

Curriculum vitae Gabriella Simbula

Gabriella Simbula, PhD

Formazione

1989 – Laurea in Scienze Biologiche, Università di Cagliari

1997 – Dottorato di Ricerca in Patologia Sperimentale e Molecolare, Università di Torino

Carriera Accademica

2002 – Oggi – Ricercatore a tempo indeterminato, Dipartimento di Scienze Biomediche, Università di Cagliari

Carriera Scientifica

1991–1993 – Studente post-laurea presso il Laboratorio di Patologia (Prof. Columbano), Università di Cagliari

1993–1995 – Dottoranda presso il Laboratorio di Patologia Cellulare e Anatomia Patologica (Prof. J.L. Farber), Thomas Jefferson University, Philadelphia, USA

1996–2002 – Ricercatrice presso il Dipartimento di Tossicologia, Oncologia e Patologia Molecolare (Prof. Columbano), Università di Cagliari

Linee di ricerca

- Identificazione dei meccanismi biochimici/molecolari dei processi di morte cellulare in linee cellulari di epatoma dopo trattamento con sostanze naturali o sintetiche potenzialmente antitumorali
- Analisi del ruolo dello stress del reticolo endoplasmatico e del metabolismo energetico in linee cellulari di epatoma trattate con l'antiossidante acido lipoico
- Analisi del ruolo della glutamina sul metabolismo di linee cellulari di tumore al colon
- Identificazione dei meccanismi molecolari associati alla proliferazione epatica in linee cellulari e modelli animali

Publicazioni

1. Spada M, Piras C, Leoni VP, Casula M, Simbula G, Noto A, Lilliu K, Kopeć KK, Serreli G, Murgia F, Etzi F, Dettori T, Atzori L, Caria P. Glutaminase inhibitor CB-839 causes metabolic adjustments in colorectal cancer cells *Sci Rep.* 2025 Oct 23;15(1):37028. doi: 10.1038/s41598-025-20528
2. Loi R, Simbula G, Pibiri M. Molecular Targets of microRNAs during Liver Regeneration after Acute Injury: Recent Advances. *Gene Expression* Published on line June 30, 2024. Doi:10.14
3. Spada M, Piras C, Diana G, Leoni VP, Frau DV, Serreli G, Simbula G, Loi R, Noto A, Murgia F, Caria P, Atzori L. Glutamine Starvation Affects Cell Cycle, Oxidative Homeostasis and Metabolism in Colorectal Cancer Cells. *Antioxidants (Basel).* 2023 Mar 10;12(3):683. doi: 10.3390/antiox12030683

4. Murgia F, Fiamma M, Serra S, Marras G, Argiolas R, Mattana C, Mattu MG, Garau MC, Doneddu S, Olla S, Cocco E, Loreface L, Muntoni S, Paffi P, Porru S, Abis M, Bellizzi S, Pani A, Angioi A, Simbula G, Mussap M, Massidda O, Carta F, Atzori L.
The impact of the secondary infections in ICU patients affected by COVID-19 during three different phases of the SARS-CoV-2 pandemic.
Clin Exp Med. 2023 Aug; 23(4):1251-1263. doi: 10.1007/s10238-022-00959-1
5. Role of the Hippo pathway in liver regeneration and repair: recent advances.
Pibiri M, Simbula G. Inflamm Regen. 2022 Dec 5;42(1):59. doi: 10.1186/s41232-022-00235-5
6. Pibiri M, Sulas P, Camboni T, Leoni VP, Simbula G α -Lipoic acid induces Endoplasmic Reticulum stress-mediated apoptosis in hepatoma cells.
Sci Rep. 2020 Apr 28;10(1):7139. doi: 10.1038/s41598-020-64004-5.
7. Lecca D, Janda E, Mulas G, Diana A, Martino C, Angius F, Spolitu S, Casu MA, Simbula G, Boi L, Batetta B, Spiga S, Carta AR. Boosting phagocytosis and anti-inflammatory phenotyoe in microglia mediates neuroprotection by PPAR ? agonist MDG548 in Parkinson's disease models. Br J Pharmacol. 2018 Mar 23 Vol.175 (16): 3298-3314
8. Pireddu R, Pibiri M, Valenti D, Sinico C, Fadda AM, Simbula G, Lai F. A novel lactoferrin modified stealth liposome for hepatoma-delivery of triiodothyronine. Int J Pharm. 2018 Feb 15;537(1-2):257-267
9. Tocco G, Zedda G, Casu M, Simbula G, Begala M. Solvent-free addition of indole to aldehydes: unexpected synthesis of novelk 1-[1-(1H-Indol-3yl)alkyl]-1 indoles and preliminary evaluation of their cytotoxicity in hepatocarcinoma cells Molecules. 2017 Oct 17; 22(10)1747
10. Mulas G, Espa E, Fenu S, Spiga S, Cossu G, Pillai E, Carboni E, Simbula G, Jadzi? D, Angius F, Spolitu S, Batetta B, Lecca D, Giuffrida A, Carta AR. Differential induction of dyskinesia and neuroiflammation by pulsatile versus continuous l-DOPA delivery in the 6-OHDA model of Parkinson's disease Exp Neurol. 2016 Dec;286:83-92
11. Pisanu A, Lecca D, Mulas G, Wardas J, Simbula G, Spiga S, Carta AR. Dynamic changes in pro- and anti-inflammatory cytokines in microglia after PPAR-? agonist neuroprotective treatment in the MPTPp mouse model of progressive Parkinson's disease. Neurobiol Dis. 2014 Nov;71:280-91.
12. Cotti E, Petreucic V, Re D, Simbula G. Cytotoxicity evaluation of a new resin-based hybrid root canal sealer: an in vitro study J Endod. 2014 Jan;40(1):124-8.
13. Simbula G, Dettori C, Camboni T, Cotti E. Comparison of tetraacetyylethylendiamine + sodium perborate and sodium hypochlorite cytotoxicity on L929 fibroblasts J Endod. 2010 Sep;36(9):1516-20.
14. Perra A, Simbula G, Simbula M, Pibiri M, Kowalik MA, Sulas P, Cocco MT, Ledda-Columbano GM, Columbano A. Thyroid hormone (T3) and TRbeta agonist GC-1 inhibit/reverse nonalcoholic fatty liver in rats
FASEB J. 2008 Aug;22(8):2981-9. doi: 10.1096/fj.08-108464. Epub 2008 Apr 23.

