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Davide Barbagallo - Curriculum Vitae et Studiorum

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ABOUT ME

Davide Barbagallo graduated cum laude in Biological Sciences at the University of Catania in 2004. In the same year he qualified as a biologist. In 2009 he obtained the title of PhD in Biology, Human Genetics and Bioinformatics and since then he has carried out university teaching activities in various study courses in the medical area. In 2017 he specialized in Medical Genetics. He obtained the National Scientific Qualification as Associate Professor of Bioloy in 2017. Davide Barbagallo's research activity focuses on the study of the expression and function of non-coding RNAs in different models of biomedical interest. In particular, in recent years, Davide Barbagallo has specialized in the study of the expression, function and molecular mechanisms of circular RNAs in glioblastoma multiforme.

EDUCATION AND TRAINING

Specialty in Medical Genetics
University of Messina [07/2017]

Address: Messina (Italy)
Field(s) of study: Applied Biology / Medical Genetics , The human non-coding RNAs miR-671-5P, CDR1AS, circ_SHPRH, circ_SMARCA5 are new candidates in the pathogenesis of Glioblastoma Multiforme - Tutor: Prof. Michele Purrello
Final grade : 50/50 with distinction

PhD in Biology, Human Genetics and Bioinformatics
University of Catania [10/2009]

Address: Catania (Italy)
Field(s) of study: Applied Biology , Pathogenomics of the Human Apoptotic Machinery: identification of new candidate genes for Diabetes - Tutor: Prof Michele Purrello

Master degree in Biological Sciences
Università degli Studi di Catania [10/2004]

Address: Catania (Italy)
Field(s) of study: Applied Microbiology , Rapid method of characterization of the structure of Tn1546 by LONG-PCR-RFLP in a sample of Enterococcus spp. - Tutor: Prof. Stefania Stefani
Final grade : 110/110 with distinction

WORK EXPERIENCE

Assistant Professor of Biology and Geneitics
Dept. of Biomedical and Biotechnological Sciences - University of Catania [Current]

City: Catania
Country: Italy

Scientific fields of interest:
1) Study of the expression, function and molecular mechanisms of circular RNAs in glioblastoma multiforme
2) Identification of non-coding RNAs as non-invasive markers for the early diagnosis of neoplasms

Teaching activity:
Teaching in various degree courses (master and bachelor degree courses) in the medical area

Post Doc
Dept. of Biomedical and Biotechnological Sciences - University of Catania [03/08/2016 – 02/08/2018]

City: Catania
Country: Italy

Research on Long Non Coding RNAs Expression Profiles in Cells and Exosomes from Colorectal Cancer Patients: Molecular Data and Translational Implications under the tutorship of Prof Michele Purrello (Dept. of Biomedical and Biotechnological Sciences - University of Catania)

Travel Grant Award from Fondazione Umberto Veronesi
Fondazione Umberto Veronesi [01/04/2017 – 30/09/2017]

City: Aarhus
Country: Denmark

Research on the pathogenetic and diagnostic role of circRNAs in glioblastoma multiforme, under the tutorship of Dr. Thomas Hansen, Department of Molecular Biology and Genetics, Aarhus University (Denmark)

Research fellowship
Dept. of Biomedical and Biotechnological Sciences - University of Catania [15/07/2014 – 14/07/2015]

City: Catania
Country: Italy

Research on the identification of small non-coding RNAs as markers of cellular identity and pathology, under the tutorship of Prof Michele Purrello (Dept. of Biomedical and Biotechnological Sciences - University of Catania)

Post Doc
Dept. of Biomedical and Biotechnological Sciences - University of Catania [03/08/2009 – 02/08/2013]

City: Catania
Country: Italy

Research on molecular markers related to follicular and oocyte quality and implantation mechanisms, under the guidance of Prof Cinzia Di Pietro (Dept. of Biomedical and Biotechnological Sciences - University of Catania)

QUALIFICATIONS

National Scientific Qualification as Associate Professor in Applied Biology
[04/2017 – Current]

Qualification as a Professional Biologist

[12/2004 – Current]

DIDACTIC ACTIVITIES

Professor with a temporary appointment for Biology and Genetics (SSD BIO/13) within the nursing bachelor degree (academic years from 2009/2010 to 2019/2020)

[10/2009 – 09/2020]

Professor with a temporary appointment for Applied Biology (SSD BIO/13) within the Techniques of cardiocirculatory fisiopathology bachelor degree (SSD BIO/13) (Academic year 2019/2020)

[10/2019 – 09/2020]

Professor with a temporary appointment for Biology and Genetics (SSD BIO/13) within the Medicine and Surgery and Dentistry master degrees (Academic years 2013/2014 and 2014/2015)

[04/2013 – 10/2015]

Professor with a temporary appointment for Analysis of the transcriptome (SSD BIO/13) within the PhD programme in Biology, Human Genetics and BioInformatics (XXVIII cycle)

[09/2014 – 10/2014]

Professor with a temporary appointment for Genomic methodologies and Laboratory techniques (SSD BIO/13)

[09/2009 – 12/2009]

Qualified Tutor within the degree courses in Orthoptics and Medical Biotecnologies, University of Catania

[02/2019]

Exam committee member

[10/2009 – 09/2020]

Exam committee member in several degree courses at University of Catania

AWARDS

International Journal of Molecular Sciences 2019 Best Paper Award

[12/2019]

Awarded of a travel grant from Fondazione Umberto Veronesi - April to September 2017

[04/2017 – 30/09/2017]

Fellowship at Aarhus University (Denmark) under the tutorship of Prof. Thomas B Hansen

Awarded as best young researcher in Biological Sciences from Accademia Gioenia (Catania, Italy) - June 2012

[06/2012]

