PERSONAL INFORMATION

Name and Surname	**Barbara BENASSI**
Work Address	ENEA-Casaccia, Via Anguillarese 301, 00123 Rome (Italy)
Work Telephone	+39/06.30483921
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Nationality	Italian

WORK EXPERIENCE

1st July 2024-present	**Researcher at the Division of Biotechnologies, Department for Sustainability, ENEA- Research Centre Casaccia, Rome, Italy**
1st July 2019-30th June 2024	**Head of The Laboratory Health and Environment, Department for Sustainability, ENEA-Research Centre Casaccia, Rome, Italy**
April 2019	**Visiting Scientist at the Laboratory for Vectorology in Anticancer Therapy, CNRS-Univ. Paris Saclay at Gustave Roussy, France.** Project: involvement of calcium metabolism in the response to the electromagnetic fields.
2007-2009	Fellowship (Research collaborator), Translational Oncogenomic Laboratory, Regina Elena Cancer Institute, Rome, Italy. Project: Evaluation of the microRNA involvement in the USP2a-driven prostate tumorigenesis. Tasks: performance and critical examination of experimental data; management of the gene expression Affymetrix facility of the Regina Elena Cancer Institute.
2007	**Visiting scientist at the Weizmann Institute of Science (Rehovot, Israele).** Project: bio-informatics approaches for gene expression profiling of human cancers.
2005-2006	**Visiting scientist at the Dana Farber Cancer Institute, Harvard Medical School, Boston (MA), USA.** Project: Gene-profiling of human tumours by omics technologies.
2003-2004	Fellowship as research collaborator at the Experimental Preclinical Chemotherapy Laboratory, Regina Elena Cancer Institute, Rome, Italy. Project: Role of the *c-myc* oncogene in the response to oxidative stress.
2000-2002	**FIRC (Italian Foundation for Cancer Research) fellowship**, Experimental Preclinical Chemotherapy Laboratory, Regina Elena Cancer Institute, Rome, Italy. Project: Role of the *c-myc* oncogene in the response to the antineoplastic agents.
1998-1999	Fellowship (Research collaborator), Experimental Preclinical Chemotherapy Laboratory, Regina Elena Cancer Institute, Rome, Italy. Project: Induction of apoptosis by anticancer drugs and antisense olygodeoxynucleotides in cancer treatment

TEACHING EXPERIENCE

2019/20-present	Adjunct Professor in **Applied Genomics** (**SSD BIO/11**), Degree in Food Science and Human Nutrition, University "Campus Biomedico", Rome, Italy
2020/21	Appointment as Expert in **Nutrigenomics (SSD BIO/11)**, Master Degree Course in Biology for Molecular, Cellular and Pathophysiological Research, Roma Tre University, Rome, Italy
2024	Lecturer at the ARDAF School, Rome, Italy. Teaching topic: The anti-inflammatory virtue of the pomegranate
2018	Lecturer at the CONI School, Rome, Italy. Teaching topic: The role of oxidative stress in physical exercise: experimental models
2016	Lecturer at the "Alessandro Chiabrera" International School of Bioelectromagnetics, Erice, Italy. Teaching topic: Effect of ELF-MF magnetic fields in the molecular biology of the neuron

EDUCATION AND TRAINING

1998-2003	Professional **PhD in Clinical Pathology**, University of L'Aquila, Italy
2002	Italian professional qualification as "Biologist", University of Viterbo-Tuscia, Italy
1991-1997	**BSc in Biological Sciences**, University of Rome "Tor Vergata", Italy
1994-1995	Erasmus Student Fellowship, University of Manchester, UK

AWARDS

2024	Winner of the Italian National Award "L'Altra Italia – Vite da Premio - Sezione Ricerca medico-scientifica", X Edition-Medaglia del Presidente della Repubblica-Patrocinio Ministero Beni, Attività Culturali e del Turismo
2007	Winner of the "Antonio Caputo" award for best Cancer Research activity
2004	Winner of the AICC award (Italian Association of Cell Culture)

SCIENTIFIC PUBLICATIONS

H-INDEX= 25 (*Scopus*); *corresponding author

62) The mucilage from the *Opuntia ficus-indica (L.) Mill.* cladodes plays an anti-inflammatory role in the LPS-stimulated HepG2 cells: a combined *in vitro* and *in silico* approach

Pierdomenico M, Giardullo P, Bruno G, Bacchetta L, Maccioni O, Demurtas OC, Sulli M, Diretto G, Arcangeli C, Colini F, Chiavarini S, and **Benassi B***. *Mol Nutr Food Res. 2025 Jan 13:e202400479, DOI: 10.1002/mnfr.202400479*

61) Investigating the impact of the Parkinson's-associated GBA1 E326K mutation on GCase dimerization and interactome dynamics through an in silico approach.

Pietrafesa D; Casamassa A; **Benassi B**; Santoro M; Marano M; Consales C, Rosati J; Arcangeli C. *Accepted in Int. J. Mol. Sci. (ISSN 1422-0067) on 22 October 2024*

60) Associations between fine particulate matter, gene expression, and promoter methylation in human bronchial epithelial cells exposed within a classroom under Air-Liquid Interface

Santoro M, Costabile F, Gualtieri M, Rinaldi M, Paglione M, Busetto M, Di Iulio G, Di Liberto L, Gherardi M, Pelliccioni A, Monti P, **Benassi B**, Grollino MG. *Environmental Pollution 2024, In Press, https://doi.org/10.1016/j.envpol.2024.124471*

59) Effects of Radiofrequency Electromagnetic Field (RF-EMF) exposure on male fertility: A systematic review of experimental studies on non-human mammals and human sperm *in vitro*

Cordelli E, Ardoino, **Benassia B**, Consales C, Eleuteri P, Marino C, Sciortino M, Villani P, Brinkworth MH, Chen G, McNamee JP, Wood AW, Belackova L, Verbeek J, Pacchierotti F. *Environ Int. 2024 Mar;185:108509. doi: 10.1016/j.envint.2024.108509*

58) The ethanolic extract of *Corylus avellana L.* drives a microRNA-based cytotoxic effect on HepG2 hepatocarcinoma cells.

