
Cecilia Giulivi, Ph.D.

Giulivi, Cecilia, Ph.D. Professor, Department of Molecular Biosciences, School of Veterinary Medicine; Member of the MIND Institute; member of the UC Davis Cancer Center

Education

Biochemistry (professional degree), University of Buenos Aires, 1985; Summa Cum Laude.
Ph.D., Biochemistry, University of Buenos Aires, 1989

Biography

Dr. Giulivi joined the University of California, Davis in 2004 as an Associate Professor and since 2007 as a Professor. She has been a member of the MIND Institute since 2011. Dr. Giulivi has a strong background and experience in the area of mitochondria bioenergetics and free radical biochemistry. This is reflected in more than 100 publications in peer-reviewed journals in the chemistry-biochemistry field of mitochondria and free radicals. She worked on mitochondrial biochemistry since her undergraduate years, and more recently, her focus has been at understanding the underlying mechanisms that result in dysfunction of mitochondria in several pathophysiological situations such as autism, essential amino acid deficiency, type-2 diabetes, fragile X, and Huntington's disease.

After receiving her Ph.D. in Biochemistry from University of Buenos Aires in 1989, Dr. Giulivi went on to do a post doc at the University of Southern California. After completing research there in the department of Molecular Pharmacology and Toxicology she was promoted to the position of Assistant Professor. She then moved to the University of Minnesota in 1998 to serve as an Associate Professor in their Department of Chemistry, before moving here to UC Davis in 2004.

Dr. Giulivi has been a Member of Executive Board for Mitochondria in Physiology and a Member of the Editorial Board for the Journal Free Radical Biology and Medicine since 2004. In 2011 she was appointed as a Reviewer in the Medical Research Council, as well as ad-hoc reviewer for several NIH study sections including MIST, NGDB, and others. Previously she has served on the council for the Society for Free Radical Biology and Medicine Research. She received Autism Science's Top 10 Achievement Award for 2010, for groundbreaking work on identifying mitochondrial dysfunction in children with autism.

Publications

Selected Peer-reviewed Publications (H-index in Google Scholar = 34; ranked top 100 laboratories in mitochondria research out of 4,613 in Mitochondrial Registry Laboratories).

1. Napoli, E, Angelastro J, Sakaguchi D, *et al.* Brain mitochondrial dysfunction in PTEN haplo-insufficient mice with autistic-like behavior. *PLoS Genetics* **in revision** (2012).
2. Lein, PJ, Li Y, Liu C, *et al.* Neuregulin-1 is Neuroprotective in a Rat Model of Organophosphate-Induced Delayed Neuronal Injury. *Tox. Applied Pharmacol.* **in revision** (2012).
3. Pon, J, Napoli E, Luckhart S & Giulivi C. Mitochondrial NAD⁺-dependent malic enzyme from *Anopheles stephensi*: a possible novel target for malaria mosquito control. *Malar J* **10**, 318 (2011).
4. Napoli, E, Ross-Inta C, Wong S, *et al.* Altered zinc transport disrupts mitochondrial protein processing/import in fragile X-associated tremor/ataxia syndrome. *Human molecular genetics* **20**, 3079-3092 (2011).

