

Valentina BOLLATI

Dati Personali

<i>Nome</i>	Valentina Bollati
<i>Data di nascita</i>	23 Settembre 1980
<i>Indirizzo</i>	Laboratorio di Epidemiologia Molecolare ed Epigenetica Ambientale, Dipartimento di Scienze Cliniche e di Comunità Università degli Studi di Milano Clinica del Lavoro "L. Devoto" Via S. Barnaba, 8 20122 Milano Tel.: +39 02 50320127 Fax.: +39 02 50320103
<i>e-mail</i>	valentina.bollati@unimi.it

Studi

<i>2004-2007</i>	Dottorato di ricerca in Medicina del Lavoro e Igiene Industriale presso l'Università degli Studi di Milano.
<i>1999-2004</i>	Laurea quinquennale in Biotecnologie Mediche conseguita presso la facoltà di Medicina e Chirurgia dell'Università degli Studi di Milano. Titolo della tesi: "La modulazione dei canali del Ca ²⁺ voltaggio-dipendenti: Effetti del Ca ²⁺ extracellulare e delle poliamine. Uno studio sperimentale con la tecnica del Patch Clamp su colture di neuroni sensoriali di ratto"
<i>1994-1999</i>	Diploma conseguito presso il Liceo Scientifico Galileo Galilei di Legnano (sperimentazione P.N.I.: Piano Nazionale Informatico).

Esperienze professionali

<i>2014-oggi</i>	Professore Associato presso il Dipartimento di Scienze Cliniche e di Comunità, Università degli Studi di Milano.
<i>2011-2014</i>	Ricercatore a Tempo Determinato presso il Dipartimento di Scienze Cliniche e di Comunità, Università degli Studi di Milano.
<i>2007-2011</i>	Postdoc presso il centro di Epidemiologia Molecolare e Genetica, Dipartimento di Medicina del Lavoro, Università degli Studi di Milano.
<i>2004-2007</i>	Dottorato di Ricerca in Medicina del Lavoro e Igiene Industriale,

Laboratorio di Epidemiologia Molecolare, Centro di ricerca EPOCA,
Dipartimento di Medicina del Lavoro, Università di Milano.

Obiettivo del progetto di ricerca: Studio e sviluppo di nuovi marcatori
molecolari degli effetti del benzene.

2005 Visiting student presso University of Southern California, Norris Cancer
Center, Los Angeles, CA

2002-2004 Internato presso il Laboratorio di Fisiologia e Biofisica Umana,
Dipartimento di Fisiologia Umana, Milano.

Obiettivo del progetto di ricerca: Definire i ruoli della poliamina
endogena Spermina e della concentrazione dello ione calcio
extracellulare come modulatori delle correnti di calcio attraverso i canali
High Voltage Activated nei neuroni dei gangli delle radici dorsali.

Indicatori Bibliometrici (aggiornato a Novembre 2014)

H-index: 23

Numero totale di citazioni: 2110

Impact Factor Cumulativo: 224.27

Pubblicazioni

1. Vrijens K, Bollati V, Nawrot TS: MicroRNAs as potential signatures of environmental exposure or effect: a systematic review. *Environmental health perspectives* 2014, in press.
2. Bollati V, Favero C, Albetti B, Tarantini L, Moroni A, Byun HM, Motta V, Conti DM, Tirelli AS, Vigna L, Bertazzi PA, Pesatori AC: Nutrients intake is associated with DNA methylation of candidate inflammatory genes in a population of obese subjects. *Nutrients* 2014, in press.
3. Bollati V, Iodice S, Favero C, Angelici L, Albetti B, Cacace R, Cantone L, Carugno M, Cavalleri T, De Giorgio B, Dioni L, Fustinoni S, Hoxha M, Marinelli B, Motta V, Patrini L, Pergoli L, Riboldi L, Rizzo G, Rota F, Sucato S, Tarantini L, Tirelli AS, Vigna L, Bertazzi PA, Pesatori AC: Susceptibility to Particle Health Effects, miRNA and Exosomes: rationale and study protocol of the SPHERE Study. *BMC Public Health* 2014, in press.
4. Pergoli L, Favero C, Pfeiffer RM, Tarantini L, Calista D, Cavalleri T, Angelici L, Consonni D, Bertazzi PA, Pesatori AC, Bollati V: Blood DNA methylation, nevi number, and the risk of melanoma. *Melanoma research* 2014, 24(5):480-487.
5. Cantone L, Angelici L, Bollati V, Bonzini M, Apostoli P, Tripodi A, Bertazzi PA, Baccarelli AA: Extracellular histones mediate the effects of metal-rich air particles on blood coagulation. *Environmental research* 2014, 132:76-82.
6. Hoxha M, Fabris S, Agnelli L, Bollati V, Cutrona G, Matis S, Recchia AG, Gentile M, Cortelezzi A, Morabito F *et al*: Relevance of telomere/telomerase system impairment in early stage chronic lymphocytic leukemia. *Genes, chromosomes & cancer* 2014, 53(7):612-621.
7. Bollati V, Angelici L, Rizzo G, Pergoli L, Rota F, Hoxha M, Nordio F, Bonzini M, Tarantini L, Cantone L *et al*: Microvesicle-associated microRNA expression is altered upon particulate matter exposure in healthy workers and in A549 cells. *Journal of applied toxicology : JAT* 2014.