Pierdomenico M, Bacchetta L, **Benassi B*.** *Nat Prod Res. 2023 Nov 27:1-8. doi: 10.1080/14786419.2023.2287170.*

57) *In vitro* imaging and molecular characterization of Ca^{2+} fluxes modulation by nanosecond pulsed electric fields.

Camera F, Colantoni E, Garcia-Sanchez T, **Benassi B**, Consales C, Muscat A, Vallet L, Mir LM, Andre F, Merla C. *Int. J. Mol. Sci. 2023, 24(21), 15616; https://doi.org/10.3390/ijms242115616*

56) Effects of Radiofrequency Electromagnetic Field (RF-EMF) exposure on pregnancy and birth outcomes: A systematic review of experimental studies on non-human mammals.

Cordelli E, Ardoino L, **Benassi B**, Consales C, Eleuteri P, Marino C, Sciortino M, Villani P, Brinkworth MH, Chen G, McNamee JP, Wood AW, Belackova L, Verbeek J, Pacchierotti F. *Environ Int. 2023 Oct;180:108178. doi: 10.1016/j.envint.2023.108178*

55) Experimental and *in silico* evaluations of the possible molecular interaction between airborne particulate matter and SARS-CoV-2.

Romeo A, Pellegrini R, Gualtieri M, **Benassi B**, Santoro M, Iacovelli F, Stracquadanio M, Falconi M, Marino C, Zanini G, Arcangeli C**.** *Sci Total Environ. 2023 Jun 21:165059. doi: 10.1016/j.scitotenv.2023.165059.*

54) Effect of *Citrus bergamia* extract on lipid profile: A combined *in vitro* and human study

Pierdomenico M, Cicero AFG, Veronesi M, Fogacci F, Riccioni C and **Benassi B***. *Phytother Res. 2023 Jun 13. doi: 10.1002/ptr.7897*

53) Anti-inflammatory effect of a pomegranate extract on LPS-stimulated HepG2 cells

Pierdomenico M, Riccioni C, **Benassi B***. *Nat Prod Res. 2023 Apr 8:1-8. doi: 10.1080/14786419.2023.2196622*

52) Epigenetic-based antioxidant effect of an ethanolic extract of *Corylus avellana L.* on THLE-2 human primary hepatocytes

Benassi B*, Bacchetta L, Maccioni O, Pacchierotti F. *Nat Prod Res. 2023 Feb 3:1-7. doi: 10.1080/14786419.2023.2174537*

51) Effects of the electromagnetic fields (EMFs) on cellular redox homeostasis

Innamorati G, Secchiaroli LC, Caramazza L, Fontana S, D'Anzi A, Salati S, Cadossi R, **Benassi B**, Apollonio F, Liberti M, Rosati J, Consales C. *Free Radical Biology and Medicine 2023, 198, Supplement 1: S8, doi.org/10.1016/j.freeradbiomed.2022.12.036*

50) Emission Factors of CO_2 and Airborne Pollutants and Toxicological Potency of Biofuels for Airplane Transport: A Preliminary Assessment.

Gualtieri M, Berico M, Grollino MG, Cremona G, La Torretta T, Malaguti A, Petralia E, Stracquadanio M, Santoro M, **Benassi B**, Piersanti A, Chiappa A, Bernabei M, Zanini G. *Toxics. 2022 Oct 18;10(10):617. doi: 10.3390/toxics10100617*

49) From single to multivariable exposure models to translate climatic and air pollution effects into mortality risk. A customized application to the city of Rome, Italy.

Michetti M, Adani M, Anav A, **Benassi B**, Dalmastri C, D'Elia I, Gualtieri M, Piersanti A, Sannino G, Uccelli R, Zanini G. *MethodsX. 2022 May 5;9:101717. doi: 10.1016/j.mex.2022.101717.*

48) Climate change and air pollution: Translating their interplay into present and future mortality risk for Rome and Milan municipalities.

Michetti M, Gualtieri M, Anav A, Adani M, **Benassi B**, Dalmastri C, D'Elia I, Piersanti A, Sannino G, Zanini G, Uccelli R. *Sci Total Environ. 2022 Mar 18:154680. doi: 10.1016/j.scitotenv.2022.154680.*

47) The interaction of DNMT1 and DNMT3A epigenetic enzymes with phthalates and perfluoroalkyl substances: an *in silico* approach.

Innamorati G. Pierdomenico M, **Benassi B**, Arcangeli C. *J Biomol Struct Dyn. 2022 Jan 6:1-17. doi: 10.1080/07391102.2021.2023642*

46) Biological effects of ultrashort electric pulses in a Neuroblastoma cell line: the energy density role.

Consales C, Merla C, **Benassi B**, Garcia-Sanchez T, Muscat A, André FM, Marino C, Mir LM. *Int J Radiat Biol. 2021 Oct 29:1-40. doi: 10.1080/09553002.2022.1998704*

45) Effects of Radiofrequency Electromagnetic Field (RF-EMF) exposure on male fertility and pregnancy and birth outcomes: protocols for a systematic review of experimental studies in non-human mammals and in human sperm exposed *in vitro*.

