

Curriculum Vitae

Personal information **Claudia Colussi**

Work experience

1. Employer: National Research Council
 - Start date: 2015
 - End date:
 - Position: Associate Professor
 - Activities:

Research in neuroscience

 - Country: Italy
2. Employer: AIFA
 - Start date: 2014
 - End date: 2015
 - Position: Preclinical Assessor for the European Assessment Office
 - Activities:
 - Country: Italy
3. Employer: Catholic University of the Sacred Heart, (Italy)
 - Start date: 2012
 - End date: 2014
 - Position: Assistant Professor
 - Activities:

Epigenetic mechanism in diabetic cardiomyopathy

 - Country: Italy
4. Employer: Istituto Dermatologico dell'Immacolata (IDI), (Italy)
 - Start date: 2010
 - End date: 2011
 - Position: Senior Scientist
 - Activities:

Epigenetic mechanisms of dystrophic cardiomyopathy

 - Country: Italy
5. Employer: Monzino Cardiology Center, (Italy)
 - Start date: 2007
 - End date: 2010
 - Position: Senior Scientist
 - Activities:

Molecular basis of cardiac and muscular dysfunction in the mdx mouse model of Duchenne Muscular Dystrophy

 - Country: Italy
6. Employer: Telethon Foundation, (Italy)
 - Start date: 2003
 - End date: 2006
 - Position: Postdoctoral Fellow
 - Activities:

Molecular basis of endothelial and muscular dysfunction in the mdx mouse model of Duchenne Muscular Dystrophy

 - Country: Italy
7. Employer: New York Medical College, (United States)
 - Start date: 2001
 - End date: 2002
 - Position: Postdoctoral Fellow
 - Activities:

Molecular basis of mechanisms of activation, proliferation and differentiation of cardiac stem cell.

 - Country: United States
8. Employer: National health institute (ISS)
 - Start date: 1998
 - End date: 2000
 - Position: Italian Association for Cancer Research Fellowship
 - Activities:

Role of the DNA mismatch repair pathway in the response to chemotherapeutic agents and the repair of oxidative DNA damage: in vitro and in vivo studies.

 - Country: Italy

Education and training

1. Subject: Catholic University of Sacred Heart,
 - Start date:
 - End date: 2012
 - Qualification: PhD in Endocrinology
 - Organisation:
 - Country: Italy
2. Subject: University of Rome Sapienza
 - Start date:
 - End date: 2003
 - Qualification: Board Certification in Clinical Pathology
 - Organisation:
 - Country: Italy
3. Subject: University of Tor Vergata
 - Start date:
 - End date: 1996
 - Qualification: Degree in Biology
 - Organisation:
 - Country: Italy

