

Curriculum Vitae

Dati Personali

Cognome: Vanella

Nome: Luca

Data e Luogo di nascita: 18/02/84, Catania.

Stato Civile: Celibe

Residenza: Via Passo Gravina 245/7, Catania (c.a.p. 95125)

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Titoli Di Studio

- Diploma di Maturità Scientifica conseguita a Catania presso l'Istituto Principe Umberto di Savoia in data Luglio 2001 con voti 90/100.
- Diploma di Laurea in Farmacia presso l'Università degli Studi di Catania in data 20/7/2007 con voti 110/110 e lode e proposta al premio "Federfarma".
- Dottorato Internazionale di Ricerca in Scienze Farmaceutiche conseguito presso l'Università degli Studi di Catania il 23 Marzo 2011
- Cultore della materia nel SSD-BIO10
- Ricercatore a tempo indeterminato SSD BIO/10 dal 1-11-2011 a tutt'oggi presso il Dipartimento di Scienze del Farmaco dell' Università di Catania

Premi

- Premio Toscano Scuderi per Studenti in corso (A.A. 2004/2005) (Università di Catania);
- Premio di Laurea "Federfarma" (Aprile 2008)
- Premio: "First place Winner for oral presentation" Forum of Cardiovascular and metabolic Diseases Department of Physiology and Pharmacology (Toledo, Ohio) (17 Giugno 2010)

Stage Con e Senza Borsa

- Vincitore di borsa di studio per un soggiorno presso il Vascular Biology Unit, Department of Surgical Research, Northwick Park Institute for Medical Research, Harrow, Middlesex, United Kingdom (Tutor Prof. Roberto Motterlini) (12-02-2007/12-04-2007);
- Stage come dottorando presso il Department of Pharmacology (New York Medical College (Valhalla, New York) (18 mesi).
- Visiting Research Fellow presso il Department of Physiology and Pharmacology (Toledo, Ohio) (1/11/2010-31/10/2011).
- Visiting assistant professor presso il Department of Physiology and Pharmacology (Toledo, Ohio) (6/10/2012-6/11/2012)

Attività Didattica

- Ha svolto numerosi seminari per post-doctors dell'Università di Toledo (Ohio) (1/11/2010-31/10/2011).
- Ha svolto numerosi seminari per post-doctors dell'Università di Toledo (Ohio) (6/10/2012-6/11/2012)
- Ha insegnato Biochimica della Nutrizione I e II presso la Scuola di Specializzazione in Farmacia Ospedaliera (SSFO) AA. 2012/2013.

Attività Organizzativa

Comunicazioni orali a congressi internazionali e nazionali

- American Heart Association
13-17 Novembre 2010, Chicago
Perturbations in redox homeostasis in visceral fat due to decrease in HO-1, adiponectin and pAMPK adversely effects vascular function in obese mice.
Vanella L.
- The 13th International winter eicosanoid conference
Baltimore, Maryland. 13-16 Marzo 2011
EET-Agonist Regulates human Mesenchymal stem-cells-derived adipocytes through activation of HO-1-pAKT signalling a decrease in PPARgamma
Vanella L.
- 2011 Symposium ISHR, Haifa 28 Giugno 2011 Increases in adiponectin in epicardial fat ameliorate ischemia-induced cardiac dysfunction in obese rats through recruitment of LKB1 and pAMPK.
Vanella L.
- Workshop: Advances in Heme Oxygenase and Oxidative Stress,
Catania 12-13 aprile 2012
Effect of EETs on mesenchymal stem cell differentiation
- 7th International Congress on Heme Oxygenases and Related Enzymes Edinburgh 28th May - 1st June 2012. HO-1 EET cross talk in transcriptional regulation of diabetes and obesity.
- Workshop: Oxidative stress, inflammation and metabolic diseases (30th May 2013)
Role of Heme Oxygenase-2 in Metabolic Syndrome.