Pacchierotti F, Ardoino L, **Benassi B**, Consales C, Cordelli, Eleuteri P, Marino C, Sciortino M, Brinkworth MH, Chen G, McNamee JP, Wood AW, Hooijmans CR, de Vries RBM. *Environ Int. 2021 Aug 26;157:106806. doi: 10.1016/j.envint.2021.106806.*

44) Amplification of the Hazelnut-Induced Epigenetic Modulation of LDLR Gene Expression in THLE-2 Human Primary Hepatocytes Compared to HepG2 Hepatocarcinoma Cells.

Benassi B*, Santangeli S, Bacchetta L and Pacchierotti F. *Austin J Nutr Metab. 2021; 8(2): 1103. DOI: 10.26420/austinjnutrmetab.2021.1103*

43) Microsecond Pulsed Electric Fields: An Effective Way to Selectively Target and Radiosensitize Medulloblastoma Cancer Stem Cells

Tanori M, Casciati A, Zambotti A, Pinto R, Gianlorenzi I, Pannicelli A, Giardullo P, **Benassi B**, Marino C, Mancuso M, Merla C. *Int J Radiat Oncol Biol Phys. 2021 Apr 1;109(5):1495-1507. doi: 10.1016/j.ijrobp.2020.11.047.*

42) Exposure of the SH-SY5Y human neuroblastoma cells to 50 Hz Magnetic Field: comparison between two-dimensional (2D) and three-dimensional (3D) in vitro cultures

Consales C, Butera A, Merla C, Pasquali E, Lopresto V, Pinto R, Pierdomenico M, Mancuso M, Marino C, and **Benassi B***. *Mol Neurobiol. 2020 Nov 24. doi: 10.1007/s12035-020-02192-x.*

41) Redox activation of ATM enhances GSNOR translation to sustain mitophagy and tolerance to oxidative stress.

Cirotti C, Rizza S, Giglio P, Poerio N, Allega MF, Claps G, Pecorari C, Lee JH, **Benassi B**, Barilà D, Robert C, Stamler JS, Cecconi F, Fraziano M, Paull TT, Filomeni G. *EMBO Rep. 2020 Nov 27;22(1):e50500. doi: 10.15252/embr.202050500.*

40) Contributor to: C95.1-2019 - IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz.

IEEE Std C95.1™-2019DOI: 10.1109/IEEESTD.2019.8859679.

39) Evidences of plasma membrane-mediated ROS generation upon ELF exposure in neuroblastoma cells.

Merla C, Liberti M, Consales C, Denzi A, Apollonio F, Marino C, and **Benassi B**. *Biochim Biophys Acta Biomembr. 2019 Aug 1;1861(8):1446-1457. doi: 10.1016/j.bbamem.2019.06.005*

38) Modulation of LDL Receptor expression and promoter methylation in HepG2 cells treated with a Corylus avellana L. extract

Benassi B*, Santi C, Santangeli S, Grollino MG, Raschellà G, Bacchetta L and Pacchierotti F. *J Funct Foods 53, 2019, 208-218. doi.org/10.1016/j.jff.2018.12.024.*

37) 50-Hz MF does not affect global DNA methylation of SH-SY5Y cells treated with the neurotoxin MPP+.

Benassi B*, Santangeli S, Merla C, Tarantini L, Bollati V, Butera A, Marino C, and Consales C. *Bioelectromagnetics. 2019 Jan;40(1):33-41. doi: 10.1002/bem.22158.*

36) 50-Hz Magnetic Field Impairs the Expression of Iron-related Genes in the in vitro SOD1G93A Model of Amyotrophic Lateral Sclerosis. Consales C, Panatta M, Butera A, Filomeni G, Merla C, Carrì MT, Marino C, and **Benassi B***. *Int J Radiat Biol. 2019 Mar;95(3):368-377. doi: 10.1080/09553002.2019.1552378.*

35) Clinical and genomic safety of treatment with Ginkgo biloba L. leaf extract (IDN 5933/Ginkgoselect®Plus) in elderly: a randomised placebo-controlled clinical trial [GiBiEx].

Bonassi S, Prinzi G, Lamonaca P, Russo P, Paximadas I, Rasoni G, Rossi R, Ruggi M, Malandrino S, Sánchez-Flores M, Valdiglesias V, **Benassi B**, Pacchierotti F, Villani P, Panatta M, Cordelli E. *BMC Complement Altern Med. 2018 Jan 22;18(1):22. doi: 10.1186/s12906-018-2080-5.*

34) Fifty-Hertz Magnetic Field Affects the Epigenetic Modulation of the miR-34b/c in Neuronal Cells.

Consales C, Cirotti C, Filomeni G, Panatta M, Butera A, Merla C, Lopresto V, Pinto R, Marino C, **Benassi B***. *Mol Neurobiol. 2018 Jul;55(7):5698-5714. doi: 10.1007/s12035-017-0791-0.*

3) The epigenetic component of the brain response to electromagnetic stimulation in Parkinson's Disease patients: A literature overview.

Consales C, Merla C, Marino C, **Benassi B***. *Bioelectromagnetics. 2018 Jan;39(1):3-14. doi: 10.1002/bem.22083*

32) A microdosimetry study for a realistic shaped nucleus.

Denzi A, Escobar JA, Nasta C, Merla C, **Benassi B**, Consales C, Apollonio F, Liberti M. *Conf Proc IEEE Eng Med Biol Soc. 2016 Aug; 2016:4189-4192. doi: 10.1109/EMBC.2016.7591650.*

31) A Microdosimetric Study of Electropulsation on Multiple Realistically Shaped Cells: Effect of Neighbours.