-
8. Elli FM, de Sanctis L, Bollati V, Tarantini L, Filopanti M, Barbieri AM, Peverelli E, Beck-Peccoz P, Spada A, Mantovani G: Quantitative analysis of methylation defects and correlation with clinical characteristics in patients with pseudohypoparathyroidism type I and GNAS epigenetic alterations. *The Journal of clinical endocrinology and metabolism* 2014, 99(3):E508-517.
 9. Bertazzi PA, Cantone L, Pignatelli P, Angelici L, Bollati V, Bonzini M, Carugno M, Mannucci PM, Violi F: Does enhancement of oxidative stress markers mediate health effects of ambient air particles? *Antioxidants & redox signaling* 2014, 21(1):46-51.
 10. Fustinoni S, Bollati V, Bertazzi PA: [Epigenetic modifications associated with low benzene exposure]. *Giornale italiano di medicina del lavoro ed ergonomia* 2013, 35(4):263-267.
 11. Peluso ME, Munnia A, Bollati V, Srivatanakul P, Jedpiyawongse A, Sangrajrang S, Ceppi M, Giese RW, Boffetta P, Baccarelli AA: Aberrant methylation of hypermethylated-in-cancer-1 and exocyclic DNA adducts in tobacco smokers. *Toxicological sciences : an official journal of the Society of Toxicology* 2014, 137(1):47-54.
 12. Alexeeff SE, Baccarelli AA, Halonen J, Coull BA, Wright RO, Tarantini L, Bollati V, Sparrow D, Vokonas P, Schwartz J: Association between blood pressure and DNA methylation of retrotransposons and pro-inflammatory genes. *International journal of epidemiology* 2013, 42(1):270-280.
 13. Collotta M, Bertazzi PA, Bollati V: Epigenetics and pesticides. *Toxicology* 2013, 307:35-41.
 14. Motta V, Angelici L, Nordio F, Bollati V, Fossati S, Frascati F, Tinaglia V, Bertazzi PA, Battaglia C, Baccarelli AA: Integrative Analysis of miRNA and inflammatory gene expression after acute particulate matter exposure. *Toxicological sciences : an official journal of the Society of Toxicology* 2013, 132(2):307-316.
 15. Bodelon C, Pfeiffer RM, Bollati V, Debbache J, Calista D, Ghiorzo P, Fagnoli MC, Bianchi-Scarra G, Peris K, Hoxha M *et al*: On the interplay of telomeres, nevi and the risk of melanoma. *PloS one* 2012, 7(12):e52466.
 16. Sordillo JE, Lange NE, Tarantini L, Bollati V, Zanobetti A, Sparrow D, Vokonas P, Schwartz J, Baccarelli A, Demeo D *et al*: Allergen sensitization is associated with increased DNA methylation in older men. *International archives of allergy and immunology* 2013, 161(1):37-43.
 17. Seow WJ, Pesatori AC, Dimont E, Farmer PB, Albetti B, Ettinger AS, Bollati V, Bolognesi C, Roggieri P, Panev TI *et al*: Urinary benzene biomarkers and DNA methylation in Bulgarian petrochemical workers: study findings and comparison of linear and beta regression models. *PloS one* 2012, 7(12):e50471.
 18. Bertazzi PA, Bollati V, Bonzini M: Hazard identification and risk evaluation in the metal industry: the epigenetic challenge. *Giornale italiano di medicina del lavoro ed ergonomia* 2012, 34(3):223-228.
 19. Lange NE, Sordillo J, Tarantini L, Bollati V, Sparrow D, Vokonas P, Zanobetti A, Schwartz J, Baccarelli A, Litonjua AA *et al*: Alu and LINE-1 methylation and lung function in the normative ageing study. *BMJ open* 2012, 2(5).
 20. Peluso M, Bollati V, Munnia A, Srivatanakul P, Jedpiyawongse A, Sangrajrang S, Piro S, Ceppi M, Bertazzi PA, Boffetta P, Baccarelli AA: DNA methylation differences in exposed workers and nearby residents of the Ma Ta Phut industrial estate, Rayong, Thailand. *International journal of epidemiology* 2012, 41(6):1753-1760; discussion 1761-1753.
 21. Lambrou A, Baccarelli A, Wright RO, Weisskopf M, Bollati V, Amarasiriwardena C, Vokonas P, Schwartz J: Arsenic exposure and DNA methylation among elderly men. *Epidemiology* 2012, 23(5):668-676.
 22. Fustinoni S, Rossella F, Polledri E, Bollati V, Campo L, Byun HM, Agnello L, Consonni D, Pesatori AC, Baccarelli A *et al*: Global DNA methylation and low-level exposure to benzene. *La Medicina del lavoro* 2012, 103(2):84-95.
 23. Baccarelli A, Rusconi F, Bollati V, Catelan D, Accetta G, Hou L, Barbone F, Bertazzi PA, Biggeri A: Nasal cell DNA methylation, inflammation, lung function and wheezing in children with asthma. *Epigenomics* 2012, 4(1):91-100.

