

CURRICULUM
VITAE



PERSONAL
INFORMATIONS

Name

PASQUALE PAGLIARO

Address

Dept Clinical and Biological Sciences, Regione Gonzole 10,
10043 Orbassano (To), Italy

Phone

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pasquale.pagliaro@unito.it

Date of birth

WORK EXPERIENCES

• Date (1996-1997)

Johns Hopkins University, USA
University and Medical School
Basic Research

Studies on cardioprotection coronary regulation by endothelial factors
and mechanical stimulation.

WORK EXPERIENCES

• Date (1996 to 2017)

University of Torino
AOU (University Hospital, San Luigi Gonzaga, Orbassano, Torino, Italy)
Research and Teaching
Research laboratory Director and Professor of Physiology in several
Course of the Medical School

EDUCATION AND
TRAINING

• Date (from 1980-81 to 86-87)
Institution and Degree

Medical School of Torino, Italy
Biology, Medical and Surgical disciplines
Medical Doctor (MD)

EDUCATION AND
TRAINING

• Date (from 1990-1 to 96-97)
Institution and Degree

Medical School of Torino, Italy
Cardiovascular Physiology
Ph.D. in Physiology (Cardiovascular research)
Post-Doc Fellowship (JHU, USA)

PERSONAL SKILLS

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

- Reading
- Writing
- Speaking

English
Excellent
Excellent
VERY GOOD

SOCIAL SKILLS AND
COMPETENCIES

Excellent interpersonal competences acquired in the various places of work

ORGANIZATIONAL
SKILLS

Excellent organizational skills of coordination acquired in the various places of work

TECHNICAL SKILLS

Good skills with writing programs and ppt (MS Office) and good skills with programs of graphics and data analysis

ADDITIONAL INFORMATION

Full Professor of Physiology at University of Turin, Italy.

Degrees awarded: MD, 1988, University of Turin.

Ph.D., 1994, University of Turin.

Research Fellowship in Cardiovascular Medicine (1996-1997; Johns Hopkins University, Baltimore, MD, USA).

Teaching activities of Prof Pagliaro:

From 1988 to 1996 prof Pagliaro has been active in teaching and practicing human physiology as a *lecturer in human physiology*: He started to teach Physiology for the Medical School of the University of Torino already in early 90's.

From 1996 he is *Professor of Physiology* in courses in the Medical and Nursing Schools. He coordinates two integrated courses of the School Medicine. He had always offered elective teaching activities (ADEs) that have been successful among students. From 1999-2000 he teaches Physiology in Specialization Schools: Respiratory Diseases and Thoracic Surgery. From 2017 he teaches Physiology at the Urology Specialization School. He is vice-director of the Ph.D. courses in Medicine and Experimental Therapy.

Students: he supervised several Ph.D. students. Now he is supervising two Ph.D. students (secondary supervisor).

Research activities of Prof Pagliaro:

PhD student 1990-1994.

Visiting Scientist at The Johns Hopkins University (JHU), Baltimore (1997-1999).

Dr. Pagliaro is an expert in coronary pathophysiology and translational research. The recent research programs of Dr. Pagliaro lab concern the protection and regeneration of the myocardium. In recent years, Dr. Pagliaro lab focused on redox-signaling and mitochondria and studied in vitro and ex vivo the cardioprotective mechanisms.

Scientific Papers (Scopus ID: 7005683618): *more than 160 publications, about 50% as senior author (citations 5950, H-index 42, Google Scholar).*

Grants: several grants in the last years; most recently obtained French-Italian University grant for the collaboration with the University of Angers. Proposed Multicenter Projects such as PRIN and Cariplo. Leader of multidisciplinary RILO projects in the last 3 editions.

Patents: USA patent in collaboration with JHU an NHI.

European patent (PCT/IB2014/058025) with Prof Giachono and University of Pisa.

Esteem: invited speaker and chair at National and International meetings, Invited lecturer at the Summer School of European Society of Cardiology; President of Italian Society of Cardiovascular Researches; Vice-chairman of the Cardioprotection and Cardiotoxicity Working Group of The Italian Society of Cardiology, Ordinary Member of Italian and Physiological Society of London. Participant of Management Committee of Cost Action CA16225 - Realising the therapeutic potential of novel cardioprotective therapies. Visiting professor of the International University of Gorazde.