EDITORIAL AND PEER REVIEW ACTIVITIES

Guest editor for the Special Issue: “Noncoding RNAs in Health and Disease” International Journal of Genomics

[03/2017]

Peer-reviewer for several international journals

Principali riviste:

- ✔ Brain (Oxford)
- ✔ Molecular Therapy - Nucleic Acids
- ✔ Cancers
- ✔ Genomics
- ✔ Gene
- ✔ Neurosciences
- ✔ International Journal of Molecular Sciences
- ✔ Clinical and Translational Medicine

External peer reviewer for research projects

[09/2019 – Current]

Evaluation of Academic research project Beyond Borders (Università degli Studi di Roma "Tor Vergata")

Evaluation of a project within HRUK Covid-19 Research Grant

Editorial Board Member of International Journal of Molecular Sciences (secion of Molecular Oncology)

[16/12/2020 – Current]

Topic Editor of the Special Issue: "Non-coding RNAs in Glioblastoma Multiforme" for the International Journal of Molecular Sciences

[Current]

RESEARCH GRANTS

Awarded with "STARTING GRANT" from University fo Catania

[10/10/2020 – Current]

PI of the project: "Multifaceted **Epi**genetic Landscape of **C**ircSMARCA5 in **Gli**oblastoma Multiforme" (EpiCGli) (10 KEuros)

Awarded from the italian league for the cure against tumours (LILT)

[07/2016]

PI of the project: "Analysis of circRNAs as diagnostic and prognostic markers of Glioblastoma Multiforme" (10 KEuros)

Member of a research group - Title of the Project: "Determination of the Expression Profile of LncRNAs in Cells and Exosomes of Patients with Colorectal Carcinoma: Molecular Data and Translational Implications" - PI: Prof. Michele Purrello

[01/2015]

Granted by University fo Catania (FIR 2014)

MEMBERSHIPS

Member of the Italian Association of General and Molecular Biology and Genetics (AIBG)

[09/2006 – Current]

Enrolled in the register of the Order of Biologists

[02/2010 – Current]

ORGANISATIONAL SKILLS

Member of the scientific committee of the International School in "Advanced Molecular Systems BioMedicine and Complex Pathological Phenotypes"

Member of the scientific committee of the International School in "Advanced Molecular Systems BioMedicine and Complex Pathological Phenotypes", Catania, 18-20 Giugno 2014.

Tutor for the International School in Advanced Molecular Systems BioMedicine and Complex Pathological Phenotypes

(i) Tutor per the International School: "Stem Cells: Biology, BioTechnology, Medical Applications", Acitrezza (CT), 1-5 October 2007. Title of the tutorial: "Structure and Functions of microRNAs"

(ii) Tutor per the International School: "Molecular BioMedicine, Medical Genomics and BioInformatics", Pantelleria (TP), 18-25 June 2005. Title of the tutorial: "Molecular Bases of Cancer";

(iii) Tutor per the International School: "Proteomes and Proteins", Lipari (ME), 9-22 July 2006. Title of the tutorial: "Structure and Functions of Proteins".

PUBLICATIONS

1. The Immunohistochemical Expression of the Serine and Arginine-Rich Splicing Factor 1 (SRSF1) Is a Predictive Factor of the Recurrence of Basal Cell Carcinoma: A Preliminary Study on a Series of 52 Cases.

[2022]

Broggi G, **Barbagallo D**, Lacarrubba F, Verzì AE, Micali G, Purrello M, Caltabiano R. Medicina (Kaunas). 2022 Jan 17;58(1):139. doi: 10.3390/medicina58010139. **I.F.: 2.430 (Q2)**

2. Competing endogenous RNA network mediated by circ_3205 in SARS-CoV-2 infected cells

[2022]

Barbagallo D, Palermo CI, Barbagallo C, Battaglia R, Caponnetto A, Spina V, Ragusa M, Di Pietro C, Scalia G, Purrello M. Competing endogenous RNA network mediated by circ_3205 in SARS-CoV-2 infected cells. Cell Mol Life Sci. 2022 Jan 17;79(2):75. doi: 10.1007/s00018-021-04119-8. **I.F.: 9.261 (Q1)**

3. MicroRNA-Mediated Regulation of the Virus Cycle and Pathogenesis in the SARS-CoV-2 Disease

[2021]

Battaglia R, Alonzo R, Pennisi C, Caponnetto A, Ferrara C, Stella M, Barbagallo C, **Barbagallo D**, Ragusa M, Purrello M, Di Pietro C.

Int J Mol Sci. 2021 Dec 7;22(24):13192. doi: 10.3390/ijms222413192. **I.F.: 5.924 (Q1)**

4. FUS driven circCNOT6L biogenesis in mouse and human spermatozoa supports zygote development.

[2021]

Chioccarelli T, Falco G, Cappetta D, De Angelis A, Roberto L, Addeo M, Ragusa M, **Barbagallo D**, Berrino L, Purrello M, Ambrosino C, Cobellis G, Pierantoni R, Chianese R, Manfrevola F. FUS driven circCNOT6L biogenesis in mouse and human spermatozoa supports zygote development. Cell Mol Life Sci. 2021 Dec 22;79(1):50. doi: 10.1007/s00018-021-04054-8. **I.F.: 9.261 (Q1)**

5. Do Extracellular RNAs Provide Insight into Uveal Melanoma Biology?

[2021]

Barbagallo C, Platania CBM, Drago F, **Barbagallo D**, Di Pietro C, Purrello M, Bucolo C, Ragusa M. Do Extracellular RNAs Provide Insight into Uveal Melanoma Biology? Cancers (Basel). 2021 Nov 25;13(23):5919. doi: 10.3390/cancers13235919. **I.F.: 6.639 (Q1)**