5. Giulivi, C, Ross-Inta C, Omanska-Klusek A, *et al.* Basal bioenergetic abnormalities in skeletal muscle from ryanodine receptor malignant hyperthermia-susceptible R163C knock-in mice. *J Biol Chem* **286**, 99-113 (2011).
6. Villanueva, C & Giulivi C. Subcellular and cellular locations of nitric oxide synthase isoforms as determinants of health and disease. *Free Radic Biol Med* **49**, 307-316 (2010).
7. Vernau, KM, Runstadler JA, Husan HJ, *et al.* Is Alaskan Husky encephalopathy a mitochondrial disease? *Journal of Veterinary Internal Medicine* **24**, 742-742 (2010).
8. Ross-Inta, C, Omanska-Klusek A, Wong S, *et al.* Evidence of mitochondrial dysfunction in fragile X-associated tremor/ataxia syndrome. *Biochem J* **429**, 545-552 (2010).
9. Perez, CJ, Jaubert J, Guenet JL, *et al.* Two hypomorphic alleles of mouse Ass1 as a new animal model of citrullinemia type I and other hyperammonemic syndromes. *Am J Pathol* **177**, 1958-1968 (2010).
10. Haynes, V, Traaseth NJ, Elfering S, *et al.* Nitration of specific tyrosines in FoF1 ATP synthase and activity loss in aging. *Am J Physiol Endocrinol Metab* **298**, E978-987 (2010).
11. Giulivi, C, Zhang YF, Omanska-Klusek A, *et al.* Mitochondrial dysfunction in autism. *JAMA* **304**, 2389-2396 (2010).
12. Ross-Inta, CM, Zhang YF, Almendares A & Giulivi C. Threonine-deficient diets induced changes in hepatic bioenergetics. *Am J Physiol Gastrointest Liver Physiol* **296**, G1130-1139 (2009).
13. Fujisawa, Y, Kato K & Giulivi C. Nitration of tyrosine residues 368 and 345 in the beta-subunit elicits FoF1-ATPase activity loss. *Biochem J* **423**, 219-231 (2009).
14. Ross-Inta, C, Tsai CY & Giulivi C. The mitochondrial pool of free amino acids reflects the composition of mitochondrial DNA-encoded proteins: indication of a post-translational quality control for protein synthesis. *Biosci Rep* **28**, 239-249 (2008).
15. Lizarralde, MS, Bailliet G, Poljak S, *et al.* Assessing genetic variation and population structure of invasive North American beaver (*Castor Canadensis* Kuhl, 1820) in Tierra Del Fuego (Argentina). *Biological Invasions* **10**, 673-683 (2008).
16. Giulivi, C, Ross-Inta C, Horton AA & Luckhart S. Metabolic pathways in *Anopheles stephensi* mitochondria. *Biochem J* **415**, 309-316 (2008).
17. Sempertegui, F, Wuehler SE, Giulivi C & Brown KH. Zinc-copper superoxide dismutase concentrations are related to altitude in young ecuadorian children with mild-moderate stunting. *Faseb Journal* **21**, A725-A725 (2007).
18. Miller, S, Ross-Inta C & Giulivi C. Kinetic and proteomic analyses of S-nitrosoglutathione-treated hexokinase A: consequences for cancer energy metabolism. *Amino Acids* **32**, 593-602 (2007).
19. Luckhart, S, Kato K & Giulivi C. Impact of nitrative/nitrosative stress in mitochondria: unraveling targets for malaria chemotherapy. *Adv. Exp. Biol.* **1**, 129-149 (2007).
20. Giulivi, C. Mitochondria as generators and targets of nitric oxide. *Novartis Found Symp* **287**, 92-100; discussion 100-104 (2007).
21. DiMarco, T & Giulivi C. Current analytical methods for the detection of dityrosine, a biomarker of oxidative stress, in biological samples. *Mass Spectrom Rev* **26**, 108-120 (2007).
22. Cooper, CE & Giulivi C. Nitric oxide regulation of mitochondrial oxygen consumption II: Molecular mechanism and tissue physiology. *Am J Physiol Cell Physiol* **292**, C1993-2003 (2007).
23. Mazzanti, R, Solazzo M, Fantappie O, *et al.* Differential expression proteomics of human colon cancer. *Am J Physiol Gastrointest Liver Physiol* **290**, G1329-1338 (2006).
24. Mazzanti, R & Giulivi C. Coordination of nuclear- and mitochondrial-DNA encoded proteins in cancer and normal colon tissues. *Biochim Biophys Acta* **1757**, 618-623 (2006).
25. Kato, K & Giulivi C. Critical overview of mitochondrial nitric-oxide synthase. *Front Biosci* **11**, 2725-2738 (2006).
26. Giulivi, C & Mazzanti R. Coordination of nuclear- and mitochondrial-DNA encoded proteins in cancer and normal colon tissues. *Biochimica Et Biophysica Acta-Bioenergetics*, 114-114 (2006).