-
24. Alegria-Torres JA, Baccarelli A, Bollati V: Epigenetics and lifestyle. *Epigenomics* 2011, 3(3):267-277.
 25. Wernimont SM, Clark AG, Stover PJ, Wells MT, Litonjua AA, Weiss ST, Gaziano JM, Tucker KL, Baccarelli A, Schwartz J, Bollati V, Cassano PA: Folate network genetic variation, plasma homocysteine, and global genomic methylation content: a genetic association study. *BMC medical genetics* 2011, 12:150.
 26. Carugno M, Pesatori AC, Dioni L, Hoxha M, Bollati V, Albetti B, Byun HM, Bonzini M, Fustinoni S, Cocco P *et al*: Increased mitochondrial DNA copy number in occupations associated with low-dose benzene exposure. *Environmental health perspectives* 2012, 120(2):210-215.
 27. Ursini G, Bollati V, Fazio L, Porcelli A, Iacovelli L, Catalani A, Sinibaldi L, Gelao B, Romano R, Rampino A *et al*: Stress-related methylation of the catechol-O-methyltransferase Val 158 allele predicts human prefrontal cognition and activity. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 2011, 31(18):6692-6698.
 28. Cantone L, Nordio F, Hou L, Apostoli P, Bonzini M, Tarantini L, Angelici L, Bollati V, Zanobetti A, Schwartz J *et al*: Inhalable metal-rich air particles and histone H3K4 dimethylation and H3K9 acetylation in a cross-sectional study of steel workers. *Environmental health perspectives* 2011, 119(7):964-969.
 29. Bollati V, Galimberti D, Pergoli L, Dalla Valle E, Barretta F, Cortini F, Scarpini E, Bertazzi PA, Baccarelli A: DNA methylation in repetitive elements and Alzheimer disease. *Brain, behavior, and immunity* 2011, 25(6):1078-1083.
 30. Zhu ZZ, Sparrow D, Hou L, Tarantini L, Bollati V, Litonjua AA, Zanobetti A, Vokonas P, Wright RO, Baccarelli A *et al*: Repetitive element hypomethylation in blood leukocyte DNA and cancer incidence, prevalence, and mortality in elderly individuals: the Normative Aging Study. *Cancer causes & control : CCC* 2011, 22(3):437-447.
 31. Fabris S, Bollati V, Agnelli L, Morabito F, Motta V, Cutrona G, Matis S, Grazia Recchia A, Gigliotti V, Gentile M *et al*: Biological and clinical relevance of quantitative global methylation of repetitive DNA sequences in chronic lymphocytic leukemia. *Epigenetics : official journal of the DNA Methylation Society* 2011, 6(2):188-194.
 32. Zhu ZZ, Hou L, Bollati V, Tarantini L, Marinelli B, Cantone L, Yang AS, Vokonas P, Lissowska J, Fustinoni S *et al*: Predictors of global methylation levels in blood DNA of healthy subjects: a combined analysis. *International journal of epidemiology* 2012, 41(1):126-139.
 33. Baccarelli A, Wright R, Bollati V, Litonjua A, Zanobetti A, Tarantini L, Sparrow D, Vokonas P, Schwartz J: Ischemic heart disease and stroke in relation to blood DNA methylation. *Epidemiology* 2010, 21(6):819-828.
 34. Bollati V, Baccarelli A, Sartori S, Tarantini L, Motta V, Rota F, Costa G: Epigenetic effects of shiftwork on blood DNA methylation. *Chronobiology international* 2010, 27(5):1093-1104.
 35. Baccarelli A, Tarantini L, Wright RO, Bollati V, Litonjua AA, Zanobetti A, Sparrow D, Vokonas PS, Schwartz J: Repetitive element DNA methylation and circulating endothelial and inflammation markers in the VA normative aging study. *Epigenetics : official journal of the DNA Methylation Society* 2010, 5(3):222-228.
 36. Bollati V, Baccarelli A: Environmental epigenetics. *Heredity* 2010, 105(1):105-112.
 37. Hou L, Wang H, Sartori S, Gawron A, Lissowska J, Bollati V, Tarantini L, Zhang FF, Zatonski W, Chow WH *et al*: Blood leukocyte DNA hypomethylation and gastric cancer risk in a high-risk Polish population. *International journal of cancer Journal international du cancer* 2010, 127(8):1866-1874.
 38. Wright RO, Schwartz J, Wright RJ, Bollati V, Tarantini L, Park SK, Hu H, Sparrow D, Vokonas P, Baccarelli A: Biomarkers of lead exposure and DNA methylation within retrotransposons. *Environmental health perspectives* 2010, 118(6):790-795.
 39. Mantovani G, de Sanctis L, Barbieri AM, Elli FM, Bollati V, Vaira V, Labarile P, Bondioni S, Peverelli E, Lania AG *et al*: Pseudohypoparathyroidism and GNAS epigenetic defects: clinical evaluation of albright hereditary osteodystrophy and molecular analysis in 40 patients. *The Journal of clinical endocrinology and metabolism* 2010, 95(2):651-658.