Revisore Delle Seguenti Riviste:

British Journal of Pharmacology
Food and chemical toxicology
Prostaglandins and Other Lipid Mediators
Cardiovascular Diabetology

Guest Editor for Journal of Hypertension and Cardiology

Scientific Secretariat:

- Workshop: Advances in Heme Oxygenase and Oxidative Stress, Catania 12-13 aprile 2012
- Workshop: Oxidative stress, inflammation and metabolic diseases (30th May 2013).

Attività Scientifica

- Azione anti-neoplastica di molecole naturali ad attività antiossidante.
- Induzione dell'eme-ossigenasi in condizioni di ischemia e ri-perfusione: effetto di molecole naturali ad azione antiossidante.
- Relazione tra eme-ossigenasi ad adiponectina in esperimenti *in vitro* ed *in vivo*.
- Ruolo dell'eme-ossigenasi durante la differenziazione delle cellule staminali mesenchimali in adipociti ed osteoblasti.
- Azione anti-infiammatoria di alcuni derivati dell'acido arachidonico nella sindrome metabolica ed in particolare nell'obesità e nel diabete mellito.

Pubblicazioni ultime cinque anni

1. Oxidative and antioxidant status in plasma of runners: effect of oral supplementation with natural antioxidants
Di Giacomo C., Acquaviva R., Sorrenti V., Vanella A., Grasso S., Barcellona M.L., Galvano F., Vanella L. and Renis M.
J. Med. Food 2009, 12, 145-150
2. Beneficial effects of rutin and L-arginine coadministration in a rat model of liver ischemia-reperfusion injury.
Acquaviva R., Lanteri R., Li Destri G., Caltabiano R., Vanella L., Lanzafame S., Di Cataldo A., Li Volti G., Di Giacomo C.
Am. J. Physiol Gastrointest. Liver Physiol., 2009, 296, G664-70
3. Heme Oxygenase-1 Induction Remodels Adipose Tissue and Improves Insulin Sensitivity in Obesity-Induced Diabetic Rats.
Nicolai A., Li M., Kim D.H., Peterson S.J., Vanella L., Positano V, Gastaldelli A., Rezzani R., Rodella L.F., Drummond G., Kusmic C, L'Abbate A., Kappas A., Abraham N.G.
Hypertension, 2009, 53, 508-515
4. The L-4F mimetic peptide prevents insulin resistance through increased levels of HO-1, pAMPK and pAKT in obese mice
1Apo A-1 mimetic peptide, L-4F prevents insulin resistance through increased HO-1 and pAMPK in obese mice.
Peterson S.J., Kim D.H, Li M., Positano V., Vanella L., Rodella L.F., Piccolomini F., Puri N., Gastaldelli A., Kusmic C, L'Abbate A. and Abraham NG.
Journal of Lipid Research, 2009, 50, 1293-1304