6. Molecular profiling of follicular fluid microRNAs in young women affected by Hodgkin lymphoma

[2021]

Caponnetto A, Battaglia R, Ragusa M, **Barbagallo D**, Lunelio F, Borzì P, Scollo P, Purrello M, Vento ME, Di Pietro C. Reprod Biomed Online. 2021 Aug 15:S1472-6483(21)00371-0. doi: 10.1016/j.rbmo.2021.08.007. Online ahead of print. **IF: 3.828**

7. VECTOR: An Integrated Correlation Network Database for the Identification of CeRNA Axes in Uveal Melanoma

[2021]

Barbagallo C, Di Maria A, Alecci A, **Barbagallo D**, Alaimo S, Colarossi L, Ferro A, Di Pietro C, Purrello M, Pulvirenti A, Ragusa M.Genes (Basel). 2021 Jun 29;12(7):1004. doi: 10.3390/genes12071004. **IF: 4.096 (Q2)**

8. Serum Extracellular Vesicle-Derived circHIPK3 and circSMARCA5 Are Two Novel Diagnostic Biomarkers for Glioblastoma Multiforme

[2021]

Stella M, Falzone L, Caponnetto A, Gattuso G, Barbagallo C, Battaglia R, Mirabella F, Broggi G, Altieri R, Certo F, Caltabiano R, Barbagallo GMV, Musumeci P, Ragusa M, Pietro CD, Libra M, Purrello M, **Barbagallo D.** Pharmaceuti cals (Basel). 2021 Jun 27;14(7):618. doi: 10.3390/ph14070618. **IF: 5.863 (Q1)**

9. LINC00483 Has a Potential Tumor-Suppressor Role in Colorectal Cancer Through Multiple Molecular Axes.

[2020]

Brex D, Barbagallo C, Mirabella F, Caponnetto A, Battaglia R, **Barbagallo D**, Caltabiano R, Broggi G, Memeo L, Di Pietro C, Purrello M, Ragusa M. LINC00483 Has a Potential Tumor-Suppressor Role in Colorectal Cancer Through Multiple Molecular Axes. Front Oncol. 2021 Jan 20;10:614455. doi: 10.3389/fonc.2020.614455. eCollection 2020. **I. F.: 4.848 (Q2)**

10. Diagnostic Utility of the Immunohistochemical Expression of Serine and Arginine Rich Splicing Factor 1 (SRSF1) in the Differential Diagnosis of Adult Gliomas

[2021]

Broggi G, Salvatorelli L, **Barbagallo D**, Certo F, Altieri R, Tirrò E, Massimino M, Vigneri P, Guadagno E, Maugeri G, D'Agata V, Musumeci G, Ragusa M, Barbagallo GMV, Russo D, Caltabiano R. Cancers (Basel). 2021 Apr 26;13(9): 2086. doi: 10.3390/cancers13092086. **IF: 6.639 (Q1)**

11. The GAUGAA Motif Is Responsible for the Binding between circSMARCA5 and SRSF1 and Related Downstream Effects on Glioblastoma Multiforme Cell Migration and Angiogenic Potential.

[2021]

Barbagallo D*, Caponnetto A*, Barbagallo C, Battaglia R, Mirabella F, Brex D, Stella M, Broggi G, Altieri R, Certo F, Caltabiano R, Barbagallo GMV, Anfuso CD, Lupo G, Ragusa M, Di Pietro C, Hansen TB, Purrello M. The GAUGAA Motif Is Responsible for the Binding between circSMARCA5 and SRSF1 and Related Downstream Effects on Glioblastoma Multiforme Cell Migration and Angiogenic Potential. Int J Mol Sci. 2021 Feb 7;22(4):1678. doi: 10.3390/ijms22041678. **I.F.: 4.556 (Q1) * Equal contribution**

12. Peritumoral Microenvironment in High-Grade Gliomas: From FLAIRectomy to Microglia-Glioma Cross-Talk.

[2021]

Altieri R*, **Barbagallo D***, Certo F, Broggi G, Ragusa M, Di Pietro C, Caltabiano R, Magro G, Peschillo S, Purrello M, Barbagallo G. Peritumoral Microenvironment in High-Grade Gliomas: From FLAIRectomy to Microglia-Glioma Cross-Talk. Brain Sci. 2021 Feb 6;11(2):200. doi: 10.3390/brainsci11020200. **I.F.: 3.332 (Q2) * Equal contribution**

13. Enrichment and Correlation Analysis of Serum miRNAs in Comorbidity Between Arnold-Chiari and Tourette Syndrome Contribute to Clarify Their Molecular Bases.

[2020]

Mirabella F, Gulisano M, Capelli M, Lauretta G, Cirnigliaro M, Palmucci S, Stella M, **Barbagallo D**, Di Pietro C, Purrello M, Ragusa M, Rizzo R. Enrichment and Correlation Analysis of Serum miRNAs in Comorbidity Between Arnold-Chiari and Tourette Syndrome Contribute to Clarify Their Molecular Bases. Front Mol Neurosci. 2021 Jan 5;13:608355. doi: 10.3389/fnmol.2020.608355. eCollection 2020. **IF: 4.057 (Q2)**

14. Uncharacterized RNAs in Plasma of Alzheimer's Patients Are Associated with Cognitive Impairment and Show a Potential Diagnostic Power.