Additional information

Publications

Selected Publications (out of 54) H_index: 27 Aceto G, Nardella L, Nanni S, Pecci V, Bertozzi A, Colussi C, D'Ascenzo M, Grassi C Activation of histamine type 2 receptors enhances intrinsic excitability of medium spiny neurons in the nucleus accumbens. *The Journal of Physiology* 2022, 10.1113/JP282962, in press Nardin C, Peres C, Putti S, Orsini T, Colussi C, Mazzarda F, Raspa M, Scavizzi F, Salvatore AM, Chiani F, Tettey_Matey A, Kuang Y, Yang G, Retamal MA, Mammano F. Connexin hemichannel activation by S_Nitrosoglutathione synergizes strongly with photodynamic therapy potentiating anti_tumor bystander killing. *Cancers* 2021, 13, 5062. doi.org/10.3390/cancers13205062 Colussi C@, Grassi C@ Epigenetic regulation of neural stem cells: The emerging role of nucleoporins. *Stem Cells*. 2021 Aug 16. doi: 10.1002/stem.3444. Barbati SA, Cocco S, Longo V, Spinelli M, Gironi K, Mattera A, Paciello F, Colussi C, Podda MV, Grassi C. Enhancing plasticity mechanisms in the mouse motor cortex by anodal transcranial direct current stimulation: the contribution of nitric oxide signaling. *Cereb Cortex*. 2020 May 14;30(5):2972_2985. doi: 10.1093/cercor/bhz288. Aceto G, Colussi C, Leone L, Fusco S, Rinaudo M, Scala F, Green TA, Laezza F, D'Ascenzo M, Grassi C. Chronic mild stress alters synaptic plasticity in the nucleus accumbens through GSK3β dependent modulation of Kv4.2 channels. *Proc Natl Acad Sci U S A*. 2020 Apr 7;117(14):8143_8153. doi: 10.1073/pnas.1917423117. Leone L, Colussi C@, Gironi K, Longo V, Fusco S, Li Puma DD, D'Ascenzo M, Grassi C. Altered Nup153 Expression Impairs the Function of Cultured Hippocampal Neural Stem Cells Isolated from a Mouse Model of Alzheimer's Disease. *Mol Neurobiol*. 2019 Aug;56(8):5934_5949. doi: 10.1007/s12035_018_1466_1. @corresponding author Aceto G, Re A, Mattera A, Leone L, Colussi C, Rinaudo M, Scala F, Gironi K, Barbati SA, Fusco S, Green T, Laezza F, D'Ascenzo M, Grassi C. GSK3β Modulates Timing Dependent Long Term Depression Through Direct Phosphorylation of Kv4.2 Channels. *Cereb Cortex*. 2019 May 1;29(5):1851_1865. doi: 10.1093/cercor/bhy042. Re A, Colussi C@, Nanni S, Aiello A, Bacci L, Grassi C, Pontecorvi A, Farsetti A. Nucleoporin 153 regulates estrogen dependent nuclear translocation of endothelial nitric oxide synthase and estrogen receptor beta in prostate cancer. *Oncotarget*. 2018 Jun 15;9(46):27985_27997. doi: 10.18632/oncotarget.25462. eCollection 2018 Jun 15. @co_corresponding author Bacci L, Barbati SA, Colussi C, Aiello A, Isidori AM, Grassi C, Pontecorvi A, Farsetti A, Gaetano C, Nanni S. Sildenafil normalizes MALAT1 level in diabetic cardiomyopathy. *Endocrine*. 2018 Oct;62(1):259_262. doi: 10.1007/s12020_018_1599_z. Milardi D*, Colussi C*, Grande G, Vincenzoni F, Pierconti F, Mancini F, Baroni S, Castagnola M, Marana R, Pontecorvi A. Olfactory Receptors in Semen and in the Male Tract: From Proteome to Proteins. *Front Endocrinol (Lausanne)*. 2018 Jan 23;8:379. doi: 10.3389/fendo.2017.00379. eCollection 2017. * equal contribution Mastrodonato A, Barbati SA, Leone L, Colussi C, Gironi K, Rinaudo M, Piacentini R, Denny CA, Grassi C. Olfactory memory is enhanced in mice exposed to extremely low frequency electromagnetic fields via Wnt/β catenin dependent modulation of subventricular zone neurogenesis. *Sci Rep*. 2018 Jan 10;8(1):262. doi: 10.1038/s41598_017_18676_1. Barbati SA*, Colussi C*, Bacci L, Re A, Stigliano E, Isidori AM, Grassi C, Pontecorvi A, Farsetti A, Gaetano C, Nanni S. Transcription Factor CREM Mediates High Glucose Response in Cardiomyocytes and in a Male Mouse Model of Prolonged Hyperglycemia. *Endocrinology*. 2017 Jul 1;158(7):2391_2405. doi: 10.1210/en.2016_1960. *equal contribution Nanni S, Re A, Ripoli C, Gowran A, Nigro P, D'Amario D, Amodeo A, Crea F, Grassi C, Pontecorvi A, Farsetti A, Colussi C. The nuclear pore protein Nup153 associates with chromatin and regulates cardiac gene expression in dystrophic mdx hearts. *Cardiovasc Res*. 2016 Nov 1;112(2):555_567. doi: 10.1093/cvr/cvw204. Podda MV, Cocco S, Mastrodonato A, Fusco S, Leone L, Barbati SA, Colussi C, Ripoli C, Grassi C. Anodal transcranial direct current stimulation boosts synaptic plasticity and memory in mice via epigenetic regulation of Bdnf expression. *Sci Rep*. 