5. Epoxyeicosatrienoic Acid Agonist Rescues the Metabolic Syndrome Phenotype of HO-2-Null Mice.
Sodhi K, Inoue K, Gotlinger K.H., Canestraro M., Vanella L., Kim D.H., Manthati V.L., Koduru S.R., Falck J.R., Schwartzman M.L., Abraham N.G.
J. Pharmacol. Exp. Ther. 2009, 331, 906-16
6. Diabetes impairs the vascular recruitment of normal stem cells by oxidant damage, reversed by increases in pAMPK, heme oxygenase-1, and adiponectin.
Sambuceti G., Morbelli S., Vanella L., Kusmic C., Marini C., Massollo M., Augeri C., Corselli M., Gherzi C., Chiavarina B., Rodella L.F., L'Abbate A., Drummond G., Abraham N.G., Frassoni F. **Stem Cells.** 2009, 27, 399-407
7. HO-1 expression increases mesenchymal stem cell-derived osteoblasts but decreases adipocyte lineage.
Vanella L., Kim D.H., Asprinio D., Peterson S.J, Barbagallo I, Vanella A., Goldstein D., Ikehara S., Kappas A., Abraham N.G.
Bone. 2010, 46, 236-243
8. EET-Agonist Regulates Human Mesenchymal Stem Cells-Derived Adipocytes Through Activation of HO-1-pAKT Signaling and a decrease in PPARgamma.
Kim D.H., Vanella L., Inoue K., Burgess A., Gotlinger K., Manthati V.L., Koduru S.R., Zeldin D.C., Falck J.R., Schwartzman M.L., Abraham N.G.
Stem Cells Dev. 2010,19.1863.73
9. Usefulness of clopidogrel to protect against diabetes-induced vascular damage.
McClung J.A., Kruger A.L., Ferraris A., Vanella L., Tsenovoy P., Weiss M.B., Abraham N.G.
Am. J. Cardiol. 2010, 105, 1014-8.
10. Overexpression of heme oxygenase-1 increases human osteoblast stem cell differentiation.
Barbagallo I, Vanella A., Peterson S.J., Kim D.H., Tibullo D., Giallongo C., Vanella L., Parrinello N., Palumbo GA, Di Raimondo F, Abraham NG, Asprinio D.
J. Bone Miner. Metab. 2010, 28, 276-88.
11. Adipocyte heme oxygenase-1 induction attenuates metabolic syndrome in both male and female obese mice.
Burgess A., Li M., Vanella L., Kim D.H., Rezzani R., Rodella L., Sodhi K., Canestraro M., Martasek P., Peterson S.J., Kappas A., Abraham N.G.
Hypertension. 2010, 56,1124-30.
12. Successful modulation of type 2 diabetes in db/db mice with intra-bone marrow-bone marrow transplantation plus concurrent thymic transplantation.
Li M., Abraham N.G., Vanella L., Zhang Y., Inaba M., Hosaka N., Hoshino S., Shi M., Ambrosini Y.M., Gershwin M.E., Ikehara S.
J. Autoimmun. 2010, 35, 414-23.
13. Lentiviral-Human heme oxygenase targeting endothelium improved vascular function in angiotensin II animal model of hypertension.

- Cao J., Sodhi K., Inoue K., Quilley J., Rezzani R., Rodella L., Vanella L., Germinario L., Stec D.E., Abraham N.G., Kappas A. **Hum. Gene Ther.** 2011, 22, 271-82.
14. Apolipoprotein A-I mimetic peptide L-4F prevents myocardial and coronary dysfunction in diabetic mice.
Vecoli C., Cao J., Neglia D., Inoue K., Sodhi K., Vanella L., Gabrielson K.K., Bedja D., Paolocci N., L'abbate A., Abraham N.G.
J. Cell Biochem. 2011
15. The DDAH/NOS pathway in human prostatic cancer cell lines: Antiangiogenic effect of L-NAME.
Vanella L., Di Giacomo C., Acquaviva R., Santangelo R., Cardile V., Barbagallo I., Abraham N.G., Sorrenti V.
Int. J. Oncol. 2011
16. Crosstalk between EET and HO-1 downregulates adipogenic marker expression in mesenchymal stem cell derived adipocytes
Vanella L., Kim DH, Sodhi K, Barbagallo I, Burgess AP, Falck JR, Schwartzman ML, Abraham NG.
Prostaglandins and Other Lipid Mediat. 2011
17. Epoxyeicosatrienoic acids and heme oxygenase-1 interaction attenuates diabetes and metabolic syndrome complications
Burgess A, Vanella L., Bellner L, Schwartzman ML, Abraham NG.
Prostaglandins Other Lipid Mediat. 2012 Jan
18. ApoA1: mimetic peptide reverses adipocyte dysfunction in vivo and in vitro via an increase in heme oxygenase (HO-1) and Wnt10b.
Vanella L., Li M, Kim D, Malfa G, Bellner L, Kawakami T, Abraham NG
Cell Cycle. 2012 Feb.
19. Heme oxygenase (HO-1) rescue of adipocyte dysfunction in HO-2 deficient mice via recruitment of epoxyeicosatrienoic acids (EETs) and adiponectin.
Burgess AP, Vanella L., Bellner L, Gotlinger K, Falck JR, Abraham NG, Schwartzman ML, Kappas A.
Cell Physiol Biochem. 2012
20. Endothelial Progenitor Cell Function Inversely Correlates With Long-term Glucose Control in Diabetic Patients: Association With the Attenuation of the Heme Oxygenase-Adiponectin Axis.
Issan Y, Hochhauser E, Kornowski R, Leshem-Lev D, Lev E, Sharoni R, Vanella L., Puri N, Laniado-Schwartzman M, Abraham NG, Porat E.
Can J Cardiol. 2012 Mar 23
21. Antiproliferative effect of oleuropein in prostate cell lines
Acquaviva R, Di Giacomo C, Sorrenti V, Galvano F, Santangelo R, Cardile V, Gangia S, D'Orazio N, Abraham NG, Vanella L.
Int J Oncol. 2012 Apr