[2020]

Barbagallo C, Di Martino MT, Grasso M, Salluzzo MG, Scionti F, Cosentino FII, Caruso G, **Barbagallo D**, Di Pietro C, Ferri R, Caraci F, Purrello M, Ragusa M. Uncharacterized RNAs in Plasma of Alzheimer's Patients Are Associated with Cognitive Impairment and Show a Potential Diagnostic Power. Int J Mol Sci. 2020 Oct 15;21(20):7644. doi: 10.3390/ijms21207644. **I.F.: 4.556 (Q1)**

15. LncRNA LINC00518 Acts as an Oncogene in Uveal Melanoma by Regulating an RNA-Based Network.

[2020]

Barbagallo C, Caltabiano R, Broggi G, Russo A, Puzzo L, Avitabile T, Longo A, Reibaldi M, **Barbagallo D**, Di Pietro C, Purrello M, Ragusa M. LncRNA LINC00518 Acts as an Oncogene in Uveal Melanoma by Regulating an RNA-Based Network. Cancers (Basel). 2020 Dec 21;12(12):3867. doi: 10.3390/cancers12123867. **I.F.: 6.126 (Q1)**

16. Potential Associations Among Alteration of Salivary miRNAs, Saliva Microbiome Structure, and Cognitive Impairments in Autistic Children.

[2020]

Ragusa M, Santagati M, Mirabella F, Lauretta G, Cirnigliaro M, Brex D, Barbagallo C, Domini CN, Gulisano M, Barone R, Trovato L, Oliveri S, Mongelli G, Spitale A, **Barbagallo D**, Di Pietro C, Stefani S, Rizzo R, Purrello M. Potential Associations Among Alteration of Salivary miRNAs, Saliva Microbiome Structure, and Cognitive Impairments in Autistic Children. Int J Mol Sci. 2020 Aug 27;21(17):6203. doi: 10.3390/ijms21176203. **I.F.: 4.556 (Q1)**

17. Ovarian aging increases small extracellular vesicle CD81 + release in human follicular fluid and influences miRNA profiles.

[2020]

Battaglia R, Musumeci P, Ragusa M, **Barbagallo D**, Scalia M, Zimbone M, Lo Faro JM, Borzì P, Scollo P, Purrello M, Vento EM, Di Pietro C. Ovarian aging increases small extracellular vesicle CD81 + release in human follicular fluid and influences miRNA profiles. Aging (Albany NY). 2020 Jun 17;12(12):12324-12341. doi: 10.18632/aging.103441. **I.F.: 4.831 (Q1)**

18. CircNAPEPLD is expressed in human and murine spermatozoa and physically interacts with oocyte miRNAs.

[2019]

Ragusa M*, **Barbagallo D***, Chioccarelli T, Manfrevola F, Cobellis G, Di Pietro C, Brex D, Battaglia R, Fasano S, Ferraro B, Sellitto C, Ambrosino C, Roberto L, Purrello M, Pierantoni R, Chianese R. CircNAPEPLD is expressed in human and murine spermatozoa and physically interacts with oocyte miRNAs. RNA Biol. 2019 Sep;16(9): 1237-1248. doi: 10.1080/15476286.2019.1624469. **I.F.: 5.477 (Q1) * Equal contribution**

19. PARP-14 Promotes Survival of Mammalian α but Not β Pancreatic Cells Following Cytokine Treatment.

[2019]

D'Angeli F, Scalia M, Cirnigliaro M, Satriano C, Barresi V, Musso N, Trovato-Salinaro A, **Barbagallo D**, Ragusa M, Di Pietro C, Purrello M, Spina-Purrello V. PARP-14 Promotes Survival of Mammalian α but Not β Pancreatic Cells Following Cytokine Treatment. Front Endocrinol (Lausanne). 2019 May 3;10:271. doi: 10.3389/fendo.2019.00271. eCollection 2019. **I.F.: 3.634 (Q2)**

20. Extracellular Vesicles in Human Oogenesis and Implantation.

[2019]

Andronico F, Battaglia R, Ragusa M, **Barbagallo D**, Purrello M, Di Pietro C. Extracellular Vesicles in Human Oogenesis and Implantation. Int J Mol Sci. 2019 May 1;20(9). pii: E2162. doi: 10.3390/ijms20092162. **I.F.: 4.183 (Q2)**

21. CircSMARCA5 Regulates VEGFA mRNA Splicing and Angiogenesis in Glioblastoma Multiforme Through the binding of SRSF1.

[2019]

Barbagallo D, Caponnetto A, Brex D, Mirabella F, Barbagallo C, Lauretta G, Morrone A, Certo F, Broggi G, Caltabiano R, Barbagallo GM, Spina-Purrello V, Ragusa M, Di Pietro C, Hansen TB, Purrello M. CircSMARCA5 Regulates VEGFA mRNA Splicing and Angiogenesis in Glioblastoma Multiforme Through the binding of SRSF1. Cancers (Basel). 2019 Feb 7;11(2). pii: E194. doi: 10.3390/cancers11020194. **I.F.: 6.162 (Q1)**

22. Identification of extracellular vesicles and characterization of miRNA expression profiles in human blastocoel fluid.

[2019]

Battaglia R, Palini S, Vento ME, La Ferlita A, Lo Faro MJ, Caroppo E, Borzì P, Falzone L, **Barbagallo D**, Ragusa M, Scalia M, D'Amato G, Scollo P, Musumeci P, Purrello M, Gravotta E, Di Pietro C. Identification of extracellular vesicles and characterization of miRNA expression profiles in human blastocoel fluid. Scientific Reports. 2019 Jan 14;9(1):84. doi: 10.1038/s41598-018-36452-7. **I.F.: 4.011 (Q1)**

23. Upregulated microRNAs in Membranous Glomerulonephropathy are associated with significant downregulation of IL6 and MYC mRNAs.

[2019]

Barbagallo C, Passanisi R, Mirabella F, Cirnigliaro M, Costanzo A, Lauretta G, **Barbagallo D**, Bianchi C, Pagni F, Castorina S, Granata A, Di Pietro C, Ragusa M, Malatino L, Purrello M. Upregulated microRNAs in Membranous Glomerulonephropathy are associated with significant downregulation of IL6 and MYC mRNAs. J Cell Physiol. 2019 Aug;234(8):12625-12636. doi: 10.1002/jcp.27851. **I.F.: 4.522 (Q2)**

24. LncRNA UCA1, upregulated in CRC biopsies and downregulated in serum exosomes, controls mRNA expression by RNA-RNA interactions.