2016 Feb 24;6:22180. doi: 10.1038/srep22180. Re A, Nanni S, Aiello A, Granata S, Colussi C, Campostrini G, Spallotta F, Mattiussi S, Pantisano V, D'Angelo C, Biroccio A, Rossini A, Barbuti A, DiFrancesco D, Trimarchi F, Pontecorvi A, Gaetano C, Farsetti A. Anacardic acid and thyroid hormone enhance cardiomyocytes production from undifferentiated mouse ES cells along functionally distinct pathways. *Endocrine*. 2016 Sep;53(3):681_8. doi: 10.1007/s12020_015_0751_2. Meraviglia V, Azzimato V, Colussi C, Florio MC, Binda A, Panariti A, Qanud K, Suffredini S, Gennaccaro L, Miragoli M, Barbuti A, Lampe PD, Gaetano C, Pramstaller PP, Capogrossi MC, Recchia FA, Pompilio G, Rivolta I, Rossini A. Acetylation mediates Cx43 reduction caused by electrical stimulation. *J Mol Cell Cardiol*. 2015 Oct;87:54_64. doi: 10.1016/j.yjmcc.2015.08.001. Prandi F, Piola M, Soncini M, Colussi C, D'Alessandra Y, Penza E, Agrifoglio M, Vinci MC, Polvani G, Gaetano C, Fiore GB, Pesce M. Adventitial vessel growth and progenitor cells activation in an ex vivo culture system mimicking human saphenous vein wall strain after coronary artery bypass grafting. *PLoS One*. 2015 Feb 17;10(2):e0117409. doi: 10.1371/journal.pone.0117409. eCollection 2015. Vecellio M, Spallotta F, Nanni S, Colussi C, Cencioni C, Derlet A, Bassetti B, Tilenni M, Carena MC, Farsetti A, Sbardella G, Castellano S, Mai A, Martelli F, Pompilio G, Capogrossi MC, Rossini A, Dimmeler S, Zeiher A, Gaetano C. The histone acetylase activator pentadecylidenemalonate 1b rescues proliferation and differentiation in the human cardiac mesenchymal cells of type 2 diabetic patients. *Diabetes*. 2014 Jun;63(6):2132_47. doi: 10.2337/db13_0731. Spallotta F, Tardivo S, Nanni S, Rosati JD, Straino S, Mai A, Vecellio M, Valente S, Capogrossi MC, Farsetti A, Martone J, Bozzoni I, Pontecorvi A, Gaetano C, Colussi C. Detrimental effect of class selective histone deacetylase inhibitors during tissue regeneration following hindlimb ischemia. *J Biol Chem*. 2013 Aug 9;288(32):22915_29. doi: 10.1074/jbc.M113.484337. Nanni S, Aiello A, Re A, Guffanti A, Benvenuti V, Colussi C, Castro_Vega LJ, Felsani A, Londono_Vallejo A, Capogrossi MC, Bacchetti S, Gaetano C, Pontecorvi A, Farsetti A. Estrogen dependent dynamic profile of eNOS DNA associations in prostate cancer. *PLoS One*. 2013 May 3;8(5):e62522. doi:10.1371/journal.pone.0062522. Spallotta F, Cencioni C, Straino S, Nanni S, Rosati J, Artuso S, Manni I, Colussi C, Piaggio G, Martelli F, Valente S, Mai A, Capogrossi MC, Farsetti A, Gaetano C. A nitric oxide dependent cross talk between class I and III histone deacetylases accelerates skin repair. *J Biol Chem*. 2013 Apr 19;288(16):11004_12. doi: 10.1074/jbc.M112.441816. Colussi C, Scopece A, Vitale S, Spallotta F, Mattiussi S, Rosati J, Illi B, Mai A, Castellano S, Sbardella G, Farsetti A, Capogrossi MC, Gaetano C. P300/CBP associated factor regulates nitroglycerin dependent arterial relaxation by N(ε)_lysine acetylation of contractile proteins. *Arterioscler Thromb Vasc Biol*. 2012 Oct;32(10):2435_43. doi: 10.1161/ATVBAHA.112.254011. Re A, Aiello A, Nanni S, Grasselli A, Benvenuti V, Pantisano V, Strigari L, Colussi C, Ciccone S, Mazzetti AP, Pierconti F, Pinto F, Bassi P, Gallucci M, Sentinelli S, Trimarchi F, Bacchetti S, Pontecorvi A, Lo Bello M, Farsetti A. Silencing of GSTP1, a prostate cancer prognostic gene, by the estrogen receptor β and endothelial nitric oxide synthase complex. *Mol Endocrinol*. 2011 Dec;25(12):2003_16. doi: 10.1210/me.2011_1024. Illi B, Colussi C, Rosati J, Spallotta F, Nanni S, Farsetti A, Capogrossi MC, Gaetano C. NO points to epigenetics in vascular development. *Cardiovasc Res*. 2011 Jun 1;90(3):447_56. doi: 10.1093/cvr/cvr056. Review. Colussi C, Rosati J, Straino S, Spallotta F, Berni R, Stilli D, Rossi S, Musso E, Macchi E, Mai A, Sbardella G, Castellano S, Chimenti C, Frustaci A, Nebbioso A, Altucci L, Capogrossi MC, Gaetano C. Nε_lysine acetylation determines dissociation from GAP junctions and lateralization of connexin 43 in normal and dystrophic heart. *Proc Natl Acad Sci*