Denzi A, Camera F, Merla C, **Benassi B**, Consales C, Paffi A, Apollonio F, Liberti M. *J Membr Biol. 2016 Oct;249(5):691-701. doi: 10.1007/s00232-016-9912-3*

30) Transgenerational inheritance of enhanced susceptibility to radiation-induced medulloblastoma in newborn Ptch1+/- mice after paternal irradiation.

Paris L, Giardullo P, Leonardi S, Tanno B, Meschini R, Cordelli E, **Benassi B**, Longobardi MG, Izzotti A, Pulliero A, Mancuso M, Pacchierotti F. *Oncotarget. 2015 Nov 3;6(34):36098-112. doi: 10.18632/oncotarget.5553.*

29) Extremely Low Frequency Magnetic Field (ELF-MF) exposure sensitizes SH-SY5Y cells to the pro-Parkinson's Disease toxin MPP^+.

Benassi B*, Filomeni G, Montagna C, Merla C, Lopresto V, Pinto R, Marino C and Consales C. *Mol Neurobiol. 2016 Aug;53(6):4247-4260.*

28) Identification of post-transcriptional regulatory networks during myeloblast-to-monocyte differentiation transition.

Fontemaggi G, Bellissimo T, Donzelli S, Iosue I, **Benassi B**, Bellotti G, Blandino G, Fazi F. *RNA Biol. 2015 May 13:0. doi: 10.1080/15476286.2015.1044194*

27) Integrated Systems Approach to the Radiation Biology of Cosmic Interest: Biophysics and Molecular Characterization of Tissues Irradiated with 14 MeV Neutrons.

Licursi V, Fratini E, **Benassi B**, Cestelli-Guidi M, Consales C, Marcelli A, Mirri C, Negri R, Amendola R. *Rendiconti Lincei. March 2014, Volume 25, Issue 1 Supplement, pp 23-27. doi.org/10.1007/s12210-013-0272-y*

26) USP2a alters chemotherapeutic response by modulating redox.

Benassi B*, Marani M, Loda M, Blandino G. *Cell Death Dis. 2013 Sep 26;4:e812. doi: 10.1038/cddis.2013.289.*

25) A melanoma immune response signature including Human Leukocyte Antigen-E.

Tremante E, Ginebri A, Lo Monaco E, **Benassi B**, Frascione P, Grammatico P, Cappellacci S, Catricalà C, Arcelli D, Natali PG, Di Filippo F, Mottolese M, Visca P, Benevolo M, Giacomini P.
Pigment Cell Melanoma Res. 2014 Jan;27(1):103-12. doi: 10.1111/pcmr.12164.

24) HCV core-mediated activation of latent TGF-β via thrombospondin drives the crosstalk between hepatocytes and stromal environment.

Benzoubir N, Lejamtel C, Battaglia S, Testoni B, **Benassi B**, Gondeau C, Perrin-Cocon L, Desterke C, Thiers V, Samuel D, Levrero M, Bréchot C, Bourgeade MF. *J Hepatol. 2013 Dec;59(6):1160-8. doi: 10.1016/j.jhep.2013.07.036.*

23) Electromagnetic fields, oxidative stress, and neurodegeneration.

Consales C*, Merla C, Marino C, **Benassi B***. *Int J Cell Biol. 2012;2012:683897. doi: 10.1155/2012/683897.*

22) Direct and delayed X-ray-induced DNA damage in male mouse germ cells.

Cordelli E, Eleuteri P, Grollino MG, **Benassi B**, Blandino G, Bartoleschi C, Pardini MC, Di Caprio EV, Spanò M, Pacchierotti F, Villani P. *Environ Mol Mutagen. 2012 Jul;53(6):429-39. doi: 10.1002/em.21703.*

21) MYC is activated by USP2a-mediated modulation of microRNAs in prostate cancer.

Benassi B, Flavin R, Marchionni L, Zanata S, Pan Y, Chowdhury D, Marani M, Strano S, Muti P, Blandino G, Loda M. *Cancer Discov. 2012 Mar;2(3):236-47. doi: 10.1158/2159-8290.CD-11-0219.*

20) Omics underpins novel clues on VDR chemoprevention target in breast cancer.

Muti P, **Benassi B**, Falvo E, Santoro R, Galanti S, Citro G, Carrubba G, Blandino G, Strano S. *OMICS. 2011 Jun;15(6):337-46. doi: 10.1089/omi.2010.0086.*

19) Phosphorylation of Ser312 contributes to tumor suppression by p53 in vivo.

Slee EA, **Benassi B**, Goldin R, Zhong S, Ratnayaka I, Blandino G, Lu X. *Proc Natl Acad Sci U S A. 2010 Nov 9;107(45):19479-84. doi: 10.1073/pnas.1005165107.*

18) Che-1 promotes tumor cell survival by sustaining mutant p53 transcription and inhibiting DNA damage response activation.

Bruno T, Desantis A, Bossi G, Di Agostino S, Sorino C, De Nicola F, Iezzi S, Franchitto A, **Benassi B**, Galanti S, La Rosa F, Floridi A, Bellacosa A, Passananti C, Blandino G, Fanciulli M. *Cancer Cell. 2010 Aug 9;18(2):122-34. doi: 10.1016/j.ccr.2010.05.027.*

17) The artificial gene Jazz, a transcriptional regulator of utrophin, corrects the dystrophic pathology in mdx mice.