27. Giulivi, C, Kato K & Cooper CE. Nitric oxide regulation of mitochondrial oxygen consumption I: cellular physiology. *Am J Physiol Cell Physiol* **291**, C1225-1231 (2006).
28. Solien, J, Haynes V & Giulivi C. Differential requirements of calcium for oxoglutarate dehydrogenase and mitochondrial nitric-oxide synthase under hypoxia: impact on the regulation of mitochondrial oxygen consumption. *Comp Biochem Physiol A Mol Integr Physiol* **142**, 111-117 (2005).
29. Solien, J, Haynes V & Giulivi C. Differential requirements of calcium for oxoglutarate dehydrogenase and mitochondrial nitric-oxide synthase under hypoxia: impact on the regulation of mitochondrial oxygen consumption. *Comp Biochem Physiol A Mol Integr Physiol* **142**, 111-117 (2005).
30. Oursler, MJ, Bradley EW, Elfering SL & Giulivi C. Native, not nitrated, cytochrome c and mitochondria-derived hydrogen peroxide drive osteoclast apoptosis. *American Journal of Physiology-Cell Physiology* **288**, C156-C168 (2005).
31. Johnson, F & Giulivi C. Superoxide dismutases and their impact upon human health. *Mol Aspects Med* **26**, 340-352 (2005).
32. Greene, AL, Rutherford MS, Regal RR, *et al.* Arginase activity differs with allergen in the effector phase of ovalbumin- versus trimellitic anhydride-induced asthma. *Toxicol Sci* **88**, 420-433 (2005).
33. Traaseth, N, Elfering S, Solien J, *et al.* Role of calcium signaling in the activation of mitochondrial nitric oxide synthase and citric acid cycle. *Biochim Biophys Acta* **1658**, 64-71 (2004).
34. Haynes, V, Elfering S, Traaseth N & Giulivi C. Mitochondrial nitric-oxide synthase: enzyme expression, characterization, and regulation. *J Bioenerg Biomembr* **36**, 341-346 (2004).
35. Giulivi, C, Traaseth N, Elfering S, *et al.* Regulation of mitochondrial nitric-oxide synthase. *Biochimica Et Biophysica Acta-Bioenergetics* **1658**, 89-89 (2004).
36. Giulivi, C. Regulation of mitochondrial nitric oxide synthase. *Comparative Biochemistry and Physiology B-Biochemistry & Molecular Biology* **139**, 138-138 (2004).
37. Giulivi, C. Mitochondrial nitric oxide synthase. *Free Radical Biology and Medicine* **36**, S12-S13 (2004).
38. Elfering, SL, Haynes VL, Traaseth NJ, *et al.* Aspects, mechanism, and biological relevance of mitochondrial protein nitration sustained by mitochondrial nitric oxide synthase. *Am J Physiol Heart Circ Physiol* **286**, H22-29 (2004).
39. Xiong, S, She H, Takeuchi H, *et al.* Signaling Role of Intracellular Iron in NF-kB Activation. *J. Biol. Chem.* **278**, 17646-17654 (2003).
40. Haynes, V, Elfering SL, Squires RJ, *et al.* Mitochondrial nitric-oxide synthase: role in pathophysiology. *IUBMB Life* **55**, 599-603 (2003).
41. Giulivi, C, Traaseth NJ & Davies KJ. Tyrosine oxidation products: analysis and biological relevance. *Amino Acids* **25**, 227-232 (2003).
42. Giulivi, C & Oursler MJ. Role of mitochondrial oxygen and nitrogen reactive species in signaling. in *Signal Transduction by Reactive Oxygen and Nitrogen Species: Pathways and Chemical Principles* (eds. Forman, H.J., Fukuto, J. & Torres, M.) 311-332 (Kluwer Academic Publishers, Dordrecht, Neth 2003).
43. Giulivi, C. Characterization and function of mitochondrial nitric-oxide synthase. *Free Radic Biol Med* **34**, 397-408 (2003).
44. Bradley, EW, Elfering SL, Giulivi C & Oursler MJ. Osteoclast apoptosis is driven by mitochondrial hydrogen peroxide-mediated oxidative damage and degradation of PI3K/MEK/ERK signaling pathway components. *Journal of Bone and Mineral Research* **18**, S238-S238 (2003).
45. Xiong, S, Takeuchi H, She H, *et al.* Intracellular iron as a novel signaling molecule for IKK and NF-kappaB activation in Kupffer-cells. *Hepatology* **36**, 378A (2002).
46. Sugawara, M, Sugawara Y, Wen K & Giulivi C. Generation of oxygen free radicals in thyroid cells and inhibition of thyroid peroxidase. *Exp Biol Med (Maywood)* **227**, 141-146 (2002).
47. She, HY, Xiong SG, Lin M, *et al.* Iron activates NF-kappa B in Kupffer cells. *American Journal of Physiology-Gastrointestinal and Liver Physiology* **283**, G719-G726 (2002).

