, Jerome P. L. Ng , Betty Yuen Kwan Law , Vincent Kam Wai Wong and **Paolo Coghi***. 2-Bromo-3-((1-(7-chloroquinolin-4-yl)-1H-1,2,3-triazol-4-yl)-methoxy)-benzaldehyde (*Molbank* **2022**, 2022(1), M1351; <https://doi.org/10.3390/M1351>)
- 6) Yoke Mooi Ng#, **Paolo Coghi#**, Jerome L. Ng, Fayaz Ali, Vincent Kam Wai Wong, Carmine Coluccini*. Synthesis and Coordination Properties of a Water-Soluble Material by Cross-Linking Low Molecular Weight Polyethyleneimine with Armed Cyclotrimertrilene. *Polymers.* (23), 4133.
- 7) **Coghi Paolo#**, Li Jun Yang, Jerome Pak Lam Ng, Alessandra Gianoncelli, Vincent Kam Wai Wong* and Giovanni Ribaud* A Drug Repurposing Approach for Antimalarials Interfering with SARS-CoV-2 Spike Protein Receptor Binding Domain (RBD) and Human Angiotensin-Converting Enzyme 2 (ACE2) (*Pharmaceuticals* **2021**, *14*(10), 954)
- 8) **Coghi, Paolo#**; Ng, Jerome#; Kadioglu, Onat; Law, Betty; Qiu, Alena; Saeed, Mohamed; Chen, Xi; Ip, Chio; Efferth, Thomas*; Liu, Liang*; Wong, Vincent Kam Wai*. Synthesis, computational docking and biological evaluation of celastrol derivatives as dual inhibitors of SERCA and P-glycoprotein in cancer therapy (*European Journal of Medicinal Chemistry* **2021**, *224*, 113676)
- 9) Pyronaridine induces apoptosis in Non-small cell lung cancer cells by upregulating DR5 expression and inhibiting EGFR Zheng-Hong Zhong# Ze-Lin Yi Yi-Dan Zhao Jue Wang Ze-Bo Jiang Cong Xu Ya-Jia Xie Qi-Da He Zi-Yan Tong Xiao-Jun Yao Elaine Lai-Han Leung **Paolo Coghi** Xing-Xing Fan* Min Chen, *Chem Biol & Drug Des.*, 00, 1– 9, **2021**).
- 10) Tiwari, Mohit#; **Coghi, Paolo#**; Agrawal, Prakhar#; Yadav, Dharmendra Kumar; Yang, Li; Congling, Qiu; Sahal, Dinkar*; Wong, Vincent Kam Wai*; Chaudhary, Sandeep*. Novel Halogenated Arylviny-1,2,4 Trioxanes as Potent Antiplasmodial as well as Anticancer Agents: Synthesis, Bioevaluation, Structure-Activity Relationship and In-silico Studies (*European Journal of Medicinal Chemistry* **2021**, in press, 113675)
- 11) **Coghi Paolo Saul#**, Yinghuai Zhu, Hongming Xie, Narayan S Hosmane*, Yingjun Zhang* Boron Embowed Small Molecules as Antiviral, Antibacterial and Antiparasitic Agents (*Molecules* **2021**, *26*, 3309).

- 12) Douglas O. Ochora#, Esezah Kakudidi, Jane Namukobe, Matthias Heydenreich, **Paolo Coghi**, Li Jun Yang, Edwin W. Mwakio , Ben Andagalu , Amanda Roth , Hoseah M. Akala, Vincent K. W. Wong, Abiy Yenesew*. A new benzophenone and the Antiplasmodial activities of the constituents of *Securidaca longipedunculata* Fresen (Polygalacea) (Natural Product Research,DOI: 10.1080/14786419.2021.1925272)
- 13) Giovanni Ribaudo*#, **Paolo Coghi*#**, Li Jun Yang, Jerome Ng, Andrea Mastinu, Maurizio Memo, Vincent Kam Wai Wong. Computational and Experimental Insights on the Interaction of Artemisinin, Dihydroartemisinin and Chloroquine with SARS-CoV-2 Spike Protein Receptor-Binding Domain (RBD) (*Natural Product Research*, **2021** May 12;1-6) for project (0096/2020/A). doi:10.1080/14786419.2021.1925894 (corresponding author).
- 14) **Paolo Coghi*#**, Jerome Ng, Ali Adnan Nasim, Dr. Vincent Kam Wai Wong# N-[7-Chloro-4-[4-(phenoxy)methyl]-1