[2018]

Barbagallo C, Brex D, Caponnetto A, Cirnigliaro M, Scalia M, Magnano A, Caltabiano R, **Barbagallo D**, Biondi A, Cappellani A, Basile F, Di Pietro C, Purrello M, Ragusa M. LncRNA UCA1, upregulated in CRC biopsies and downregulated in serum exosomes, controls mRNA expression by RNA-RNA interactions. 2018. Mol Ther Nucleic Acids. 2018 2018 Sep 7;12:229-241. doi: 10.1016/j.omtn.2018.05.009. **I.F.: 5.660 (Q1)**

25. CircSMARCA5 Inhibits Migration of Glioblastoma Multiforme Cells by Regulating a Molecular Axis Involving Splicing Factors SRSF1/SRSF3/PTB.

[2018]

Barbagallo D, Caponnetto A, Cirnigliaro M, Brex D, Barbagallo C, D'Angeli F, Morrone A, Caltabiano R, Barbagallo GM, Ragusa M, Di Pietro C, Hansen TB, Purrello M. CircSMARCA5 Inhibits Migration of Glioblastoma Multiforme Cells by Regulating a Molecular Axis Involving Splicing Factors SRSF1/SRSF3/PTB. Int J Mol Sci. 2018 Feb 6;19(2). . pii: E480. doi: 10.3390/ijms19020480. **I.F.: 3.687 (Q2)**

26. Noncoding RNAs in Health and Disease.

[2018]

Barbagallo D, Vittone G, Romani M, Purrello M. Noncoding RNAs in Health and Disease. Int J Genomics. 2018 Jan 22;2018:9135073. doi: 10.1155/2018/9135073. eCollection 2018. **I.F.: 1.904 (Q3)**

27. Asymmetric RNA distribution among cells and their secreted exosomes: biomedical meaning and considerations on diagnostic applications.

[2017]

Ragusa M, Barbagallo C, Cirnigliaro M, Battaglia R, Brex D, Caponnetto A, **Barbagallo D**, Di Pietro C, Purrello M. Asymmetric RNA distribution among cells and their secreted exosomes: biomedical meaning and considerations on diagnostic applications. Front Mol Biosci. 2017 Oct 4;4:66. doi: 10.3389/fmolb.2017.00066. eCollection 2017.

28. Molecular crosstalking among Noncoding RNAs: a new network layer of genome regulation in cancer.

[2017]

Ragusa M, Barbagallo C, Brex D, Caponnetto A, Cirnigliaro M, Battaglia R, **Barbagallo D**, Di Pietro C, Purrello M. Molecular crosstalking among Noncoding RNAs: a new network layer of genome regulation in cancer. Int J Genomics. 2017;2017:4723193. doi: 10.1155/2017/4723193. Epub 2017 Sep 24. **I.F.: 1.904 (Q3)**

29. Expression and Regulatory Network Analysis of miR-140-3p, a New Potential Serum Biomarker for Autism Spectrum Disorder.

[2017]

Cirnigliaro M, Barbagallo C, Gulisano M, Domini CN, Barone R, **Barbagallo D**, Ragusa M, Di Pietro C, Rizzo R, Purrello M. Expression and Regulatory Network Analysis of miR-140-3p, a New Potential Serum Biomarker for Autism Spectrum Disorder. Front Mol Neurosci. 2017 Aug 10;10:250. doi: 10.3389/fnmol.2017.00250. eCollection 2017. **I.F.: 3.902 (Q2)**

30. Non-coding RNAs in the Ovarian Follicle.

[2017]

Battaglia R, Vento ME, Borzì P, Ragusa M, **Barbagallo D**, Arena D, Purrello M, Di Pietro C. Non-coding RNAs in the Ovarian Follicle. Front Genet. 2017 May 12;8:57. doi: 10.3389/fgene.2017.00057. eCollection 2017. **I.F.: 4.151 (Q1)**

31. miRNAs in the vitreous humor of patients affected by idiopathic epiretinal membrane and macular hole.

[2017]

Russo A, Ragusa M, Barbagallo C, Longo A, Avitabile T, Uva MG, Bonfiglio V, Toro MD, Caltabiano R, Mariotti C, Boscia F, Romano MR, Di Pietro C, **Barbagallo D**, Purrello M, Reibaldi M. miRNAs in the vitreous humor of patients affected by idiopathic epiretinal membrane and macular hole. PLoS One. 2017 Mar 22;12(3):e0174297. doi: 10.1371/journal.pone.0174297. eCollection 2017. **I.F.: 2.766 (Q1)**

32. MicroRNAs Are Stored in Human MII Oocyte and Their Expression Profile Changes in Reproductive Aging.

[2016]

Battaglia R, Vento ME, Ragusa M, **Barbagallo D**, La Ferlita A, Di Emidio G, Borzí P, Artini PG, Scollo P, Tatone C, Purrello M, Di Pietro C. MicroRNAs Are Stored in Human MII Oocyte and Their Expression Profile Changes in Reproductive Aging. Biol Reprod. 2016 Dec;95(6):131. doi: 10.1095/biolreprod.116.142711. Epub 2016 Nov 9. **I.F.: 3.184 (Q1)**

33. Altered expression of miRNAs and methylation of their promoters are correlated in neuroblastoma.

[2016]