48. Elfering, SL, Sarkela TM & Giulivi C. Biochemistry of mitochondrial nitric-oxide synthase. *J Biol Chem* **277**, 38079-38086 (2002).
49. Steffen, M, Sarkela TM, Gybina AA, *et al.* Metabolism of S-nitrosoglutathione in intact mitochondria. *Biochem J* **356**, 395-402 (2001).
50. Shaw, AK, Pascoe DA, Giulivi C & Oursler MJ. Mechanisms controlling osteoclast apoptosis. *Journal of Bone and Mineral Research* **16**, S385-S385 (2001).
51. Sarkela, TM, Berthiaume J, Elfering S, *et al.* The modulation of oxygen radical production by nitric oxide in mitochondria. *J Biol Chem* **276**, 6945-6949 (2001).
52. Giulivi, C & Davies KJ. Mechanism of the formation and proteolytic release of H₂O₂-induced dityrosine and tyrosine oxidation products in hemoglobin and red blood cells. *J Biol Chem* **276**, 24129-24136 (2001).
53. French, S, Giulivi C & Balaban RS. Nitric oxide synthase in porcine heart mitochondria: evidence for low physiological activity. *Am J Physiol Heart Circ Physiol* **280**, H2863-2867 (2001).
54. Giulivi, C. The role of mitochondrial nitric-oxide synthase in mitochondrial metabolism. *Free Radic Biol Med* **29**, S3 (2000).
55. Tsukamoto, H, Lin M, Ohata M, *et al.* Iron primes hepatic macrophages for NF-kappa B activation in alcoholic liver injury. *American Journal of Physiology-Gastrointestinal and Liver Physiology* **277**, G1240-G1250 (1999).
56. Poderoso, JJ, Carreras MC, Schopfer F, *et al.* The reaction of nitric oxide with ubiquinol: kinetic properties and biological significance. *Free Radic Biol Med* **26**, 925-935 (1999).
57. Giulivi, C, Sarkela T, Berthiaume J & Elfering S. Modulation of mitochondrial respiration by endogenous nitric oxide. *Faseb Journal* **13**, A1554-A1554 (1999).
58. Giulivi, C, Boveris A & Cadenas E. The steady-state concentrations of oxygen radicals in mitochondria. 77-102 (1999).
59. Tatoyan, A & Giulivi C. Purification and characterization of a nitric-oxide synthase from rat liver mitochondria. *J Biol Chem* **273**, 11044-11048 (1998).
60. Liu, RM, Shi MM, Giulivi C & Forman HJ. Quinones increase gamma-glutamyl transpeptidase expression by multiple mechanisms in rat lung epithelial cells. *Am J Physiol* **274**, L330-336 (1998).
61. Lin, M, Giulivi C, Ohata M, *et al.* Iron dependent NF-kB activation by hepatic macrophages. *Hepatology* **28**, 440A-440A (1998).
62. Giulivi, C, Poderoso JJ & Boveris A. Production of nitric oxide by mitochondria. *Journal of Biological Chemistry* **273**, 11038-11043 (1998).
63. Giulivi, C, Forlin A, Bellin S & Cadenas E. Reactions of halogen-substituted aziridinylbenzoquinones with glutathione - Formation of diglutathionyl conjugates and semiquinones. *Chemico-Biological Interactions* **108**, 137-154 (1998).
64. Giulivi, C & Cadenas E. The role of mitochondrial glutathione in DNA base oxidation. *Biochimica Et Biophysica Acta-Bioenergetics* **1366**, 265-274 (1998).
65. Giulivi, C & Cadenas E. Oxidation of adrenaline by ferrylmyoglobin. *Free Radical Biology and Medicine* **25**, 175-183 (1998).
66. Giulivi, C & Cadenas E. Extracellular activation of fluorinated aziridinylbenzoquinone in HT29 cells EPR studies. *Chemico-Biological Interactions* **113**, 191-204 (1998).
67. Giulivi, C & Cadenas E. Heme protein radicals: Formation, fate, and biological consequences. *Free Radical Biology and Medicine* **24**, 269-279 (1998).
68. Giulivi, C. Functional implications of nitric oxide produced by mitochondria in mitochondrial metabolism. *Biochemical Journal* **332**, 673-679 (1998).
69. Goin, J, Giulivi C, Butler J & Cadenas E. Enzymatic-Mediated and Thiol-Mediated Activation of Halogen-Substituted Diaziridinylbenzoquinones - Redox Transitions of the Semiquinone and Semiquinone-Thioether Species. *Free Radical Biology and Medicine* **18**, 525-536 (1995).
70. Giulivi, C, Lavagno CC, Lucesoli F, *et al.* Lung damage in paraquat poisoning and hyperbaric oxygen exposure: superoxide-mediated inhibition of phospholipase A2. *Free Radic Biol Med* **18**, 203-213 (1995).

