CURRICULUM VITAE

FORMATO EUROPEO/EUROPEAN FORMAT

INFORMAZIONI PERSONALI/ PERSONAL INFORMATION

Nome, Cognome/Name, Surname	**Andrea Natali**
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Sito web/Website	**-**
Nazionalità/Nationality	**Italian**
Luogo e data di nascita/ Place and Date of birth	**Pisa, 20-February-1961**

ESPERIENZA PROFESSIONALE /WORK EXPERIENCE

In ordine di data /Dates (from – to)	**2007-Today Associate professor of Internal Medicine** **1999-2007 Research Investigator University of Pisa** **1994-1999 Research Investigator CNR Institute of Clinical Physiology**
Nome e indirizzo del datore di lavoro / Name and address of employer	**Università di Pisa, Lungarno Pacinotti 43, Pisa**
Tipo o settore di attività / Type of business or sector	**Teaching, clinical activities and clinical investigation**
Funzione o posto occupato / Occupation or position held	**Associate professor**
Principali mansion e responsabilità / Main activities and responsibilities	**Responsible for inpatient and outpatient clinic for metabolic diseases.**

ISTRUZIONE E FORMAZIONE / EDUCATION AND TRAINING

In ordine di data /Dates (from – to)	**1995 Specialty in Internal medicine** **1990 Specialty in Nuclear medicine** **1987 Degree in Medicine**

Nome e tipo d'istituto di istruzione o formazione / Name and type of organisation providing education and training	**University of Pisa**
Principali materie e competenze professionali apprese / Principal subjects occupational skills covered	**Clinical investigation and teaching in metabolic diseases**

ATTIVITA' DI RICERCA / RESEARCH ACTIVITIES

Attuali campi di ricerca / Research sectors	**1) epidemiology and pathophysiology of cardiovascular complications in diabetes and hypertension.** **2) pathophysiology of insulin resistance in relation to cardiovascular risk factors and endothelial dysfunction.** **3) pathophysiology of ß-cell dysfunction.** **4) Lipoproteins pathphysiology**
Recenti attività scientifiche/ Recent Scientific Activities.	**Participation to collaborative projects funded by EU agencies:** **Project management board in FP5 EU project RISC,** **Recruiting centre in IMI initiative sponsored SUMMIT project.** **Work package leader WP5 in ePREDICE an EU FP7 study.**

Article in extenso

1. **Morgantini C, Stea F, Boldrini B, Duranti E, Ghiadoni L, Natali A. Effect of mild hyperisulinemia on conduit vessel endothelial function: role of noradrenergic activation. J hypertens 2012;30:720-724.**
2. **Natali A, Santini E, Delbarba A, Baldi S, Venturi E, Tulipani A, Nisoli E, Ferrannini E. Effects of short and prolonged mild intracellular nitric oxide manipulations on various aspects of insulin secretion in INS-1E beta-cells. Exp Clin Endocrinol Diabetes 2012;120:210-216.**
3. **Baldi S, Bonnet F, Laville M, Morgantini C, Monti L, Hojlund K, Ferrannini E, Natali A. Influence of apolipoproteins on the association between lipids and insulin sensitivity: A cross-sectional analysis of the RISC study. Diabetes Care 2013;36:4125-4131.**
4. **Bonnet F, Roussel R, Natali A, Cauchi S, Petrie J, Laville M, Yengo L, Froguel P, Lange C, Lantieri O, Marre M, Balkau B, Ferrannini E. Parental history of type 2 diabetes, TCF7L2 variant and lower insulin secretion are associated with incident hypertension. Data from the DESIR and RISC cohorts. Diabetologia 2013;56:2414-2423.**
5. **Cobb J, Gall W, Adam KP, Nakhle P, Button E, Hathorn J, Lawton K, Milburn M, Perichon R, Mitchell M, Natali A, Ferrannini E. A novel fasting blood test for insulin resistance and prediabetes. J Diabetes Sci Technol 2013;7:100-110.**
6. **Ferrannini E, Natali A, Camastra S, Nannipieri M, Mari A, Adam KP, Milburn MV, Kastenmüller G, Adamski J, Tuomi T, Lyssenko V, Groop L, Gall WE. Early metabolic markers of the development of dysglycemia and type 2 diabetes and their physiological significance. Diabetes 2013;62:1730-1737.**
7. **Fiorillo C, Brisca G, Cassandrini D, Scapolan S, Astrea G, Valle M, Scuderi F, Trucco F, Natali A, Magnano G, Gazzerro E, Minetti C, Arca M, Santorelli FM, Bruno C. Subclinical myopathy in a child with neutral lipid storage disease and mutations in the PNPLA2 gene. Biochem Biophys Res Commun 2013;430:241-244.**
8. **Knowles JW, Assimes TL, Tsao PS, Natali A, Mari A, Quertermous T, Reaven GM, Abbasi F. Measurement of insulin-mediated glucose uptake: direct comparison of the modified insulin suppression test and the euglycemic, hyperinsulinemic clamp. Metabolism 2013;62:548-553.**
9. **Kozakova M, Natali A, Dekker J, Beck-Nielsen H, Laakso M, Nilsson P, Balkau B, Ferrannini E. Insulin sensitivity and carotid intima-media thickness: relationship between insulin sensitivity and cardiovascular risk study. Arterioscler Thromb Vasc Biol 2013;33:1409-1417.**
10. **Natali A, Gastaldelli A, Camastra S, Baldi S, Quagliarini F, Minicocci I, Bruno C, Pennisi E, Arca M. Metabolic consequences of adipose triglyceride lipase deficiency in humans: an in vivo study in patients with neutral lipid storage disease with myopathy. J Clin Endocrinol Metab 2013;98:E1540-1548.**
11. **Natali A, Ribeiro R, Baldi S, Tulipani A, Rossi M, Venturi E, Mari A, Macedo MP, Ferrannini E. Systemic inhibition of nitric oxide synthesis in non-diabetic individuals produces a significant deterioration in glucose tolerance by increasing insulin clearance**