Di Certo MG, Corbi N, Strimpakos G, Onori A, Luvisetto S, Severini C, Guglielmotti A, Batassa EM, Pisani C, Floridi A, **Benassi B**, Fanciulli M, Magrelli A, Mattei E, Passananti C. *Hum Mol Genet. 2010 Mar 1;19(5):752-60. doi: 10.1093/hmg/ddp539.*

16) Growth-inhibitory and antiangiogenic activity of the MEK inhibitor PD0325901 in malignant melanoma with or without BRAF mutations.

Ciuffreda L, Del Bufalo D, Desideri M, Di Sanza C, Stoppacciaro A, Ricciardi MR, Chiaretti S, Tavolaro S, **Benassi B**, Bellacosa A, Foà R, Tafuri A, Cognetti F, Anichini A, Zupi G, Milella M. *Neoplasia. 2009 Aug;11(8):720-31. doi: 10.1593/neo.09398.*

15) Tetraploidy triggers mitochondria.

Benassi B, Strano S, Blandino G. *Cell Cycle. 2009 May 1;8(9):1305-6. doi: 10.4161/cc.8.9.8685*

14) Gamma-glutamylcysteine synthetase mediates the c-Myc-dependent response to antineoplastic agents in melanoma cells.

Benassi B, Zupi G, Biroccio A. *Mol Pharmacol. 2007 Oct;72(4):1015-23. doi: 10.1124/mol.107.038687.*

13) The isopeptidase USP2a protects human prostate cancer from apoptosis.

Priolo C, Tang D, Brahamandan M, **Benassi B,**, Sicinska E, Ogino S, Farsetti A, Porrello A, Finn S, Zimmermann J, Febbo P, Loda M. *Cancer Res. 2006 Sep 1;66(17):8625-32. doi: 10.1158/0008-5472.CAN-06-1374.*

12) TRF2 inhibition triggers apoptosis and reduces tumourigenicity of human melanoma cells.

Biroccio A, Rizzo A, Elli R, Koering CE, Belleville A, **Benassi B,**, Leonetti C, Stevens MF, D'Incalci M, Zupi G, Gilson E. *Eur J Cancer. 2006 Aug;42(12):1881-8. doi: 10.1016/j.ejca.2006.03.010.*

11) c-Myc phosphorylation is required for cellular response to oxidative stress.

Benassi B, Fanciulli M, Fiorentino F, Porrello A, Chiorino G, Loda M, Zupi G, Biroccio A. *Mol Cell. 2006 Feb 17;21(4):509-19. doi: 10.1016/j.molcel.2006.01.009*

10) Biological activity of the G-quadruplex ligand RHPS4 (3,11-difluoro-6,8,13-trimethyl-8H-quino[4,3,2-kl]acridinium methosulfate) is associated with telomere capping alteration.

Leonetti C, Amodei S, D'Angelo C, Rizzo A, **Benassi B,**, Antonelli A, Elli R, Stevens MF, D'Incalci M, Zupi G, Biroccio A. *Mol Pharmacol. 2004 Nov;66(5):1138-46. doi: 10.1124/mol.104.001537.*

9) Glutathione depletion induced by c-Myc downregulation triggers apoptosis on treatment with alkylating agents.

Biroccio A, **Benassi B,**, Fiorentino F, Zupi G. *Neoplasia. 2004 May-Jun;6(3):195-206. doi: 10.1593/neo.3370.*

8) Inhibition of c-Myc oncoprotein limits the growth of human melanoma cells by inducing cellular crisis.

Biroccio A, Amodei S, Antonelli A, **Benassi B,**, Zupi G. *J Biol Chem. 2003 Sep 12;278(37):35693-701. doi: 10.1074/jbc.M304597200*

7) Telomere dysfunction increases cisplatin and ecteinascidin-743 sensitivity of melanoma cells.

Biroccio A, Gabellini C, Amodei S, **Benassi B,** , Del Bufalo D, Elli R, Antonelli A, D'Incalci M, Zupi G. *Mol Pharmacol. 2003 Mar;63(3):632-8. doi: 10.1124/mol.63.3.632.*

6) Che-1 affects cell growth by interfering with the recruitment of HDAC1 by Rb.

Bruno T, De Angelis R, De Nicola F, Barbato C, Di Padova M, Corbi N, Libri V, **Benassi B,** , Mattei E,Chersi A, Soddu S, Floridi A, Passananti C, Fanciulli M. *Cancer Cell. 2002 Nov;2(5):387-99. doi: 10.1016/s1535-6108(02)00182-4*

5) Glutathione influences c-Myc-induced apoptosis in M14 human melanoma cells.

Biroccio A, **Benassi B,** , Filomeni G, Amodei S, Marchini S, Chiorino G, Rotilio G, Zupi G, Ciriolo MR. *J Biol Chem. 2002 Nov 15;277(46):43763-70. doi: 10.1074/jbc.M207684200.*

4) Reconstitution of hTERT restores tumorigenicity in melanoma-derived c-Myc low-expressing clones.

Biroccio A, Amodei S, **Benassi B,** , Scarsella M, Cianciulli A, Mottolese M, Del Bufalo D, Leonetti C, Zupi G. *Oncogene. 2002 May 2;21(19):3011-9. doi: 10.1038/sj.onc.1205415.*

3) Encapsulation of c-myc antisense oligodeoxynucleotides in lipid particles improves antitumoral efficacy in vivo in a human melanoma line.