22. Oxidative stress and heme oxygenase-1 regulated human mesenchymal stem cells differentiation.
Vanella L, Sanford C Jr, Kim DH, Abraham NG, Ebraheim N.
Int J Hypertens. 2012
23. Heme oxygenase gene targeting to adipocytes attenuates adiposity and vascular dysfunction in mice fed a high-fat diet.
Cao J, Peterson SJ, Sodhi K, Vanella L, Barbagallo I, Rodella LF, Schwartzman ML, Abraham NG, Kappas A
Hypertension 2012
24. Heme Oxygenase (HO-1) Rescue of Adipocyte Dysfunction in HO-2 Deficient Mice via Recruitment of Epoxyeicosatrienoic Acids (EETs) and adiponectin
Burgess AP, Vanella L, Bellner L, Gotlinger K, Falck JR, Abraham NG, Schwartzman ML, Kappas A
Cellular Physiology And Biochemistry 2012
25. Effect of treatment with cyanidin-3-O-beta-D-glucoside on rat ischemic/reperfusion brain damage
Di Giacomo C, Acquaviva R, Santangelo R, Sorrenti V, Vanella L, Li Volti G, D'Orazio N, Vanella A, Galvano F (2012).
Evidence-Based Complementary And Alternative Medicine
26. Biochemical modifications in Pinus pinaster Ait. as a result of environmental pollution.
Acquaviva R, Vanella L, Sorrenti V, Santangelo R, Iauk L, Russo A, Savoca F, Barbagallo I, Di Giacomo C (2012).
Environmental Science And Pollution Research International
27. Nuclear translocation of heme oxygenase-1 confers resistance to Imatinib in chronic myeloid leukemia cells.
Tibullo D, Barbagallo I, Giallongo C, La Cava P, Parrinello N, Vanella L, Stagno F, Palumbo GA, Li Volti G, Di Raimondo F.
Current Pharmaceutical Design 2013
28. Ellagic Acid: Cytodifferentiating and Antiproliferative Effects In Human Prostatic Cancer Cell Lines
Vanella L, Barbagallo I, Acquaviva R, Di Giacomo C, Cardile V, Abraham NG, Sorrenti V
Current Pharmaceutical Design 2013
29. Heme oxygenase-2/adiponectin protein-protein interaction in metabolic syndrome.
Vanella L, Li Volti G, Guccione S, Rappazzo G, Salvo E, Pappalardo M, Forte S, Schwartzman ML, Abraham NG.
Biochem Biophys Res Commun. 2013
30. Antioxidant activity of extracts of Momordica foetida Schumach. et Thonn.
Acquaviva R, Di Giacomo C, Vanella L, Santangelo R, Sorrenti V, Barbagallo I, Genovese C, Mastrojeni S, Ragusa S, Iauk L.
Molecules. 2013

31. Increased heme-oxygenase 1 expression in mesenchymal stem cell-derived adipocytes decreases differentiation and lipid accumulation via upregulation of the canonical Wnt signaling cascade.

Vanella L, Sodhi K, Kim DH, Puri N, Maheshwari M, Hinds TD Jr, Bellner L, Goldstein D, Peterson SJ, Shapiro JI, Abraham NG.

Stem Cell Res Ther. 2013