and inhibiting insulin secretion. Diabetologia 2013;56:1183-1191.
12. Petrie JR, Malik MO, Balkau B, Perry CG, Hojlund K, Pataky Z, Nolan J, Ferrannini E, Natali A, Investigators R. Euglycemic clamp insulin sensitivity and longitudinal systolic blood pressure: role of sex. Hypertension 2013;62:404-409.
13. Morgantini C, Meriwether D, Baldi S, Venturi E, Pinnola S, Wagner AC, Fogelman AM, Ferrannini E, Natali A, Reddy ST. HDL lipid composition is profoundly altered in patients with type 2 diabetes and atherosclerotic vascular disease. Nutr Metab Cardiovasc Dis 2014;24:594-599.
14. Natali A, Boldrini B, Baldi S, Rossi M, Landi P, Severi S, Solini A, Ferrannini E. Impact of mild to moderate reductions of glomerular filtration rate on coronary artery disease severity. Nutr Metab Cardiovasc Dis 2014;24:681-688.
15. Bonnet F, Empana JP, Natali A, Monti L, Golay A, Lalic K, Dekker J, Mari A, Balkau B, Group RS. Elevated heart rate predicts beta cell function in non-diabetic individuals: the RISC cohort. Eur J Endocrinol 2015;173:409-415.
16. Goncalves I, Bengtsson E, Colhoun HM, Shore AC, Palombo C, Natali A, Edsfeldt A, Duner P, Fredrikson GN, Bjorkbacka H, Ostling G, Aizawa K, Casanova F, Persson M, Gooding K, Strain D, Khan F, Looker HC, Adams F, Belch J, Pinnoli S, Venturi E, Kozakova M, Gan LM, Schnecke V, Nilsson J, Consortium S. Elevated Plasma Levels of MMP-12 Are Associated With Atherosclerotic Burden and Symptomatic Cardiovascular Disease in Subjects With Type 2 Diabetes. Arterioscler Thromb Vasc Biol 2015;35:1723-1731.
17. Rebelos E, Seghieri M, Natali A, Balkau B, Golay A, Piatti PM, Lalic NM, Laakso M, Mari A, Ferrannini E. Influence of endogenous NEFA on beta cell function in humans. Diabetologia 2015;58:2344-2351.
18. Shore AC, Colhoun HM, Natali A, Palombo C, Ostling G, Aizawa K, Kennback C, Casanova F, Persson M, Gooding K, Gates PE, Kahn F, Looker HC, Adams F, Belch J, Pinnoli S, Venturi E, Morizzo C, Goncalves I, Ladenvall C, Nilsson J, consortium S. Measures of atherosclerotic burden are associated with clinically manifest cardiovascular disease in type 2 diabetes: a European cross-sectional study. J Intern Med 2015;278:291-302.
19. Solini A, Rossi C, Duranti E, Taddei S, Natali A, Virdis A. Saxagliptin prevents vascular remodeling and oxidative stress in db/db mice. Role of endothelial nitric oxide synthase uncoupling and cyclooxygenase. Vascular pharmacology 2015;76:62-71.
20. Trico D, Baldi S, Tulipani A, Frascerra S, Macedo MP, Mari A, Ferrannini E, Natali A. Mechanisms through which a small protein and lipid preload improves glucose tolerance. Diabetologia 2015;58:2503-2512.
21. Bizzotto R, Natali A, Gastaldelli A, Muscelli E, Krssak M, Brehm A, Roden M, Ferrannini E, Mari A. Glucose uptake saturation explains glucose kinetics profiles measured by different tests. American journal of physiology Endocrinology and metabolism 2016;311:E346-357.
22. Comassi M, Natali A, Solini A. Syphilis iridocyclitis in a patient with type 1 diabetes. J Diabetes Investig 2016;7:641-644.