Management and academic leadership: vice-chairman of Ph.D. school in Therapy and Experimental Medicine; Elected Member of Department Deliberative Administrative Council (Giunta); Elected Member of the School of Medicine.

Outreach scientific initiative: organization of several meetings and seminaries; most recently: "New Roads in Cardiovascular Sciences" meeting, Rome 2018 International meeting in Imola 2017. "New Roads in Cardiovascular Sciences" meeting, Genova 2016 and "Biennale del Cuore" International meeting in Imola 2015.

Recent Publications

1: Davidson SM, Andreadou I, Barile L, Birnbaum Y, Cabrera-Fuentes HA, Cohen MV, Downey JM, Girao H, Pagliaro P, Penna C, Pernow J, Preissner KT, Ferdinandy P. Circulating blood cells and extracellular vesicles in acute cardioprotection. *Cardiovasc Res.* 2019 Jun 1;115(7):1156-1166. doi: 10.1093/cvr/cvy314. PubMed PMID: 30590395.

- 2: Zuurbier CJ, Abbate A, Cabrera-Fuentes HA, Cohen MV, Collino M, De Kleijn DPV, Downey JM, Pagliaro P, Preissner KT, Takahashi M, Davidson SM. Innate immunity as a target for acute cardioprotection. *Cardiovasc Res.* 2019 Jun 1;115(7):1131-1142. doi: 10.1093/cvr/cvy304. PubMed PMID: 30576455.
- 3: Cristallini C, Vaccari G, Barbani N, Cibrario Rocchietti E, Barberis R, Falzone M, Cabiale K, Perona G, Bellotti E, Pascale S, Pagliaro P, Giachino C. Cardioprotection of PLGA/gelatine cardiac patches functionalised with Adenosine in a large animal model of ischemia and reperfusion injury: a feasibility study. *J Tissue Eng Regen Med.* 2019 May 3. doi: 10.1002/term.2875. [Epub ahead of print] PubMed PMID: 31050859.
- 4: Femminò S, Pagliaro P, Penna C. Obesity and cardioprotection. *Curr Med Chem.* 2019 Mar 24. doi: 10.2174/0929867326666190325094453. [Epub ahead of print] PubMed PMID: 30907304.
- 5: Roberto S, Milia R, Doneddu A, Pinna V, Palazzolo G, Serra S, Orrù A, Hosseini Kakhak SA, Ghiani G, Mulliri G, Pagliaro P, Crisafulli A. Hemodynamic abnormalities during muscle metaboreflex activation in patients with type 2 diabetes mellitus. *J Appl Physiol* (1985). 2019 Feb 1;126(2):444-453. doi: 10.1152/jappphysiol.00794.2018. Epub 2018 Dec 13. PubMed PMID: 30543497.
- 6: Santillo M, Pagliaro P. Editorial: Redox and Nitrosative Signaling in Cardiovascular System: From Physiological Response to Disease. *Front Physiol.* 2018 Nov 2;9:1538. doi: 10.3389/fphys.2018.01538. eCollection 2018. PubMed PMID: 30450054; PubMed Central PMCID: PMC6224784.
- 7: Bøtker HE, Hausenloy D, Andreadou I, Antonucci S, Boengler K, Davidson SM, Deshwal S, Devaux Y, Di Lisa F, Di Sante M, Efentakis P, Femminò S, Garcia-Dorado D, Giricz Z, Ibanez B, Iliodromitis E, Kaludercic N, Kleinbongard P, Neuhäuser M, Ovize M, Pagliaro P, Rahbek-Schmidt M, Ruiz-Meana M, Schlüter KD, Schulz R, Skyschally A, Wilder C, Yellon DM, Ferdinandy P, Heusch G. Practical guidelines for rigor and reproducibility in preclinical and clinical studies on cardioprotection. *Basic Res Cardiol.* 2018 Aug 17;113(5):39. doi: 10.1007/s00395-018-0696-8. Review. PubMed PMID: 30120595; PubMed Central PMCID: PMC6105267.
- 8: Pasqua T, Pagliaro P, Rocca C, Angelone T, Penna C. Role of NLRP-3 Inflammasome in Hypertension: a Potential Therapeutic Target. *Curr Pharm Biotechnol.* 2018 Aug 8. doi: 10.2174/1389201019666180808162011. [Epub ahead of print] PubMed PMID: 30091406.
- 9: Russo I, Femminò S, Barale C, Tullio F, Geuna S, Cavalot F, Pagliaro P, Penna C. Cardioprotective Properties of Human Platelets Are Lost in Uncontrolled Diabetes Mellitus: A Study in Isolated Rat Hearts. *Front Physiol.* 2018 Jul 10;9:875. doi: 10.3389/fphys.2018.00875. eCollection 2018. PubMed PMID: 30042694; PubMed Central PMCID: PMC6048273.