71. Giulivi, C, Boveris A & Cadenas E. Hydroxyl radical generation during mitochondrial electron transfer and the formation of 8-hydroxydesoxyguanosine in mitochondrial DNA. *Archives of Biochemistry and Biophysics* **316**, 909-916 (1995).
72. Romero, FJ, Ordonez I, Giulivi C & Cadenas E. The interaction of sulfur compounds with ferrylmyoglobin. *Biol. Oxid. Antioxid.*, 49-56 (1994).
73. Giulivi, C, Pacifici RE & Davies KJA. Exposure of Hydrophobic Moieties Promotes the Selective Degradation of Hydrogen Peroxide-Modified Hemoglobin by the Multicatalytic Proteinase Complex, Proteasome. *Archives of Biochemistry and Biophysics* **311**, 329-341 (1994).
74. Giulivi, C, Hochstein P & Davies KJ. Hydrogen peroxide production by red blood cells. *Free Radic Biol Med* **16**, 123-129 (1994).
75. Giulivi, C & Davies KJA. Dityrosine - a Marker for Oxidatively Modified Proteins and Selective Proteolysis. *Oxygen Radicals in Biological Systems, Pt C* **233**, 363-371 (1994).
76. Giulivi, C & Davies KJ. Hydrogen peroxide-mediated ferrylhemoglobin generation in vitro and in red blood cells. *Methods Enzymol* **231**, 490-496 (1994).
77. Giulivi, C & Davies KJ. Dityrosine: a marker for oxidatively modified proteins and selective proteolysis. *Methods Enzymol* **233**, 363-371 (1994).
78. Giulivi, C & Cadenas E. Ferrylmyoglobin - Formation and Chemical-Reactivity toward Electron-Donating Compounds. *Oxygen Radicals in Biological Systems, Pt C* **233**, 189-202 (1994).
79. Giulivi, C & Cadenas E. One- and two-electron reduction of 2-methyl-1,4-naphthoquinone bioreductive alkylating agents: kinetic studies, free-radical production, thiol oxidation and DNA-strand-break formation. *Biochemical Journal* **301 (Pt 1)**, 21-30 (1994).
80. Giulivi, C & Cadenas E. Ferrylmyoglobin: formation and chemical reactivity toward electron-donating compounds. *Methods Enzymol* **233**, 189-202 (1994).
81. Cadenas, E, Giulivi C, Ursini F & Boveris A. Electronically excited state formation. 384-399 (1994).
82. Wilhelm, FD, Giulivi C & Boveris A. Antioxidant defenses in marine fish. I. Teleosts. *Comp. Biochem. Physiol., C: Comp. Pharmacol. Toxicol.* **106C**, 409-413 (1993).
83. Massa, EM & Giulivi C. Alkoxy and methyl radical formation during cleavage of tert-butyl hydroperoxide by a mitochondrial membrane-bound, redox active copper pool: an EPR study. *Free Radic Biol Med* **14**, 559-565 (1993).
84. Giulivi, C & Davies KJ. Dityrosine and tyrosine oxidation products are endogenous markers for the selective proteolysis of oxidatively modified red blood cell hemoglobin by (the 19 S) proteasome. *J Biol Chem* **268**, 8752-8759 (1993).
85. Giulivi, C & Cadenas E. Inhibition of Protein Radical Reactions of Ferrylmyoglobin by the Water-Soluble Analog of Vitamin-E, Trolox-C. *Archives of Biochemistry and Biophysics* **303**, 152-158 (1993).
86. Giulivi, C & Cadenas E. The reaction of ascorbic acid with different heme iron redox states of myoglobin. Antioxidant and prooxidant aspects. *Febs Letters* **332**, 287-290 (1993).
87. Giulivi, C, Romero FJ & Cadenas E. The interaction of Trolox C, a water-soluble vitamin E analog, with ferrylmyoglobin: reduction of the oxoferryl moiety. *Archives of Biochemistry and Biophysics* **299**, 302-312 (1992).
88. Lissi, EA, Videla LA, Gonzalez Flecha B, *et al.* Metabolic Regulation in Oxidative Stress an Overview. 444-448 (1991).
89. Lavagno, C, Giulivi C & Boveris A. Betamethasone Effects on Paraquat Lung Toxicity. *Xenobiotica* **21**, 1003-1011 (1991).
90. Giulivi, C, Lavagno C, Pisarello J & Boveris A. Lung Oxidative Stress Produced by Hyperbaric Oxygen and Paraquat. *Journal of Cellular Biochemistry*, 222 (1991).
91. Zhang, Y, Marcillat O, Giulivi C, *et al.* The oxidative inactivation of mitochondrial electron transport chain components and ATPase. *J Biol Chem* **265**, 16330-16336 (1990).
92. Salo, DC, Pacifici RE, Lin SW, *et al.* Superoxide dismutase undergoes proteolysis and fragmentation following oxidative modification and inactivation. *J Biol Chem* **265**, 11919-11927 (1990).