-
40. Bollati V, Marinelli B, Apostoli P, Bonzini M, Nordio F, Hoxha M, Pegoraro V, Motta V, Tarantini L, Cantone L *et al*: Exposure to metal-rich particulate matter modifies the expression of candidate microRNAs in peripheral blood leukocytes. *Environmental health perspectives* 2010, 118(6):763-768.
 41. Pavanello S, Pesatori AC, Dioni L, Hoxha M, Bollati V, Siwinska E, Mielzynska D, Bolognesi C, Bertazzi PA, Baccarelli A: Shorter telomere length in peripheral blood lymphocytes of workers exposed to polycyclic aromatic hydrocarbons. *Carcinogenesis* 2010, 31(2):216-221.
 42. Baccarelli A, Bollati V: Epigenetics and environmental chemicals. *Current opinion in pediatrics* 2009, 21(2):243-251.
 43. Rossella F, Polledri E, Bollati V, Baccarelli A, Fustinoni S: Development and validation of a gas chromatography/mass spectrometry method for the assessment of genomic DNA methylation. *Rapid communications in mass spectrometry : RCM* 2009, 23(17):2637-2646.
 44. Bollati V, Fabris S, Pegoraro V, Ronchetti D, Mosca L, Deliliers GL, Motta V, Bertazzi PA, Baccarelli A, Neri A: Differential repetitive DNA methylation in multiple myeloma molecular subgroups. *Carcinogenesis* 2009, 30(8):1330-1335.
 45. Pavanello S, Bollati V, Pesatori AC, Kapka L, Bolognesi C, Bertazzi PA, Baccarelli A: Global and gene-specific promoter methylation changes are related to anti-B[a]PDE-DNA adduct levels and influence micronuclei levels in polycyclic aromatic hydrocarbon-exposed individuals. *International journal of cancer Journal international du cancer* 2009, 125(7):1692-1697.
 46. Aparicio A, North B, Barske L, Wang X, Bollati V, Weisenberger D, Yoo C, Tannir N, Horne E, Groshen S *et al*: LINE-1 methylation in plasma DNA as a biomarker of activity of DNA methylation inhibitors in patients with solid tumors. *Epigenetics : official journal of the DNA Methylation Society* 2009, 4(3):176-184.
 47. Tarantini L, Bonzini M, Apostoli P, Pegoraro V, Bollati V, Marinelli B, Cantone L, Rizzo G, Hou L, Schwartz J *et al*: Effects of particulate matter on genomic DNA methylation content and iNOS promoter methylation. *Environmental health perspectives* 2009, 117(2):217-222.
 48. Bollati V, Schwartz J, Wright R, Litonjua A, Tarantini L, Suh H, Sparrow D, Vokonas P, Baccarelli A: Decline in genomic DNA methylation through aging in a cohort of elderly subjects. *Mechanisms of ageing and development* 2009, 130(4):234-239.
 49. Baccarelli A, Wright RO, Bollati V, Tarantini L, Litonjua AA, Suh HH, Zanobetti A, Sparrow D, Vokonas PS, Schwartz J: Rapid DNA methylation changes after exposure to traffic particles. *American journal of respiratory and critical care medicine* 2009, 179(7):572-578.
 50. Rusiecki JA, Baccarelli A, Bollati V, Tarantini L, Moore LE, Bonefeld-Jorgensen EC: Global DNA hypomethylation is associated with high serum-persistent organic pollutants in Greenlandic Inuit. *Environmental health perspectives* 2008, 116(11):1547-1552.
 51. Bollati V, Baccarelli A, Hou L, Bonzini M, Fustinoni S, Cavallo D, Byun HM, Jiang J, Marinelli B, Pesatori AC *et al*: Changes in DNA methylation patterns in subjects exposed to low-dose benzene. *Cancer research* 2007, 67(3):876-880.
 52. Baccarelli A, Marinelli B, Bollati V, Albetti B, Consonni D, Bonzini M, Pesatori AC, Bertazzi PA: DNA methylation analysis in environmental and occupational cancer research. *Giornale italiano di medicina del lavoro ed ergonomia* 2005, 27(3):267-271.
-