- 10: Popara J, Accomasso L, Vitale E, Gallina C, Roggio D, Iannuzzi A, Raimondo S, Rastaldo R, Alberto G, Catalano F, Martra G, Turinetto V, Pagliaro P, Giachino C. Silica nanoparticles actively engage with mesenchymal stem cells in improving acute functional cardiac integration. *Nanomedicine (Lond)*. 2018 May;13(10):1121-1138. doi: 10.2217/nnm-2017-0309. Epub 2018 Jun 8. PubMed PMID: 29882732.
- 11: Rocca C, Femminò S, Aquila G, Granieri MC, De Francesco EM, Pasqua T, Rigracciolo DC, Fortini F, Cerra MC, Maggiolini M, Pagliaro P, Rizzo P, Angelone T, Penna C. Notch1 Mediates Preconditioning Protection Induced by GPER in Normotensive and Hypertensive Female Rat Hearts. *Front Physiol*. 2018 May 15;9:521. doi: 10.3389/fphys.2018.00521. eCollection 2018. PubMed PMID: 29867564; PubMed Central PMCID: PMC5962667.
- 12: Pagliaro P, Penna C. Editorial: Alteration of Redox Equilibrium, Inflammation and Progression of Disease. *Curr Med Chem*. 2018;25(11):1272-1274. doi: 10.2174/092986732511180417115122. PubMed PMID: 29697359.
- 13: Pagliaro P, Femminò S, Popara J, Penna C. Mitochondria in Cardiac Postconditioning. *Front Physiol*. 2018 Mar 26;9:287. doi: 10.3389/fphys.2018.00287. eCollection 2018. Review. PubMed PMID: 29632499; PubMed Central PMCID: PMC5879113.
- 14: Penna C, Sorge M, Femminò S, Pagliaro P, Brancaccio M. Redox Aspects of Chaperones in Cardiac Function. *Front Physiol*. 2018 Mar 16;9:216. doi: 10.3389/fphys.2018.00216. eCollection 2018. Review. PubMed PMID: 29615920; PubMed Central PMCID: PMC5864891.
- 15: Varricchi G, Ameri P, Cadeddu C, Ghigo A, Madonna R, Marone G, Mercurio V, Monte I, Novo G, Parrella P, Pirozzi F, Pecoraro A, Spallarossa P, Zito C, Mercurio G, Pagliaro P, Tocchetti CG. Antineoplastic Drug-Induced Cardiotoxicity: A Redox Perspective. *Front Physiol*. 2018 Mar 7;9:167. doi: 10.3389/fphys.2018.00167. eCollection 2018. Review. PubMed PMID: 29563880; PubMed Central PMCID: PMC5846016.
- 16: Folino A, Accomasso L, Giachino C, Montarolo PG, Losano G, Pagliaro P, Rastaldo R. Apelin-induced cardioprotection against ischaemia/reperfusion injury: roles of epidermal growth factor and Src. *Acta Physiol (Oxf)*. 2018 Feb;222(2). doi: 10.1111/apha.12924. Epub 2017 Aug 30. PubMed PMID: 28748611.
- 17: Penna C, Tullio F, Femminò S, Rocca C, Angelone T, Cerra MC, Gallo MP, Gesmundo I, Fanciulli A, Brizzi MF, Pagliaro P, Alloatti G, Granata R. Obestatin regulates cardiovascular function and promotes cardioprotection through the nitric oxide pathway. *J Cell Mol Med*. 2017 Dec;21(12):3670-3678. doi: 10.1111/jcmm.13277. Epub 2017 Jul 26. PubMed PMID: 28744974; PubMed Central PMCID: PMC5706590.
- 18: Russo I, Penna C, Musso T, Popara J, Alloatti G, Cavalot F, Pagliaro P. Platelets, diabetes and myocardial ischemia/reperfusion injury. *Cardiovasc Diabetol*. 2017 May 31;16(1):71. doi: 10.1186/s12933-017-0550-6. Review. PubMed PMID: 28569217; PubMed Central PMCID: PMC5452354.