Maugeri M*, **Barbagallo D***, Barbagallo C, Banelli B, Di Mauro S, Purrello F, Magro G, Ragusa M, Di Pietro C, Romani M, Purrello M. Altered expression of miRNAs and methylation of their promoters are correlated in neuroblastoma. Oncotarget. 2016 Dec 13;7(50):83330-83341. doi: 10.18632/oncotarget.13090. **I.F.: 5.168 (Q1) * Equal contribution**

34. Epigenetic dysregulation in neuroblastoma: A tale of miRNAs and DNA methylation.

[2016]

Parodi F, Carosio R, Ragusa M, Di Pietro C, Maugeri M, **Barbagallo D**, Sallustio F, Allemanni G, Pistillo MP, Casciano I, Forlani A, Schena FP, Purrello M, Romani M, Banelli B. Epigenetic dysregulation in neuroblastoma: A tale of miRNAs and DNA methylation. Biochim Biophys Acta. 2016 Dec;1859(12):1502-1514. doi: 10.1016/j.bbagrm.2016.10.006. Epub 2016 Oct 15. **I.F.: 5.179 (Q1)**

35. miRNAs Plasma Profiles in Vascular Dementia: Biomolecular Data and Biomedical implications.

[2016]

Ragusa M, Bosco P, Tamburello L, Barbagallo C, Condorelli AG, Tornitore T, Spada RS, **Barbagallo D**, Scalia M, Elia M, Di Pietro C, Purrello M. miRNAs Plasma Profiles in Vascular Dementia: Biomolecular Data and Biomedical implications. Front Cell Neurosci. 2016 Mar 1;10:51. doi: 10.3389/fncel.2016.00051. eCollection 2016. **I.F.: 4.300 (Q1)**

36. ltered Expression of Uncoupling Protein 2 in GLP-1-producing Cells after Chronic High Glucose Exposure: Implications for the Pathogenesis of Diabetes Mellitus.

[2016]

Urbano F, Filippello A, Di Pino A, **Barbagallo D**, Di Mauro S, Pappalardo A, Rabuazzo AM, Purrello M, Purrello F, Piro S. Altered Expression of Uncoupling Protein 2 in GLP-1-producing Cells after Chronic High Glucose Exposure: Implications for the Pathogenesis of Diabetes Mellitus. Am J Physiol Cell Physiol. 2016 Apr 1;310(7):C558-67. doi: 10.1152/ajpcell.00148.2015. Epub 2016 Jan 6. **I.F.: 3.454 (Q1)**

37. Dysregulated miR-671-5p / CDR1-AS / CDR1 / VSNL1 axis is involved in glioblastoma multiforme.

[2016]

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Ragusa M, Barbagallo C, Statello L, Condorelli AG, Battaglia R, Tamburello L, **Barbagallo D**, Di Pietro C, Purrello M. Non-coding landscapes of colorectal cancer. World J Gastroenterol. 2015 Nov 7;21(41):11709-39. doi: 10.3748/wjg.v21.i41.11709. **I.F.: 3.365 (Q2)**

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[2015]

Rizzo R, Ragusa M, Barbagallo C, Sammito M, Gulisano M, Calì PV, Pappalardo C, Barchitta M, Granata M, Condorelli AG, **Barbagallo D**, Scalia M, Agodi A, Di Pietro C, Purrello M. Circulating miRNAs profiles in tourette syndrome: molecular data and clinical implications. Mol Brain. 2015 Jul 25;8:44. doi: 10.1186/s13041-015-0133-y. **I .F.: 3.745 (Q2)**

40. miRNA profiling in vitreous humor, vitreal exosomes and serum from uveal melanoma patients: Pathological and diagnostic implications.

[2015]

Ragusa M, Barbagallo C, Statello L, Caltabiano R, Russo A, Puzzo L, Avitabile T, Longo A, Toro MD, **Barbagallo D**, Valadi H, Di Pietro C, Purrello M, Reibaldi M. miRNA profiling in vitreous humor, vitreal exosomes and serum from uveal melanoma patients: Pathological and diagnostic implications. Cancer Biol Ther. 2015 Sep 2;16(9):1387-96. doi: 10.1080/15384047.2015.1046021. Epub 2015 May 7. **I.F.: 2.921 (Q2)**

41. PJ-34 inhibits PARP-1 expression and ERK phosphorylation in glioma-conditioned brain microvascular endothelial cells.

[2015]

Motta C, D'Angeli F, Scalia M, Satriano C, **Barbagallo D**, Naletova I, Anfuso CD, Lupo G, Spina-Purrello V. PJ-34 inhibits PARP-1 expression and ERK phosphorylation in glioma-conditioned brain microvascular endothelial cells. Eur J Pharmacol. 2015 Aug 15;761:55-64. doi: 10.1016/j.ejphar.2015.04.026. Epub 2015 Apr 28. **I.F.: 2.730 (Q2)**

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[2015]

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43. Highly skewed distribution of miRNAs and proteins between colorectal cancer cells and their exosomes following Cetuximab treatment: biomolecular, genetic and translational implications.

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Ragusa M, Statello L, Maugeri M, Barbagallo C, Passanisi R, Alhamdani MS, Li Destri G, Cappellani A, **Barbagallo D**, Scalia M, Valadi H, Hoheisel JD, Di Pietro C, Purrello M. Highly skewed distribution of miRNAs and proteins between colorectal cancer cells and their exosomes following Cetuximab treatment: biomolecular, genetic and translational implications. Oncoscience. 2014 Mar 16;1(2):132-157. eCollection 2014.