U S A. 2011 Feb 15;108(7):2795-800. doi: 10.1073/pnas.1013124108. Rosati J, Spallotta F, Nanni S, Grasselli A, Antonini A, Vincenti S, Presutti C, Colussi C, D'Angelo C, Biroccio A, Farsetti A, Capogrossi MC, Illi B, Gaetano C. Smad_interacting protein_1 and microRNA 200 family define a nitric oxide_dependent molecular circuitry involved in embryonic stem cell mesendoderm differentiation. *Arterioscler Thromb Vasc Biol.* 2011 Apr;31(4):898-907. doi:10.1161/ATVBAHA.110.214478. Colussi C, Banfi C, Brioschi M, Tremoli E, Straino S, Spallotta F, Mai A, Rotili D, Capogrossi MC, Gaetano C. Proteomic profile of differentially expressed plasma proteins from dystrophic mice and following suberoylanilide hydroxamic acid treatment. *Proteomics Clin Appl.* 2010 Jan;4(1):71-83. doi: 10.1002/prca.200900116. Colussi C, Illi B, Rosati J, Spallotta F, Farsetti A, Grasselli A, Mai A, Capogrossi MC, Gaetano C. Histone deacetylase inhibitors: keeping momentum for neuromuscular and cardiovascular diseases treatment. *Pharmacol Res.* 2010 Jul;62(1):3-10. doi: 10.1016/j.phrs.2010.02.014. Review. Colussi C, Berni R, Rosati J, Straino S, Vitale S, Spallotta F, Baruffi S, Bocchi L, Delucchi F, Rossi S, Savi M, Rotili D, Quaini F, Macchi E, Stili D, Musso E, Mai A, Gaetano C, Capogrossi MC. The histone deacetylase inhibitor suberoylanilide hydroxamic acid reduces cardiac arrhythmias in dystrophic mice. *Cardiovasc Res.* 2010 Jul 1;87(1):73-82. doi: 10.1093/cvr/cvq035. Greco S, De Simone M, Colussi C, Zaccagnini G, Fasanaro P, Pescatori M, Cardani R, Perbellini R, Isaia E, Sale P, Meola G, Capogrossi MC, Gaetano C, Martelli F. Common micro_RNA signature in skeletal muscle damage and regeneration induced by Duchenne muscular dystrophy and acute ischemia. *FASEB J.* 2009 Oct;23(10):3335-46. doi: 10.1096/fj.08_128579. Illi B, Colussi C, Grasselli A, Farsetti A, Capogrossi MC, Gaetano C. NO sparks off chromatin: tales of a multifaceted epigenetic regulator. *Pharmacol Ther.* 2009 Sep;123(3):344-52. doi: 10.1016/j.pharmthera.2009.05.003. May 20. Review. Nanni S, Benvenuti V, Grasselli A, Priolo C, Aiello A, Mattiussi S, Colussi C, Lirangi V, Illi B, D'Eletto M, Cianciulli AM, Gallucci M, De Carli P, Sentinelli S, Mottolose R, Carlini P, Strigari L, Finn S, Mueller E, Arcangeli G, Gaetano C, Capogrossi MC, Donnorso RP, Bacchetti S, Sacchi A, Pontecorvi A, Loda M, Farsetti A. Endothelial NOS, estrogen receptor beta, and HIFs cooperate in the activation of a prognostic transcriptional pattern in aggressive human prostate cancer. *J Clin Invest.* 2009 May;119(5):1093-108. doi: 10.1172/JCI35079. Colussi C, Gurtner A, Rosati J, Illi B, Ragone G, Piaggio G, Moggio M, Lamperti C, D'Angelo G, Clementi E, Minetti G, Mozzetta C, Antonini A, Capogrossi MC, Puri PL, Gaetano C. Nitric oxide deficiency determines global chromatin changes in Duchenne muscular dystrophy. *FASEB J.