19: Mastrocola R, Aragno M, Alloatti G, Collino M, Penna C, Pagliaro P. Metaflammation: Tissue-Specific Alterations of the NLRP3 Inflammasome Platform in Metabolic Syndrome. *Curr Med Chem.* 2018;25(11):1294-1310. doi: 10.2174/0929867324666170407123522. Review. PubMed PMID: 28403789.

19: Tocchetti CG, Cadeddu C, Di Lisi D, Femminò S, Madonna R, Mele D, Monte I, Novo G, Penna C, Pepe A, Spallarossa P, Varricchi G, Zito C, Pagliaro P, Mercurio G. From Molecular Mechanisms to Clinical Management of Antineoplastic Drug-Induced Cardiovascular Toxicity: A Translational Overview. *Antioxid Redox Signal.* 2017 May 15. doi: 10.1089/ars.2016.6930. [Epub ahead of print] PubMed PMID: 28398124.

20: Tullio F, Penna C, Cabiale K, Femminò S, Galloni M, Pagliaro P. Cardioprotective effects of calcitonin gene-related peptide in isolated rat heart and in H9c2 cells via redox signaling. *Biomed Pharmacother.* 2017 Jun;90:194-202. doi: 10.1016/j.biopha.2017.03.043. Epub 2017 Mar 29. PubMed PMID: 28364596.

21: Morano M, Angotti C, Tullio F, Gambarotta G, Penna C, Pagliaro P, Geuna S. Myocardial ischemia/reperfusion upregulates the transcription of the Neuregulin1 receptor ErbB3, but only postconditioning preserves protein translation: Role in oxidative stress. *Int J Cardiol.* 2017 Apr 15;233:73-79. doi: 10.1016/j.ijcard.2017.01.122. Epub 2017 Jan 31. PubMed PMID: 28162790.

22: Mastrocola R, Penna C, Tullio F, Femminò S, Nigro D, Chiazza F, Serpe L, Collotta D, Alloatti G, Cocco M, Bertinaria M, Pagliaro P, Aragno M, Collino M. Pharmacological Inhibition of NLRP3 Inflammasome Attenuates Myocardial Ischemia/Reperfusion Injury by Activation of RISK and Mitochondrial Pathways. *Oxid Med Cell Longev.* 2016;2016:5271251. doi: 10.1155/2016/5271251. Epub 2016 Dec 8. PubMed PMID: 28053692; PubMed Central PMCID: PMC5178375.

23: Angotti C, Venier-Julienne MC, Penna C, Femminò S, Sindji L, Paniagua C, Montero-Menei CN, Pagliaro P. Nanoprecipitated catestatin released from pharmacologically active microcarriers (PAMs) exerts pro-survival effects on MSC. *Int J Pharm.* 2017 May 25;523(2):506-514. doi: 10.1016/j.ijpharm.2016.11.050. Epub 2016 Nov 22. PubMed PMID: 27887883.

24: Maurea N, Spallarossa P, Cadeddu C, Madonna R, Mele D, Monte I, Novo G, Pagliaro P, Pepe A, Tocchetti CG, Zito C, Mercurio G. A recommended practical approach to the management of target therapy and angiogenesis inhibitors cardiotoxicity: an opinion paper of the working group on drug cardiotoxicity and cardioprotection, Italian Society of Cardiology. *J Cardiovasc Med (Hagerstown).* 2016 May;17 Suppl 1 Special issue on Cardiotoxicity from Antineoplastic Drugs and Cardioprotection:e93-e104. Review. PubMed PMID: 27755247.

25: Spallarossa P, Maurea N, Cadeddu C, Madonna R, Mele D, Monte I, Novo G, Pagliaro P, Pepe A, Tocchetti CG, Zito C, Mercurio G. A recommended practical approach to the management of anthracycline-based chemotherapy cardiotoxicity: an opinion paper of the working group on drug cardiotoxicity and cardioprotection, Italian Society of Cardiology. *J Cardiovasc Med (Hagerstown).* 2016 May;17 Suppl 1 Special issue on Cardiotoxicity from Antineoplastic Drugs and Cardioprotection:e84-e92. Review. PubMed PMID: 27755246.