Capitoli di Libro

- 2008 Bollati V, Forni A *Benzene and Leukemia*. In: Encyclopedia of Cancer, 2nd Edition, Springer.
- 2011 Alegría-Torres J A, Bollati V, Baccarelli A *Environmental Epigenetics*. In: Epigenetics of Lifestyle.
- 2013 Bollati V. *Nuovi Indicatori Biologici*. In: Linee Guida per il Monitoraggio Biologico. Società Italiana di Medicina del Lavoro e Igiene Industriale.
- 2013 Bollati V, *Variabilità genetica ed epigenetica e noxae ambientali e professionali*. In: La Medicina del Lavoro. Raffaello Cortina Editore.
-

Presentazioni su invito

- XXXII Congresso Italiano di Epidemiologia, Milano, 2008* Bollati V, Baccarelli A. *Utilizzo di markers epigenetici negli studi epidemiologici*.
- 72° Congresso Nazionale SIMLII, Firenze, 2009* Bollati V, Fustinoni S, Pesatori A. *Epigenetic mechanisms in subjects exposed to benzene in occupational and living settings*.
- 50th EUROTOX Congress, Edinburgh 7-10th September 2014.* Bollati V, *Epigene-Environment Interactions*.
-

Finanziamenti

My First Airc Grant AIRC 10361

31/12/2010 - 30/12/2013

Italian Association for Cancer Research (AIRC)

“Germline epimutations in malignant melanoma”

Ruolo: PI

Finanziamento: € 150.000

ERC Starting Independent Researcher Grant 282413

1/12/2011 - 30/11/2016

ERC-European Research Council

“SPHERE: Susceptibility to Particle Health Effects, miRNAs and Exosomes”

Ruolo: PI

Finanziamento: € 1.444.742

FP7 - HEALTH - 2011 - two Stage – Grant 279143

1/12/2011 - 30/11/2014

Unione Europea

“EPIMIGRANT: Identification of epigenetic markers underlying increased risk of T2D in South Asians”

Ruolo: Co-PI

Finanziamento € 591.800