15. Perra A, Pibiri M, Sulas P, Simbula G, Ledda-Columbano GM, Columbano A. Alpha-lipoic acid promotes the growth of rat hepatic pre-neoplastic lesions in choline-deficient model. *Carcinogenesis*. 2008 Jan;29(1):161-8.
16. Simbula G, Columbano A, Ledda-Columbano GM, Sanna L, Deidda M, Diana A, Pibiri M. Increased ROS generation and p53 activation in alpha-lipoic acid-induced apoptosis in hepatoma cells. *Apoptosis* 2007 Jan;12(1):113-23.
17. Simbula G, Pibiri M, Sanna L, Cossu C, Molotzu F, Columbano A, Ledda-Columbano GM. The peroxisome proliferator BR931 Kills FaO cells by p53-dependent apoptosis *Life Sci*. 2004 Jun 4;75(3):271-86.
18. Ledda-Columbano GM, Pibiri M, Molotzu F, Cossu C, Sanna L, Simbula G, Perra A, Columbano A. Induction of hepatocyte proliferation by retinoic acid *Carcinogenesis*. 2004 Nov; 25(11):2061-66
19. Simbula G, Pibiri M, Sanna L, Cossu C, Molotzu F, Columbano A, Ledda-Columbano GM. The peroxisome proliferator BR931 Kills FaO cells by p53-dependent apoptosis *Life Sci*. 2004 Jun 4;75(3):271-8
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21. Ishigami T, Fujita T, Simbula G, Columbano A, Kikuchi K, Ishigami A, Shimosawa T, Arakawa Y, Maruyama N. Regulatory effects of senescence marker protein 30 on the proliferation of the hepatocytes *Pathol Int*. 2001 Jul;51(7):491-7.
22. Pibiri M, Ledda-Columbano GM, Cossu C, Simbula G, Menegazzi M, Shinozuka H, Columbano A. Cyclin D1 is an early target hepatocyte proliferation induced by thyroid hormone (T3) *FASEB J*. 2001 Apr;15(6):1006-13.
23. Simbula G, Glascott PA Jr, Akita S, Hoek JB, Farber JL. Two mechanisms by which ATP depletion potentiates induction of the mitochondrial permeability transition *Am J Physiol*. 1997 Aug;273(2 Pt 1):C479-88.
24. Pastorino JG, Simbula G, Yamamoto K, Glascott PA Jr, Rothman RJ, Farber JL. The cytotoxicity of tumor necrosis factor depends on induction of the mitochondrial permeability transition *J Biol Chem*. 1996 Nov 22;271(47):29792-8.
25. Pastorino JG, Simbula G, Gilfor E, Hoek JB, Farber JL. Protoporphyrine IX, an endogenous ligand of the peripheral benzodiazepine receptor, potentiates induction of the mitochondrial permeability transition and the killing of cultured hepatocytes by rotenone *J Biol Chem*. 1994 Dec 9;269(49):31041-6.
26. Ledda-Columbano GM, Columbano A, Cannas A, Simbula G, Okita K, Kayano K, Kubo Y, Katyal SL, Shinozuka H. Dexametasone inhibits induction of liver tumor necrosis factor-alpha mRNA and liver growth induced by lead nitrate and ethylene dibromide *Am J Pathol*. 1994 Oct;145(4):951-8.
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28. Coni P, Simbula G, de Prati AC, Menegazzi M, Suzuki H, Sarma DS, Ledda-Columbano GM, Columbano A. Differences in the steady-state levels of c-fos, c-jun and c-myc messenger RNA during mitogen-induced liver growth and compensatory regeneration *Hepatology*. 1993 Jun;17(6):1109-16.
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growth of initiated cells in the resistant hepatocyte model Jpn J Cancer Res. 1993
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