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Teaching activities: Medicinal chemistry and laboratory; Basic Chemistry and laboratory; Functional chemistry for Pharmaceutics and laboratory; analytical chemistry laboratory.

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

/ Research project

FDCT 0087/2020/A

"Investigation of ozonide analogs for overcoming drug resistance and study of mechanism of action" august 2020- august 2021- Principal Investigator

FDCT 0096/2020/A

Covid-19

"Synthesis of novel 1, 2, 3- Q

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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
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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, Ribaudo 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 Ribaudo * 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 Ribaudo* 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.Gnoula , 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>
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- 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.
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/ 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**