23. Goncalves I, Edsfeldt A, Colhoun HM, Shore AC, Palombo C, Natali A, Fredrikson GN, Bjorkbacka H, Wigren M, Bengtsson E, Ostling G, Aizawa K, Casanova F, Persson M, Gooding K, Gates P, Khan F, Looker HC, Adams F, Belch J, Pinnola S, Venturi E, Kozakova M, Gan LM, Schnecke V, Nilsson J, consortium S. Association between renin and atherosclerotic burden in subjects with and without type 2 diabetes. BMC cardiovascular disorders 2016;16:171.

24. Roussel R, Natali A, Balkau B, Hojlund K, Sanchez G, Nolan JJ, Mari A, Kozakova M, Bonnet F. Beta-cell function is associated with carotid intima-media thickness independently of insulin resistance in healthy individuals. J Hypertens 2016;34:685-691.

25. Solini A, Rossi C, Duranti E, Taddei S, Natali A, Virdis A. Saxagliptin prevents vascular remodeling and oxidative stress in db/db mice. Role of endothelial nitric oxide synthase uncoupling and cyclooxygenase. Vascul Pharmacol 2016;76:62-71.

26. Trico D, Baldi S, Frascerra S, Venturi E, Marraccini P, Neglia D, Natali A. Abnormal Glucose Tolerance Is Associated with a Reduced Myocardial Metabolic Flexibility in Patients with Dilated Cardiomyopathy. J Diabetes Res 2016;2016:3906425.

27. Trico D, Filice E, Baldi S, Frascerra S, Mari A, Natali A. Sustained effects of a protein and lipid preload on glucose tolerance in type 2 diabetes patients. Diabetes & metabolism 2016;42:242-248.

28. Trico D, Filice E, Trifiro S, Natali A. Manipulating the sequence of food ingestion improves glycemic control in type 2 diabetic patients under free-living conditions. Nutrition & diabetes 2016;6:e226.

29. Venturi E, Pinnola S, Morizzo C, Boldrini B, Rossi M, Trifiro S, Trico D, Natali A, Group SS. Clinical Phenotype and Microvascular Dynamics of Subjects with Endothelial Dysfunction as Assessed by Peripheral Tonometry. Microcirculation 2016;23:230-239.

30. Bonnet F, Gastaldelli A, Pihan-Le Bars F, Natali A, Roussel R, Petrie J, Tichet J, Marre M, Fromenty B, Balkau B, D.E.S.I.R RSG. Gamma-glutamyltransferase, fatty liver index and hepatic insulin resistance are associated with incident hypertension in two longitudinal studies. J Hypertens 2017;35:493-500.

31. Fadini GP, Zatti G, Consoli A, Bonora E, Sesti G, Avogaro A, Network D-TD. Rationale and design of the DARWIN-T2D (DApagliflozin Real World evIdeNce in Type 2 Diabetes): A multicenter retrospective nationwide Italian study and crowdsourcing opportunity. Nutr Metab Cardiovasc Dis 2017;27:1089-1097.

32. Natali A, Nesti L, Fabiani I, Calogero E, Di Bello V. Impact of empagliflozin on subclinical left ventricular dysfunctions and on the mechanisms involved in myocardial disease progression in type 2 diabetes: rationale and design of the EMPA-HEART trial. Cardiovasc Diabetol 2017;16:130.