* 2009 Jul;23(7):2131-41. doi: 10.1096/fj.08_115618. Colussi C, Mozzetta C, Gurtner A, Illi B, Rosati J, Straino S, Ragone G, Pescatori M, Zaccagnini G, Antonini A, Minetti G, Martelli F, Piaggio G, Gallinari P, Steinkühler C, Clementi E, Dell'Aversana C, Altucci L, Mai A, Capogrossi MC, Puri PL, Gaetano C. HDAC2 blockade by nitric oxide and histone deacetylase inhibitors reveals a common target in Duchenne muscular dystrophy treatment. *Proc Natl Acad Sci U S A.* 2008 Dec 9;105(49):19183-7. doi:10.1073/pnas.0805514105. Colussi C, Gaetano C, Capogrossi MC. AAV_dependent targeting of myostatin function: follistatin strikes back at muscular dystrophy. *Gene Ther.* 2008 Aug;15(15):1075-6. doi: 10.1038/gt.2008.95. Grasselli A, Nanni S, Colussi C, Aiello A, Benvenuti V, Ragone G, Moretti F, Sacchi A, Bacchetti S, Gaetano C, Capogrossi MC, Pontecorvi A, Farsetti A. Estrogen receptor_alpha and endothelial nitric oxide synthase nuclear complex regulates transcription of human telomerase. *Circ Res.* 2008 Jul 3;103(1):34-42. doi: 10.1161/CIRCRESAHA.107.169037. Gurtner A, Fuschi P, Magi F, Colussi C, Gaetano C, Döbelstein M, Sacchi A, Piaggio G. NF_Y dependent epigenetic modifications discriminate between proliferating and postmitotic tissue. *PLoS One.* 2008 Apr 23;3(4):e2047. doi: 10.1371/journal.pone.0002047. Illi B, Dello Russo C, Colussi C, Rosati J, Pallaoro M, Spallotta F, Rotili D, Valente S, Ragone G, Martelli F, Biglioli P, Steinkühler C, Gallinari P, Mai A, Capogrossi MC, Gaetano C. Nitric oxide modulates chromatin folding in human endothelial cells via protein phosphatase 2A activation and class II histone deacetylases nuclear shuttling. *Circ Res.* 2008 Jan 4;102(1):51-8. Gaetano C, Colussi C, Capogrossi MC. PEDF, PPAR_gamma, p53: deadly circuits arise when worlds collide. *Cardiovasc Res.* 2007 Nov 1;76(2):195-6. Minetti GC*, Colussi C*, Adami R*, Serra C, Mozzetta C, Parente V, Fortuni S, Straino S, Sampaolesi M, Di Padova M, Illi B, Gallinari P, Steinkühler C, Capogrossi MC, Sartorelli V, Bottinelli R, Gaetano C, Puri PL. Functional and morphological recovery of dystrophic muscles in mice treated with deacetylase inhibitors. *Nat Med.* 2006 Oct;12(10):1147-50. *equal contribution

Projects

Memberships

American Heart Association; Society for Neuroscience

Other Relevant Information

Editorial activity Reviewer for Scientific Reports, PLoS ONE, The International Journal of Biochemistry & Cell Biology, British Journal of Pharmacology, Journal of Cellular Physiology, Developmental Dynamics, Journal of Molecular and cellular Cardiology, Translational Neurodegeneration, Cells

International Grant Advisory Committees

2018 Ad hoc reviewer for Alzheimer's Association research grant fellowship (A

2020 Ad hoc reviewer for Alzheimer's Association research grant fellowship (A

2020 Ad hoc reviewer for Alzheimer's Association research grant (AARG)

2021 Ad hoc reviewer and discussant panel member for AARF program

2021 Ad hoc reviewer for Poland National Science Center (SONATA-21)

2022 Ad hoc reviewer and discussant panel member for Alzheimer's Association

2023 Ad hoc Reviewer for Biotechnology and Biological Sciences Research Co