26: Deidda M, Madonna R, Mango R, Pagliaro P, Bassareo PP, Cugusi L, Romano S, Penco M, Romeo F, Mercurio G. Novel insights in pathophysiology of antineoplastic

- drugs-induced cardiotoxicity and cardioprotection. *J Cardiovasc Med (Hagerstown)*. 2016 May;17 Suppl 1 Special issue on Cardiotoxicity from Antiblastic Drugs and Cardioprotection:e76-e83. Review. PubMed PMID: 27755245.
- 27: Cadeddu C, Mercurio V, Spallarossa P, Nodari S, Triggiani M, Monte I, Piras R, Madonna R, Pagliaro P, Tocchetti CG, Mercurio G. Preventing antiblastic drug-related cardiomyopathy: old and new therapeutic strategies. *J Cardiovasc Med (Hagerstown)*. 2016 May;17 Suppl 1 Special issue on Cardiotoxicity from Antiblastic Drugs and Cardioprotection:e64-e75. Review. PubMed PMID: 27755244.
- 28: Novo G, Cadeddu C, Sucato V, Pagliaro P, Romano S, Tocchetti CG, Zito C, Longobardo L, Nodari S, Penco M. Role of biomarkers in monitoring antiblastic cardiotoxicity. *J Cardiovasc Med (Hagerstown)*. 2016 May;17 Suppl 1 Special issue on Cardiotoxicity from Antiblastic Drugs and Cardioprotection:e27-e34. Review. PubMed PMID: 27755240.
- 29: Mele D, Tocchetti CG, Pagliaro P, Madonna R, Novo G, Pepe A, Zito C, Maurea N, Spallarossa P. Pathophysiology of anthracycline cardiotoxicity. *J Cardiovasc Med (Hagerstown)*. 2016 May;17 Suppl 1 Special issue on Cardiotoxicity from Antiblastic Drugs and Cardioprotection:e3-e11. Review. PubMed PMID: 27755237.
- 30: Pagliaro P, Penna C. Hypertension, hypertrophy, and reperfusion injury. *J Cardiovasc Med (Hagerstown)*. 2017 Mar;18(3):131-135. doi: 10.2459/JCM.0000000000000435. Review. PubMed PMID: 27606784.
- 31: Crisafulli A, Pagliaro P, Cohen-Solal A, Coats AJ. Effects of Physical Exercise on Cardiovascular Diseases: Biochemical, Cellular, and Organ Effects. *Biomed Res Int*. 2015;2015:853632. doi: 10.1155/2015/853632. Epub 2015 Dec 15. PubMed PMID: 26788512; PubMed Central PMCID: PMC4692999.
- 32: Mastrocola R, Collino M, Penna C, Nigro D, Chiazza F, Fracasso V, Tullio F, Alloatti G, Pagliaro P, Aragno M. Maladaptive Modulations of NLRP3 Inflammasome and Cardioprotective Pathways Are Involved in Diet-Induced Exacerbation of Myocardial Ischemia/Reperfusion Injury in Mice. *Oxid Med Cell Longev*. 2016;2016:3480637. doi: 10.1155/2016/3480637. Epub 2015 Dec 14. PubMed PMID: 26788246; PubMed Central PMCID: PMC4691622.
- 33: Gallina C, Capelôa T, Saviozzi S, Accomasso L, Catalano F, Tullio F, Martra G, Penna C, Pagliaro P, Turinetto V, Giachino C. Human mesenchymal stem cells labelled with dye-loaded amorphous silica nanoparticles: long-term biosafety, stemness preservation and traceability in the beating heart. *J Nanobiotechnology*. 2015 Oct 29;13:77. doi: 10.1186/s12951-015-0141-1. PubMed PMID: 26510588; PubMed Central PMCID: PMC4625930.
- 34: Boero M, Pagliaro P, Tullio F, Pellegrino RM, Palmieri A, Ferbo L, Saglio G, De Gobbi M, Penna C, Roetto A. A comparative study of myocardial molecular phenotypes of two *tfr2 β* null mice: role in ischemia/reperfusion. *Biofactors*. 2015 Sep-Oct;41(5):360-71. doi: 10.1002/biof.1237. Epub 2015 Oct 13. PubMed PMID: 26458496.
- 35: Lapi D, Vagnani S, Sapio D, Mastantuono T, Boscia F, Pignataro G, Penna C, Pagliaro P, Colantuoni A. Effects of bone marrow mesenchymal stem cells (BM-MSCs) on rat pial microvascular remodeling after transient middle cerebral artery occlusion. *Front Cell Neurosci*. 2015 Aug 25;9:329. doi: 10.3389/fncel.2015.00329. eCollection 2015. PubMed PMID: 26379500; PubMed Central PMCID: PMC4548191.