33. Natali AB, S.; Bonnet, F.; Petrie, J.; Trifirò, S.; Tricò, D.; Mari, A.; RISC Investigators. Plasma HDL-cholesterol and triglycerides, but not LDL-cholesterol, are associated with insulin secretion in non-diabetic subjects. Metabolism 2017;69:33-42.

34. Wood AR, Jonsson A, Jackson AU, Wang N, van Leewen N, Palmer ND, Kobes S, Deelen J, Boquete-Vilarino L, Paananen J, Stancakova

A, Boomsma DI, de Geus EJC, Eekhoff EMW, Fritsche A, Kramer M, Nijpels G, Simonis-Bik A, van Haeften TW, Mahajan A, Boehnke M, Bergman RN, Tuomilehto J, Collins FS, Mohlke KL, Banasik K, Groves CJ, McCarthy MI, Diabetes Research on Patient S, Pearson ER, Natali A, Mari A, Buchanan TA, Taylor KD, Xiang AH, Gjesing AP, Grarup N, Eiberg H, Pedersen O, Chen YD, Laakso M, Norris JM, Smith U, Wagenknecht LE, Baier L, Bowden DW, Hansen T, Walker M, Watanabe RM, t Hart LM, Hanson RL, Frayling TM. A Genome-Wide Association Study of IVGTT-Based Measures of First-Phase Insulin Secretion Refines the Underlying Physiology of Type 2 Diabetes Variants. Diabetes 2017;66:2296-2309.

35. Astiarraga B, Chueire VB, Souza AL, Pereira-Moreira R, Monte Alegre S, Natali A, Tura A, Mari A, Ferrannini E, Muscelli E. Effects of acute NEFA manipulation on incretin-induced insulin secretion in participants with and without type 2 diabetes. Diabetologia 2018;61:1829-1837.

36. Grespan E, Giorgino T, Arslanian S, Natali A, Ferrannini E, Mari A. Defective Amplifying Pathway of beta-Cell Secretory Response to Glucose in Type 2 Diabetes: Integrated Modeling of In Vitro and In Vivo Evidence. Diabetes 2018;67:496-506.

37. Morgantini C, Trifiro S, Trico D, Meriwether D, Baldi S, Mengozzi A, Reddy ST, Natali A. A short-term increase in dietary cholesterol and fat intake affects high-density lipoprotein composition in healthy subjects. Nutr Metab Cardiovasc Dis 2018;28:575-581.

38. Trico D, Frascerra S, Baldi S, Mengozzi A, Nesti L, Mari A, Natali A. The insulinotropic effect of a high-protein nutrient preload is mediated by the increase of plasma amino acids in type 2 diabetes. Eur J Nutr 2018;

39. Trico D, Natali A, Mari A, Ferrannini E, Santoro N, Caprio S. Triglyceride-rich very low-density lipoproteins (VLDL) are independently associated with insulin secretion in a multiethnic cohort of adolescents. Diabetes Obes Metab 2018;

40. Trico D, Trifiro S, Mengozzi A, Morgantini C, Baldi S, Mari A, Natali A. Reducing Cholesterol and Fat Intake Improves Glucose Tolerance by Enhancing beta Cell Function in Nondiabetic Subjects. J Clin Endocrinol Metab 2018;103:622-631.

41. Yamamoto R, Sacks FM, Hu FB, Rosner B, Furtado JD, Aroner SA, Ferrannini E, Baldi S, Kozakova M, Balkau B, Natali A, Jensen MK, Investigators R. High density lipoprotein with apolipoprotein C-III is associated with carotid intima-media thickness among generally healthy individuals. Atherosclerosis 2018;269:92-99.

ULTERIORI INFORMAZIONI / ADDITIONAL INFORMATION

Reviews

1. **Natali A, Ferrannini E. Endothelial dysfunction in type 2 diabetes. Diabetologia 2012;55:1559-1563.**
2. **Frontoni S, Solini A, Fioretto P, Natali A, Zuccalà A, Cosentino F, Penno G. The ideal blood pressure target to prevent cardiovascular disease in type 2 diabetes: A neutral viewpoint. Nutrition, Metabolism and Cardiovascular Diseases 2014;24:577-584.**
3. **Nesti L, Natali A. Metformin effects on the heart and the cardiovascular system: A review of experimental and clinical data. Nutrition, metabolism, and cardiovascular diseases : NMCD 2017;27:657-669.**
4. **Seghieri M, Trico D, Natali A. The impact of triglycerides on glucose tolerance: Lipotoxicity revisited. Diabetes & metabolism 2017;43:9.**

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