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[2014]

Santonocito M, Vento M, Guglielmino MR, Battaglia R, Wahlgren J, Ragusa M, **Barbagallo D**, Borzì P, Rizzari S, Maugeri M, Scollo P, Tatone C, Valadi H, Purrello M, Di Pietro C. Molecular characterization of exosomes and their microRNA cargo in human follicular fluid: bioinformatic analysis reveals that exosomal microRNAs control pathways involved in follicular maturation. Fertil Steril. 2014 Dec;102(6):1751-61.e1. doi: 10.1016/j.fertnstert. 2014.08.005. Epub 2014 Sep 17. **I.F.: 4.590 (Q1)**

45. CEBPA exerts a specific and biologically important proapoptotic role in pancreatic β cells through its downstream network targets.

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Barbagallo D, Condorelli AG, Piro S, Parrinello N, Fløyel T, Ragusa M, Rabuazzo AM, Størling J, Purrello F, Di Pietro C, Purrello M. CEBPA exerts a specific and biologically important proapoptotic role in pancreatic β cells through its downstream network targets. Mol Biol Cell. 2014 Aug 15;25(16):2333-41. doi: 10.1091/mbc.E14-02-0703. Epub 2014 Jun 18. **I.F.: 4.466 (Q2)**

46. miR-296-3p, miR-298-5p and their downstream networks are causally involved in the higher resistance of mammalian pancreatic α cells to cytokine-induced apoptosis as compared to β cells.

[2013]

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47. The apoptotic transcriptome of the human MII oocyte: characterization and age-related changes.

[2013]

Santonocito M, Guglielmino MR, Vento M, Ragusa M, **Barbagallo D**, Borzì P, Casciano I, Scollo P, Romani M, Tatone C, Purrello M, Di Pietro C. The apoptotic transcriptome of the human MII oocyte: characterization and age-related changes. Apoptosis. 2013 Feb;18(2):201-11. doi: 10.1007/s10495-012-0783-5. **I.F.: 3.614 (Q2)**

48. Specific alterations of the microRNA transcriptome and global network structure in colorectal cancer after treatment with MAPK/ERK inhibitors.

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Ragusa M, Statello L, Maugeri M, Majorana A, **Barbagallo D**, Salito L, Sammito M, Santonocito M, Angelica R, Cavallaro A, Scalia M, Caltabiano R, Privitera G, Biondi A, Di Vita M, Cappellani A, Vasquez E, Lanzafame S, Tendi E, Celeste S, Di Pietro C, Basile F, Purrello M. Specific alterations of the microRNA transcriptome and global network structure in colorectal cancer after treatment with MAPK/ERK inhibitors. J Mol Med (Berl). 2012 Dec;90(12): 1421-38. doi: 10.1007/s00109-012-0918-8. Epub 2012 Jun 4. **I.F.: 4.768 (Q1)**

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[2011]

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[2010]

Ragusa M, Majorana A, Statello L, Maugeri M, Salito L, **Barbagallo D**, Guglielmino MR, Duro LR, Angelica R, Caltabiano R, Biondi A, Di Vita M, Privitera G, Scalia M, Cappellani A, Vasquez E, Lanzafame S, Basile F, Di Pietro C, Purrello M. Specific alterations of microRNA transcriptome and global network structure in colorectal carcinoma after cetuximab treatment. Mol Cancer Ther. 2010 Dec;9(12):3396-409. doi: 10.1158/1535-7163.MCT-10-0137. Epub 2010 Sep 29. **I.F.: 5.225 (Q1)**

51. Expression profile and specific network features of the Apoptotic Machinery explain relapse of Acute Myeloid Leukemia after chemotherapy.

[2010]

Ragusa M, Avola G, Angelica R, **Barbagallo D**, Guglielmino MR, Duro LR, Majorana A, Statello L, Salito L, Consoli C, Camuglia MG, Di Pietro C, Milone G, Purrello M. Expression profile and specific network features of the Apoptotic Machinery explain relapse of Acute Myeloid Leukemia after chemotherapy. BMC Cancer. 2010 Jul 19;10:377. doi: 10.1186/1471-2407-10-377. **I.F.: 3.153 (Q2)**

52. Molecular profiling of human oocytes after vitrification strongly suggests that they are biologically comparable with freshly isolated gametes.

[2010]

Di Pietro C, Vento M, Guglielmino MR, Borzì P, Santonocito M, Ragusa M., **Barbagallo D**, Duro LR, Majorana A, De Palma A, Garofalo MR, Minutolo E, Scollo P, Purrello M. Molecular profiling of human oocytes after vitrification strongly suggests that they are biologically comparable with freshly isolated gametes. Fertil Steril. 2010 Dec;94(7): 2804-7. doi: 10.1016/j.fertnstert.2010.04.060. Epub 2010 Jun 9. **I.F.: 3.958 (Q1)**

53. MIR152, MIR200B, and MIR338, human positional and functional neuroblastoma candidates, are involved in neuroblast differentiation and apoptosis.

[2010]

Ragusa M, Majorana A, Banelli B, **Barbagallo D**, Statello L, Casciano I, Guglielmino MR, Duro LR, Scalia M, Magro G, Di Pietro C, Romani M, Purrello M. MIR152, MIR200B, and MIR338, human positional and functional neuroblastoma candidates, are involved in neuroblast differentiation and apoptosis. J Mol Med (Berl). 2010 Oct; 88(10):1041-53. doi: 10.1007/s00109-010-0643-0. Epub 2010 Jun 25. **I.F.: 5.192 (Q1)**

54. The apoptotic machinery as a biological complex system: analysis of its omics and evolution, identification of candidate genes for fourteen major types of cancer, and experimental validation in CML and neuroblastoma.