- 26) Novel peroxides as promising anticancer agents with unexpected depressed antimalarial activities. **P.Coghi**#, Ivan A. Yaremenko#, Parichat Prommana#, Peter S. Radulov, Mikhail A. Syroeshkin, Yu Jun Wu, Jia Ying Gao, Floria M. Gordillo, Simon Mok, Vincent Kam Wai Wong*, Chairat Uthaipibull*, and Alexander O. Terent'ev*. *Chemmedchem*. **2018** (Front Cover may **2018**, VIP paper, first author, hot topic 2020 in section Neglected and Tropical Disease) doi: 10.1002/cmdc.201700804
- 27) Law BYK#, Mok SWF#, Chen J, Michelangeli F, Jiang ZH, Han Y, Qu YQ, Qiu ACL, Xu SW, Xue WW, Yao XJ, Gao JY, Javed MU, **Coghi P**, Liu L#, Wong VKW*. N-desmethyldauricine induces autophagic cell death in apoptosis-defective cells via Ca²⁺ mobilization. *Frontiers in Pharmacology* **2017**, 16;8:388. <https://doi.org/10.3389/fphar.2017.00388>
- 28) Yoseph Atilaw#, Lois Muiva-Mutisya, Albert Ndakala, Hoseah M. Akala, Matthew L. Brown, Agnes C. Cheruiyot, **P.Coghi**, Vincent Kam Wai Wong, Abiy Yenesew*, Máté Erdély*. Four flavones with modified prenyl groups from the stem of *Tephrosia purpurea* supsp *leptostachya*. *Molecules* **2017**, Sep 10;22(9). doi: 10.3390/molecules22091514
- 29) Thalidezine, A Novel AMPK Activator, Eliminates Apoptosis-resistant Cancer Cells Through Energy-mediated Autophagic Cell Death, *Oncotarget* **2017** 2;8(18):30077-30091, doi: 10.18632/oncotarget.15616
- 30) Autophagic degradation of epidermal growth factor receptor in gefitinib-resistant lung cancer by celastrol. *International journal of oncology*, **2016** Oct;49(4):1576-88 doi: 10.3892/ijo.2016.3644
- 31) **P. Coghi** #, Antonio Papagni, Riccardo Po, Anna Calabrese, Alessandra Tacca, Alberto Savoini*. Reactivity of Decafluorobenzophenone and decafluoroazobenzene towards aromatic diamines: a potential entry to Donor-Acceptor systems *New Journal of Chemistry*, **2015**, *New J. Chem*, 39, 3615-3623. 10.1039/C4NJ02359E
- 32) Richard K. Haynes#, Kwan-Wing Cheu, David N'Da, Paolo **Coghi** DD.Monti. Some Current Considerations on the Mechanism of action of Artemisinin Antimalarials : Part 1 – The ‘Carbon Radical’ and ‘Heme’ Hypotheses, *Infectious Disorders – Drug Targets*, **2013**, 13, 217-277
- 33) D. P. Ilboudo#, N.Basilico, S. Parapini, Y. Corbett, S.D'Alessandro, M.Dell'Agli, **P.Coghi**, S.D.Karou, R. Sawadogo, C.Gnoulou, J.Simpore, J.BaptisteNikiema, D.Monti, E.Bosisio, D.Taramelli*. Antiplasmodial and anti-inflammatory activities of *Canthium henriquesianum* (K. Schum), a plant used in traditional medicine in Burkina Faso. *Journal of Ethnopharmacology* **2013**.148, 3, 763-769. <https://doi.org/10.1016/j.jep.2013.04.049>
- 34) Haynes RK#*, Cheu KW, Chan HW, Wong HN, Li KY, Tang MM, Chen MJ, Guo ZF, Guo ZH, Sinniah K, Witte AB, Coghi P, Monti D*. Interactions between Artemisinins and other Antimalarial Drugs in Relation to the Co-Factor Model – A Unifying Proposal for Drug Action". *ChemMedChem* **2012**, 7, 12, 2204-2226.
- 35) R.K. Haynes#*, K.Cheu, K.Li, M.Tang, H.Wong, M.Chen, Z.Guo, Z.Guo, **P.Coghi**, D.Monti* A Parallel in Action of Methylene Blue and Artemisinins - Antagonism with Chloroquine, a Reversal with Verapamil, and an Aspect of Antimalarial Activity of Chloroquine.. *ChemMedChem* **2011**, 6, 9, 1603-1615.
- 36) Haynes RK#*, Cheu KW, Tang MM, Chen MJ, Guo ZF, Guo ZH, **Coghi P**, Monti D* Reactions of Antimalarial Peroxides with Each of Leucomethylene Blue and Dihydroflavins: Flavin Reductase and the Cofactor Model Exemplified *ChemMedChem* **2011**, 6, 2, 279-291.
- 37) R.K. Haynes#*, W.Chan, H.Wong, K.Li, W.Wu, K.Fan, H. Sung, I.D. Williams, D. Prosperi, S.Melato, **P.Coghi**, D. Monti *Facile Oxidation of Leucomethylene Blue and Dihydroflavins by Artemisinins: Relationship with Flavoenzyme Function and Antimalarial Mechanism of Action.. *ChemMedChem* **2010**, 5, 8, 1282-1299.
- 38) N.Basilico#, S.Parapini, F. Sisto, F.Omodeo-Salè, **P.Coghi**, F.Ravagnani, P.Oliario,D.Taramelli *The lipid moiety of haemozoin (malaria pigment) and *P.falciparum* parasitised red blood cells bind synthetic and native endothelin-1.. *Journal of Biomedicine and Biotechnology*.**2010**, 1-9.
- 39) **P.Coghi**#, N. Basilico, D. Taramelli, W. Chan, R.K. Haynes*, D.Monti*. Interaction of Artemisinins with Oxyhemoglobin Hb-Fell, Hb-Fell, CarboxyHb-Fell, Heme-Fell, and Carboxyheme Fell: Significance for Mode of Action and Implications for Therapy of Cerebral Malaria. *ChemMedChem(co er pict re)* 2009, 4, 12, 2045-2053.
- 40) N.Basilico#, E Bosisio, F Buelli, G Campiani, M Casagrande, F Castelli, **P Coghi** et al. Old and new targets for innovative antimalarial compounds: the different strategies of the Italian Malaria Network". *Parassitologia*. **2008**