Leonetti C, Biroccio A, **Benassi B,** , Stringaro A, Stoppacciaro A, Semple SC, Zupi G. *Cancer Gene Ther. 2001 Jun;8(6):459-68. doi: 10.1038/sj.cgt.7700326*

2) c-Myc down-regulation increases susceptibility to cisplatin through reactive oxygen species-mediated apoptosis in M14 human melanoma cells.

Biroccio A, **Benassi B,** Amodei S, Gabellini C, Del Bufalo D, Zupi G. *Mol Pharmacol. 2001 Jul;60(1):174-82. doi: 10.1124/mol.60.1.174.*

1) c-Myb and Bcl-x overexpression predicts poor prognosis in colorectal cancer: clinical and experimental findings.

Biroccio A, **Benassi B,** D'Agnano I, D'Angelo C, Buglioni S, Mottolese M, Ricciotti A, Citro G, Cosimelli M, Ramsay RG, Calabretta B, Zupi G. *Am J Pathol. 2001 Apr;158(4):1289-99. doi: 10.1016/S0002-9440(10)64080-1.*

BOOK CHAPTERS

2023 **Electromagnetic Fields Redox Signaling Modulation in Brain**. Innamorati G, **Benassi B**, Consales C. *In: Environmental Stressors and OxInflammatory Tissues Responsese, Vol. 53. CRC Press, 2023. eBook ISBN9781003328100, https://doi.org/10.1201/9781003328100*

2020 **Diet and epigenetics: dietary effects on DNA methylation, histone remodeling and mRNA stability.** Fratantonio D, Virgili F, **Benassi B.** *In: Cifuentes, A.(Ed.), Comprehensive Foodomics, vol. 1. Elsevier, pp. 364–379. ISBN: 9780128163955*

2020 **Impact of environmental chemicals and endocrine disruptors on mammalian germ cell epigenome.** Pacchierotti F, **Benassi B** and Cordelli E. eBook: Translational Epigenetics: Epigenetics and Reproductive Health, Volume 21, Elsevier

2019 **Advances in understanding health benefits of hazelnuts.** Bacchetta L, Procacci S, and **Benassi B.** *Achieving sustainable cultivation of tree nuts, Burleigh Dodds Science Publishing Limited*

2014 **Environmental Impact on the Etiology of Alzheimer's Disease: Mechanistic Insights from Oxidative Stress and Epigenetic Perspective. Benassi B** and Consales C. *Frontiers in Clinical Drug Research - Alzheimer Disorders, Chapter 5, Vol. 2.*

2001 **Antisense oligonucletides as theraputic agents for human cancer.** Leonetti C, **Benassi B** and Zupi G. *Recent Res Devel Cancer, 3 (2001): 397-409*

TECHNICAL REPORTS

2024 **Modeling the potential interaction between airborne particulate matter and the SARS-COV-2 spike protein.** A. Romeo, R. Pellegrini, M. Gualtieri, B. Benassi, M. Santoro, F. Iacovelli, M. Stracquadanio, M. Falconi, C. Marino, G. Zanini, C. Arcangeli. *High Performance Computing on CRESCO Infrastructure: research activity and results 2023*, pp. 149-153. *ISBN Edizione digitale: 978-88-8286-494-1*

2024 **Classical molecular dynamics simulations of a $PM_{0.1}$ model and its interaction with raft-like and non-raft-like biological membranes**. S. Giordani, F. Iacovelli, A. Romeo, D. Pietrafesa, M. Falconi, B. Benassi and C. Arcangeli. *High Performance Computing on CRESCO Infrastructure: research activity and results 2023*, pp. 97-101. *ISBN Edizione digitale: 978-88-8286-494-1*

2020 ***Crocus sativus L.* and Nutriepigenomics: In Silico Studies of Interaction with Histone Deacetylases 85**. A.Piergentili, B.Benassi and C.Arcangeli. *High Performance Computing on CRESCO Infrastructure: research activity and results 2020, ISBN: 978-88-8286-429-3*

2020 **Molecular Dynamics Simulations to Evaluate the Effect of Environmental Pollutants on Epigenetic Modulators 75.** G.Innamorati, M.Pierdomenico, B.Benassi and C.Arcangeli. *High Performance Computing on CRESCO Infrastructure: research activity and results 2020, ISBN: 978-88-8286-429-3*

DIVULGATIVE PUBLICATIONS

2025 **Focus su Biotecnologie per l'Economia Circolare- Rapporto del Circular Economy Network 2025 della Fondazione per lo Sviluppo Sostenibile. Benassi B**, Cesi V., Chiavetta C., Scipioni F., Testa C., Brunori C.

2024 **Nella nocciola viterbese promettenti proprietà antitumorali**. **B. Benassi** e M. Pierdomenico. *Rivista Ordine dei Biologi. Novembre-Dicembre 2024. Anno VII - N. 11/12*

2023 **INTERAZIONI TRA PARTICOLATO E VIRUS SARS-COV-2**. A cura del Gruppo di Lavoro dell'Obiettivo 5.1. del Progetto Pulvirus: Arcangeli C, Romeo A, Pellegrini R, Gualtieri M, **Benassi B**, Santoro M, Iacovelli F, Stracquadanio M, Falconi, M, Marino C, Zanini G. *Ecoscienza-sostenibilità e controllo ambientale, N° 5/6, dicembre 2022, anno XIII, pp 83-85.*

2020 **Sicurezza alimentare, qualità del cibo e salute (*Food safety, food quality and health*).** Zoani C, **Benassi B**, Fiorani L, Bevivino A. *ENEA, Energia, ambiente e innovazione, 2020, DOI 10.12910/EAI2020-016*