[2009]

Di Pietro C, Ragusa M, **Barbagallo D**, Duro LR, Guglielmino MR, Majorana A, Angelica R, Scalia M, Statello L, Salito L, Tomasello L, Pernagallo S, Valenti S, D'Agostino V, Triberio P, Tandurella I, Palumbo GA, La Cava P, Cafiso V, Bertuccio T, Santagati M, Li Destri G, Lanzafame S, Di Raimondo F, Stefani S, Mishra B, Purrello M. The apoptotic machinery as a biological complex system: analysis of its omics and evolution, identification of candidate genes for fourteen major types of cancer, and experimental validation in CML and neuroblastoma. BMC Med Genomics. 2009 Apr 30;2:20. doi: 10.1186/1755-8794-2-20. **I.F.: 2.661 (Q2)**

55. Expression analysis of TFIID in single human oocytes: new potential molecular markers of oocyte quality.

[2008]

Di Pietro C, Vento M, Ragusa M, **Barbagallo D**, Guglielmino MR, Maniscalchi T, Duro LR, Tomasello L, Majorana A, De Palma A, Borzì P, Scollo P, Purrello M. Expression analysis of TFIID in single human oocytes: new potential molecular markers of oocyte quality. Reprod Biomed Online. 2008 Sep;17(3):338-49. **I.F.: 2.954 (Q1)**

56. Involvement of GTA protein NC2beta in neuroblastoma pathogenesis suggests that it physiologically participates in the regulation of cell proliferation.

[2008]

Di Pietro C, Ragusa M, **Barbagallo D**, Duro LR, Guglielmino MR, Majorana A, Giunta V, Rapisarda A, Tricarichi E, Miceli M, Angelica R, Grillo A, Banelli B, Defferari I, Forte S, Laganà A, Bosco C, Giugno R, Pulvirenti A, Ferro A, Grzeschik KH, Di Cataldo A, Tonini GP, Romani M, Purrello M. Involvement of GTA protein NC2beta in neuroblastoma pathogenesis suggests that it physiologically participates in the regulation of cell proliferation. Mol Cancer. 2008 Jun 6;7:52. doi: 10.1186/1476-4598-7-52. **I.F.: 5.362 (Q1)**

57. Genomics, Evolution, and Expression of TBPL2, a Member of the TBP Family.

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Di Pietro C, Ragusa M, Duro L, Guglielmino MR, **Barbagallo D**, Carnemolla A, Laganà A, Buffa P, Angelica R, Rinaldi A, Calafato MS, Milicia I, Caserta C, Giugno R, Pulvirenti A, Giunta V, Rapisarda A, Di Pietro V, Grillo A, Messina A, Ferro A, Grzeschik KH, Purrello M. Genomics, Evolution, and Expression of TBPL2, a Member of the TBP Family. DNA Cell Biol. 2007 Jun;26(6):369-85. **IF: 1.861 (Q3)**

Book Chapter

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ORAL COMMUNICATIONS (SELECTION)

Identification of a new Molecular Network within Human Glioblastoma Multiforme (GBM): circSMARCA5 Regulates VEGFA mRNA Splicing and Angiogenesis by Binding to SRSF1

[12/2019]

Retreat of the Department of Biomedical and Biotechnological Sciences (University of Catania) 30th November - 1st December – Hotel Capo Peloro, Torre Faro, Messina (ME), Italy. **Barbagallo D.** *Identification of a new Molecular Network within Human Glioblastoma Multiforme (GBM): circSMARCA5 Regulates VEGFA mRNA Splicing and Angiogenesis by Binding to SRSF1*.

The role of circular RNA SMARCA5 (circSMARCA5) in the pathogenesis of Glioblastoma Multiforme.

[11/2018]

Retreat of the Department of Biomedical and Biotechnological Sciences (University of Catania) 24th -25th November 2018 – Il Picciolo, Castiglione di Sicilia (CT), Italy. **Barbagallo D.** *The role of circular RNA SMARCA5 (circSMARCA5) in the pathogenesis of Glioblastoma Multiforme.*

Pathogenetic Involvement of Non Coding RNAs in GBM.

[12/2016]

Retreat of the Department of Biomedical and Biotechnological Sciences (University of Catania) 17th-18th December 2016 – Il Picciolo, Castiglione di Sicilia (CT), Italy. **Barbagallo D.** *Pathogenetic Involvement of Non Coding RNAs in GBM*.

miR-296-3p, miR-298-5p and their downstream networks are causally involved in the higher resistance of mammalian pancreatic α cells to cytokine-induced apoptosis as compared to β cells.

[09/2013]

Podium presentation at XV Congresso Nazionale AIBG. Arcavacata di Rende (CS), Italy. September 27th-September 28th, 2013. **Barbagallo D**, Piro S, Condorelli AG, Mascali LG, Urbano F, Parrinello N, Monello A, Statello L, Ragusa M, Rabuazzo AM, Di Pietro C, Purrello F, Purrello M. *miR-296-3p, miR-298-5p and their downstream networks are causally involved in the higher resistance of mammalian pancreatic α cells to cytokine-induced apoptosis as compared to β cells*.

Specifically different microRNAs profiles provide new insights on the molecular mechanisms activated by cytotoxic proinflammatory cytokines in mammalian pancreatic α- and β-cells.

[10/2011]

Podium presentation at XIII Congresso Nazionale AIBG. Padova (PD), Italy. September 30th-October 1st, 2011. **D Barbagallo**, S Piro, M Ragusa, LR Duro, ET Maniscalchi, M Sammito, LG Mascali, MR Guglielmino, A Monello, MA Rabuazzo, C Di Pietro, F Purrello, M Purrello. *Specifically different microRNAs profiles provide new insights on the molecular mechanisms activated by cytotoxic proinflammatory cytokines in mammalian pancreatic α- and β-cells*.

I hereby declare that the information contained in this curriculum vitae is accurate and truthful. I authorize the processing of personal data, including sensitive ones, based on the Italian Government law 196/2003 for the purposes referred to this application

Sincerely

Davide Barbagallo

Catania, 31/01/2022