93. Giulivi, C, Sarcansky M, Rosenfeld E & Boveris A. The photodynamic effect of rose bengal on proteins of the mitochondrial inner membrane. *Photochem Photobiol* **52**, 745-751 (1990).
94. Giulivi, C & Davies KJA. An Antioxidant Role for Hemoglobin. *Free Radical Biology and Medicine* **9**, 10 (1990).
95. Giulivi, C & Davies KJA. An Antioxidant Role of Oxyhemoglobin under Oxidative Conditions. *FASEB Journal* **4**, A2280 (1990).
96. Giulivi, C & Davies KJ. A novel antioxidant role for hemoglobin. The comproportionation of ferrylhemoglobin with oxyhemoglobin. *J Biol Chem* **265**, 19453-19460 (1990).
97. Turrens, JF, Giulivi C, Pinus CR, *et al.* Spontaneous lung chemiluminescence upon paraquat administration. *Free Radic Biol Med* **5**, 319-323 (1988).
98. Turrens, JF, Giulivi C, Pinus C, *et al.* Low level chemiluminescence from isolated rat hepatocytes, intact lung and intestine in situ. *Basic Life Sci* **49**, 239-242 (1988).
99. Giulivi, C, Turrens JF & Boveris A. Chemiluminescence Enhancement by Trypanocidal Drugs and by Inhibitors of Antioxidant Enzymes in Trypanosoma-Cruzi. *Molecular and Biochemical Parasitology* **30**, 243-252 (1988).
100. Duran, HA, Giulivi C, Boveris A & De Rey BM. The level of antioxidant enzymes in alveolar and peritoneal macrophages. *Cellular and Molecular Biology* **34**, 507-515 (1988).
101. Turrens, JF, Giulivi C & Boveris A. Increased spontaneous chemiluminescence from liver homogenates and isolated hepatocytes upon inhibition of O₂- and H₂O₂ utilization. *J Free Radic Biol Med* **2**, 135-140 (1986).
102. Turrens, JF, Giulivi C & Boveris A. Intracellular hydrogen peroxide stimulates low level chemiluminescence. *Superoxide Superoxide Dismutase Chem., Biol. Med., Proc. Int. Conf., 4th*, 335-337 (1986).
103. Giulivi, C, Turrens JF & Boveris A. Metabolism Oxygen Radicals in Trypanosoma-Cruzi. *Archivos De Biologia Y Medicina Experimentales* **19**, R207-R207 (1986).
104. Videla, LA, Villena MI, Donoso G, *et al.* Changes in oxygen consumption induced by t-butyl hydroperoxide in perfused rat liver. Effect of free-radical scavengers. *Biochemical Journal* **223**, 879-883 (1984).

Research Support

Ongoing:

A-3514 Huntington Foundation

Giulivi (PI)
05/01/10-04/30/12

Title: Mitochondrial Dysfunction in HD-Affected Human Fibroblasts
Goal: Evaluate mitochondrial dysfunction in Huntington's disease

NIH S10RR023586

Giulivi (PI)
04/01/09-12/31/11

Title: Free radical detection in biomedicine
Goal: Acquire an EPR for Campus use in biomedicine-related research.

NIH RC1DK087307

Havel & Giulivi (MPI)
09/20/09-08/31/11

Title: Surgical amelioration of type 2 diabetes: Hormones, microbiota and mitochondria
Goal: Role of mitochondrial functions during illeal interposition.