2017 **Alimenti funzionali: valorizzazione della risorsa e caratterizzazione nutraceutica (*Functional foods: resource and nutraceutical characterization)*. Benassi B,** Procacci S, Santi C, Pacchierotti F, Bacchetta L. *ENEA, Energia, ambiente e innovazione, 2017, DOI 10.12910/EAI2017-043*

EDITOR ACTIVITY FOR INTERNATIONAL PEER-REVIEWED JOURNALS

2022 Review Editor on the Editorial Board of "Air Quality and Health" (specialty section of Frontiers in Environmental Health)
2021 Guest Editor for the Special Issue "Research on Nutrigenetics and Nutrigenomics", International Journal of Molecular Sciences (MDPI)
2021 Review Editor on the Editorial Board of Radiation and Health (specialty section of Frontiers in Public Health)

REFEREE ACTIVITY FOR INTERNATIONAL PEER-REVIEWED JOURNALS

Independent Reviewer for scientific international peer-reviewed journals:

Bioelectrochemistry, Bioelectromagnetics, Biol Trace Elem Res, BMC Neuroscience, Cancer Biomarkers, Electromagnetic Biol & Med, Frontiers In Molecular Neuroscience, Frontiers in Public Health, Genes and Nutrition, International Journal of Biochemistry Research & Review, International Journal of Radiation Biology, Mediators of Inflammation, Molecular Neurobiology, Oxidative Medicine & Cellular Longevity, PLOSone, Tissue and Cell, Toxicological & Environmental Chemistry, Toxicological Sciences.

ATTENDANCE TO CONGRESS AS CHAIRMAN

Session S08: Effects of ELF magnetic fields (in-vitro). **BIOEM 2019, June 23-28, Montpellier, France**

ATTENDANCE TO CONGRESS AS INVITED SPEAKER

- ✓ **50 Hz magnetic field exposure modulates Nitric Oxide Synthase 2 (NOS2) expression in N9 microglia cells.** BIOEM 2019, June 23-28, Montpellier, France.
- ✓ **The role of the oxidative stress in the exercise: experimental models.** Lecture at the CONI School (Italian National Olympic Organization), 7 March 2018, Rome, Italy.
- ✓ **ELF-MF Effect on the Molecular Biology of the Neuron.** Lecture at the International School of Bioelectromagnetics "Alessandro Chiabrera". 11-16 April 2016, Erice, Italy.
- ✓ **Exposure of Neuronal Cells to 50-Hz Magnetic Fields triggers EPIGENETIC microRNA-34b/c impairment independently of the Oxidative Stress.** BIOEM 2016, June 5-10, Ghent, Belgium.
- ✓ **ELF-MFs exposure potentiates the sensitivity to the neurotoxin MPP+ in an in vitro model of Parkinson's Disease.** BIOEM 2014, June 8-13, 2014. Cape Town, South Africa.
- ✓ **Role of the microRNAs in the regulation of prostate cancer by USP2A.** Italian Society of Endocrinology and Italian Association of Medical oncology. Oct 14th, 2008; Rome, Italy.
- ✓ **Role of c-myc oncogene in the response to oxidative stress.** Annual congress AICC. Dec 9-10, 2004, Naples, Italy.
- ✓ **Study of the involvement of c-myc oncogene in the chemoresistance.** VII National Congress G.O.I.M. Jun 23-25, 2004, Rome, Italy.
- ✓ **c-myc down-regulation increases susceptibility to cisplatin through ROS-mediated apoptosis in M14 melanoma cells.** XVIII National Meeting of the Italian cytometry society. Oct 2-5, 2001, Chioggia, Italy.

CONGRESS ABSTRACTS

LIST OF MOST RECENT SINCE 2015

- ✓ ***Opuntia Ficus-Indica* extract as potential natural radioprotector.** EUROPEAN RADIATION PROTECTION WEEK 2024 – ROME, 11-15 NOVEMBER
- ✓ **Molecular modelling and Molecular Dynamics Simulation to Reveal and Predict the Molecular Interaction Between the Airborne particles and Biomolecular Targets.** The 4th MASBIC annual symposium. Ancona, 25-27 Settembre 2024
- ✓ ***In Vitro* Imaging and Molecular Characterization of Ca^{2+} Flux Modulation by Nanosecond Pulsed Electric Fields.** BIOEM 2024, Crete, Greece, 16-21 June 2024
- ✓ **Evaluation of *Opuntia ficus-indica* (OFI) extract as a potential natural radioprotector**. European Environmental Mutagenesis and Genomics Society (EEMGS), Malaga, Spain, 15-18 May 2023
- ✓ **Insights into the possible interaction between fine particulate matter and SARS-CoV-2: molecular and *in silico* approaches**. Biophysics@Rome 2023, Rome, Italy, 19-20 April 2023
- ✓ **Characterization of Ca^{2+} fluxes modulation by nanosecond pulsed electric fields in neuroblastoma and mesenchymal stem cells.** 4th World Congress on Electroporation, Copenhagen, Denmark, 9 - 13 October 2022
- ✓ **Pulsed Electromagnetic Fields (PEMFs) and Amyotrophic Lateral Sclerosis (ALS): a numerical and experimental study** BioEM 2022, Nagoya, Japan, 19-24 June 2022
- ✓ **Simulazioni di Dinamica Molecolare mediante Calcolo ad Alte Prestazioni (HPC) per identificare le interazioni tra PM2.5 e SARS-CoV-2 nell'ambito del progetto Pulvirus (*Molecular Dynamics Simulations using High Performance Computing (HPC) to identify the interactions between PM2.5 and SARS-CoV-2 as part of the Pulvirus project*).** X CONVEGNO SUL PARTICOLATO ATMOSFERICO (X CONFERENCE ON THE ATMOSPHERIC PARTICULATE), Bologna, Italy, 18-20 May 2022
- ✓ **1) RISEUP: Regeneration of Injured Spinal cord by Electro pUlsed bio-hybrid implant**
  2) Membrane receptor-mediated ROS generation upon ELF exposure in neuroblastoma cells: an experimental and computational study
  3) Biological effects of ultrashort electric pulses in a Neuroblastoma cell line: the energy density role
  4) Ultrashort electric pulses: an effective way to target cancer stem cells
  URSI GASS 2021, Rome, Italy, 28 August - 4 September 2021
- ✓ **Ultrashort electric pulses: an effective way to target cancer stem cells**. 3rd Congress Electroporation 2019, Toulouse, France, 3-6 September 2019
- ✓ **Membrane receptor-mediated ROS generation upon ELF exposure in neuroblastoma cells: an experimental and**