- 41) **P.Coghi**#, N.Vaiana, M.G. Pezzano, L.Rizzi, M.Kaiser, R.Brun, S.Romeo* Parallel synthesis and antileishmanial activity of ether-linked phospholipids. *Bioorganic and Medicinal Chemistry Letters* **2008**, 18, 16, 4658-4660.
- 42) S. Melato#, D.Prosperti, **P.Coghi**, N.Basilico, D.Monti *. A Combinatorial Approach to 2,4,6-Trisubstituted Triazines with Potent Antimalarial Activity: Combining Conventional Synthesis and Microwave-Assistance.. *ChemMedChem* **2008**, 3, 6, 873-876.
- 43) S. Melato#, D.Prosperti, **P.Coghi**, N.Basilico, D.Monti *. Novel 4-Aminoquinolines through Microwave-Assisted SNAr Reactions: a Practical Route to Antimalarial Agents. *Eur. J. Org. Chem* **2007**, 36, 6618-6623.

/ Book

Fundamentals and Applications of Boron Chemistry Chapter: Boron containing small molecules as antiparasitic agents, **2022**

/ Patent

- 1) Patent prop. WO2014188376 A1 - Stabilized photoactive composition and use thereof. V.Malatesta, **P.Coghi** A.Papagni, G.Giannotta. Uv light stabilization additive package for solar cell, **2014**.
- 2) Patent prop. CN 111848722 B –Tripterine derivative and preparation method and application thereof Huang Jinwei, Liu Liang, **Paul Coghi**, Luo Wanjun,Wu Bolin **2021**