- 36: Pagliaro P, Penna C. Editorial: Protection, Repair and Regeneration of AChybreaky Heart. *Curr Drug Targets*. 2015;16(8):778-9. PubMed PMID: 26212424.
- 37: Madonna R, Cadeddu C, Deidda M, Mele D, Monte I, Novo G, Pagliaro P, Pepe A, Spallarossa P, Tocchetti CG, Zito C, Mercurio G. Improving the preclinical models for the study of chemotherapy-induced cardiotoxicity: a Position Paper of the Italian Working Group on Drug Cardiotoxicity and Cardioprotection. *Heart Fail Rev*. 2015 Sep;20(5):621-31. doi: 10.1007/s10741-015-9497-4. PubMed PMID: 26168714.
- 38: Madonna R, Cadeddu C, Deidda M, Giricz Z, Madeddu C, Mele D, Monte I, Novo G, Pagliaro P, Pepe A, Spallarossa P, Tocchetti CG, Varga ZV, Zito C, Geng YJ, Mercurio G, Ferdinandy P. Cardioprotection by gene therapy: A review paper on behalf of the Working Group on Drug Cardiotoxicity and Cardioprotection of the Italian Society of Cardiology. *Int J Cardiol*. 2015 Jul 15;191:203-10. doi: 10.1016/j.ijcard.2015.04.232. Epub 2015 May 1. Review. PubMed PMID: 25974196.
- 39: Penna C, Granata R, Tocchetti CG, Gallo MP, Alloatti G, Pagliaro P. Endogenous Cardioprotective Agents: Role in Pre and Postconditioning. *Curr Drug Targets*. 2015;16(8):843-67. Review. PubMed PMID: 25751010.
- 40: Tocchetti CG, Molinaro M, Angelone T, Lionetti V, Madonna R, Mangiacapra F, Moccia F, Penna C, Sartiani L, Quaini F, Pagliaro P. Nitroso-Redox Balance and Modulation of Basal Myocardial Function: An Update from the Italian Society of Cardiovascular Research (SIRC). *Curr Drug Targets*. 2015;16(8):895-903. PubMed PMID: 25738298. 4
- 41: Pagliaro P, Penna C. Redox signalling and cardioprotection: translatability and mechanism. *Br J Pharmacol*. 2015 Apr;172(8):1974-95. doi: 10.1111/bph.12975. Epub 2015 Jan 12. Review. PubMed PMID: 25303224; PubMed Central PMCID: PMC4386976.
- 42: Penna C, Brancaccio M, Tullio F, Rubinetto C, Perrelli MG, Angotti C, Pagliaro P, Tarone G. Overexpression of the muscle-specific protein, melusin, protects from cardiac ischemia/reperfusion injury. *Basic Res Cardiol*. 2014 Jul;109(4):418. doi: 10.1007/s00395-014-0418-9. Epub 2014 May 25. PubMed PMID: 24859929.
- 43: Penna C, Angotti C, Pagliaro P. Protein S-nitrosylation in preconditioning and postconditioning. *Exp Biol Med (Maywood)*. 2014 Jun;239(6):647-62. Review. PubMed PMID: 24668550.
- 44: Tullio F, Angotti C, Perrelli MG, Penna C, Pagliaro P. Redox balance and cardioprotection. *Basic Res Cardiol*. 2013 Nov;108(6):392. doi: 10.1007/s00395-013-0392-7. Epub 2013 Oct 25. Review. PubMed PMID: 24158692.

Torino, May 23th 2019

Signature

Prof. Pasquale Pagliaro