computational study. BIOEM 2019, Montpellier, France, June 23-28, 2019

- ✓ **Molecular characterization of neuroblastoma cell line to single microsecond and nanosecond electric pulses: comparing low and high field amplitudes**. BIOEM 2019, Montpellier, France, June 23-28, 2019
- ✓ **50-Hz magnetic field impairs the expression of iron-related genes in the in vitro SOD1G93A model of amyotrophic lateral sclerosis.** BIOEM 2019, Montpellier, France, June 23-28, 2019
- ✓ **50 Hz 1 mT field exposure does not affect DNA global methylation of an in vitro model for Parkinson's Disease**. BIOEM 2018, Portoroz, Slovenia, June 25-29, 2018

The Genome and Epigenome of Sperm, a bridge across generations. XXXV Italian National Conference of Cytometry, Paestum, Italy, October 3-6, 2017

- ✓ **Evaluation of the hazelnuts as functional food: molecular effects of long maceration raw kernel extract in HepG2 human hepatocarcinoma cell line**. 22nd International Conference of Functional Foods Center -10th International Symposiun of ASFFB. Harvard Medical School, Boston, MA, USA, September 22-23, 2017
- ✓ **Hazelnut functional food: clinical trial and epigenetic approach**. IX International Congress on Hazelnut, Samsun, Turkey, August 15-19, 2017
- ✓ **The hazelnut as functional food: an in vitro study of the epigenetic effect elicited by the hazelnut extract in the HepG2 human hepatocarcinoma cell line**. Annual National Congress of the Italian Society of Nutritionists, Bologna, Italy, Nov 30- Dec 2, 2016
- ✓ **50 Hz Exposure Does Not Affect DNA Global Methylation of an In Vitro Model of Parkinson's Disease**. IV ICEmB National Conference, Milan, Italy, July 4-6, 2016
- ✓ **Extremely Low Frequency Magnetic Field (ELF-MF) exposure sensitizes SHSY5Y dopaminergic cells to the pro-Parkinson's Disease toxin MPP.** VI Meeting on the Molecular Mechanisms of Neurodegeneration. Casa Shuster, Milano, Italia, 28-30 Maggio 2015

ATTENDANCE TO COURSES AND WORKSHOPS

- ✓ **Salute, Ambiente e Cambiamenti climatici- Prospettiva 2030**. April 12, 2024; MAST auditorium, Bologna, Italy
- ✓ **Recent Advances in Air Pollution and Health**. Feb 29th-March 1st, 2024; Cariplo Conference Centre, Mian, Italy.
- ✓ **Workshop: in vitro disease models**. Nov 29th, 2018; Campus Bio-Medico, Rome, Itlay
- ✓ **Workshop: advanced application of the flow cytometry to oncology.** Jun 6-8th, 2018; Meeting of the Italian Group of Cytometry, Frascati, Italy.
- ✓ **Workshop in Chromatin remodelling and Human disease.** Dec 3-4th, 2009; Italian National Cancer Institute -Regina Elena, Rome, Italy.
- ✓ **Workshop on bioinformatic analysis of macroarrays.** Jun 10-17th, 2008; Weizmann Institute of Science, Rehovot, Israel.
- ✓ **A joint EMBL/Affymetrix workshop on trascriptome data analysis.** Sept 17-20th, 2007; EMBL, Heidelberg, Germany.
- ✓ **The world of small-non coding RNAs: from basic to applied science.** June 11-12, 2007; Rome, Italy.
- ✓ **2nd National Congress MIUR-CNR.** *Oct 12-13th, 2004; Rome, Italy.*
- ✓ **Frontiers in Flow Cytometry.** Mar 6th, 2002; Monteporzio Catone (Rome), Italy.
- ✓ **Melanoma Day.** Regina Elena Cancer Institute. Oct 31st, 2001; Rome, Italy.
- ✓ **Flow Cytometry in solid tumours.** National School of Cytometry (GIC). Oct 2nd, 2001; Chioggia, Italy.

PERSONAL SKILLS

Mother language	Italian
Other languages	English. Excellent writing and oral skills
Technical skills and competence	Qualified user of computer (Microsoft Office application for writing, data analysis and presentation). Good skills in managing the on line biological data-related banks
Organisational and managerial skills	Good skills achieved through years of organisation of lab activities and in managing the laboratory members (20 people)
Communicational skills	Excellent communication skills gained through experience as scientist, students' trainer and oral speaker in workshops and congresses
Job-related skills	Expertise covering different areas of biomedical sciences, experintal cellular and molecular biology, mainly in the research filed of the cancerogenesis and response to environmental factors
Driving license	European B driving license

Rome,
May 17th, 2025