NIH/NIEHS R01ES020392

Hertz-Picciotto, Pessah, Ozenoff (MPI)
07/1/11- 06/30/16

Giulivi (Investigator)

Title: Autism Risk, Prenatal Environmental Exposures, and Pathophysiologic Markers

Goal: To understand gestational risk factors that contributes to autism risk in a prospective study of women at high risk.

Completed Research Support (during the last 3 years)

A-2638 CHDI Foundation

Giulivi (PI)
03/01/09-02/28/10

Title: Role of mitochondria dysfunction in Huntington's disease
Goal: Evaluate mitochondrial dysfunction in Huntington's disease

UC Mexus CONACYT CN-08-182
(MPI)

Giulivi & Villanueva López
07/01/08-05/31/10

Title: Genomics and proteomics of nitric oxide synthases in liver from endotoxic shocked rats
Goal: Tissue distribution of NOS in liver during endotoxemia.

Autism Speaks 2344

Giulivi (PI)
07/01/08-06/30/10

Title: Is autism a mitochondrial disease?
Goal: Mitochondria depletion in PTEN transgenic mice.

MIND Institute

Giulivi (PI)
07/01/08-06/30/09

Title: Mitochondrial DNA depletion in autism
Goal: Evaluation of mtDNA depletion in autistic children.

Mosquito Research Program

Luckhart (PI), Giulivi (co-PI)
08/20/07-07/19/08

University of California

Title: Mosquito mitochondria: an untapped resource for the development of aging biomarkers
Goal: Mitochondria physiology in mosquitoes.

R01HL071790 NIH

Zhang (PI), Giulivi (Co-PI)
07/01/03-06/30/08

Title: Nitric oxide superoxide effects on failing hearts
Goal: To evaluate the role of the superoxide anion-nitric oxide in failing hearts from dogs exposed to extreme exercise.

R01ES012691 NIH/NIEHS

Giulivi (PI)
09/23/04-08/31/08

Title: Antioxidants and oxidative damage in mitochondria
Goal: Investigate oxidative damage to mitochondria.

Other Professional Experience and Professional Memberships

2011 Medical Research Council, Reviewer.
2011- Member of the MIND Institute
2011 NIH/MIST Study Section, reviewer
2010 NIH/Cellular Mechanisms in Aging and Development) Study Section, reviewer
2007 NIH/Applied Metabolomics Technology Study Section, SPE ZRG1 BST-W (52),
reviewer

- 2005 NIH/Neurodegeneration and Biology of Glia Study Section (NGDB) SPE Mitochondria and Neurodegeneration Z-RG1, reviewer
- 2004-06 United Mitochondrial Disease Foundation, reviewer.
- 2004-2007 Society for Free Radical Biology and Medicine Research: Council Member
- 1997- Member, American Society for Biochemistry and Molecular Biology
- 1989- Member, Society for Free Radical Biology & Medicine
- 2006 American Chemical Society, ACS-PRF type AC proposals, 2005-2006 round, reviewer.
- 2004- Journal Free Radical Biology and Medicine: Member of the Editorial Board
- 2004- Member of Executive Board for Mitochondria in Physiology.
- 2005 NIH/Special Emphasis Panel/Scientific Review Group 2005/10 ZRG1 MDCN E (90), reviewer.

Awards and Honors

- 2010 Autism Science Top 10 Achievement for 2010, for groundbreaking work on identifying mitochondrial dysfunction in autistic children.
- 2008 *Session Chair* of Mitochondria & Free Radical Generation, Thursday, February 4th at Gordon Conference
- 2007 *Chair* of a session, Chair of two discussion sessions - Harden Conference on Mitochondria in Physiology, Ambleside, UK
- 2005 Chair of Inaugural Session. Mitochondria in Physiology. Schrörken, Austria.
- 1990 Award on Aging and Free Radicals from Argentine Society of Geriatrics and Gerontology
- 1989 Scholarship from Antorchas Foundation
- 1988 Sandoz Pharmaceuticals, Switzerland: Award for the project "Human Ageing"
- 1986 International Union of Biochemistry: Fellowship to attend the Universidad Autonoma, Mexico
- 1986 University of Buenos Aires: Young Investigator Award
- 1985-1987 National Research Council (CONICET), Argentina: Research Fellowship
- 1985 University of Buenos Aires: Biochemistry, Summa Cum Laude