

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome DAVIDE
Cognome CORONA
Recapiti Dipartimento STEBICEF
E-mail davide.corona@unipa.it

FORMAZIONE TITOLI

Education:

1990-1995 Diploma in Biochemistry and Molecular Biology (grade:110/110 *cum laude & honors*),
Universita' degli Studi di Palermo (Palermo, ITALY);

1. ERASMUS – Undergraduate Exchange Fellow, University of Wales-Swansea (Swansea, UK);
1. PhD in Biochemistry; graduated with "*Summa cum Laude*", EMBL-University of Heidelberg (Heidelberg, GERMANY);

ATTIVITA' DIDATTICA

TEACHING ACTIVITIES

2006-2012 Since I joined the Faculty of Medicine at the University of Palermo I accepted without any interruption a teaching load of a maximum of 60hours/year. In particular, over the course of these years I got assigned the following courses: Biochemistry Laboratory, Introduction to Biochemistry, Proteomics, Cellular Biochemistry, Introduction to Molecular Biology, Applied Genomics, Gene Expression, Biochemical Mechanisms of Epigenetic Processes

TUTORING ACTIVITIES

Since I started my independent research group in 2005:

- I have supervised the experimental thesis of over twenty undergraduate students and three ERASMUS students;
- I have been the tutor of three PhD Student (Dr. Giosalba Burgio, Dr. Water Arancio and Dr. Maria Toto) that have successfully graduated under my supervision. I am currently tutoring two PhD students (Giulia D'Angelo and Roberta Sanfilippo);
- I have been supervising the research activity of three Postdoctoral fellows (Dr. Gaspare La Rocca, Dr. Anna Sala, Dr. Maria Cristina Onorati) and one Assegnista di Ricerca (Junior Research fellow; Dr. Giosalba Burgio);

RICERCHE FINANZIATE

Funding ID

Funding that have already been secured via national or other research funding agencies:

2005-2009 Fondazione Telethon (ITALY) A Drosophila Model to Study the Human Multisystemic Disease Williams-Beuren Syndrome

2005-2007 HFSP – CDA (FRANCE – JAPAN) Analysis of Functional Interactions between Remodelers and Covalent Modifiers of Chromatin

2005-2009 Armenise-Harvard Foundation – CDA (ITALY – USA) Genetic Identification of Factors Positively Regulating the Drosophila Chromatin Remodeling ATPase ISWI

2006-2009 MIUR-FIRB (ITALY) Functional Interactions between the ISWI Nucleosome Remodeling ATPase and Dosage Compensation in Drosophila.

2008-2011 AIRC (ITALY) Role of the ATP- dependent Nucleosome Remodeling Factor ISWI in Cell Cycle Control and Differentiation

2010-2014 Fondazione Telethon (ITALY) Role of Chromatin Remodeling in Stem Cell Identity and Epigenetic Memory Switch Occurring in Tissue Regeneration

2011-2013 EMBO Young Investigator Programme

INCARICHI / CONSULENZE

REFEREE & STUDY SESSION ACTIVITY

2007-2012 I have been invited to peer-review scientific manuscripts for the following scientific editorial groups: Nature publishing group, Science Magazine, Elsevier, Wiley-Blackwell, and PLoS.

2007-2008 I have been selected from "Ministero dell'Istruzione dell'Università e della Ricerca" (MIUR) as an external referee to evaluate the national grants "PRIN";

2008 I have been selected from "Ministero dell'Istruzione dell'Università e della Ricerca" (MIUR) as an external referee to evaluate the "Rientro dei Cervelli" grants;

2009 I have been invited by the "Czech Science Foundation", the major Czech national funding agency, as an external referee to evaluate their: "International Projects" grants;

2010-2011 I have been invited by Istituto Superiore Sanità (ISS), as an external referee to evaluate their: "Internal Project" grants;

2011 I have been invited by the "Agence National de la Recherche (ANR)", one of the major French national funding agency, as an external referee to evaluate their: "Chair of Excellence Programme" grants;

2011-2012 I have been invited by the European Research Council (ERC), the major EU basic research funding agency, as an external referee to evaluate their: "Starting-Grant" programme;

2011-2012 I have been invited by the "Fondazione Telethon", one of the major non-profit Italian funding agency, to be part of their Telethon Scientific Committee to evaluate and select their "Ordinary Project" grants;

2012 I have been nominated by the Assessorato della Sanità Regione Sicilia, member of the Commissione Regionale per la Ricerca Sanitaria, to evaluate and select their "Progetti Finalizzati" and "Progetti Giovani Ricercatori" grants;

MEETING ORGANIZATION

2006 I organized the "IV Dulbecco Telethon Institute" Meeting 14th-16th May, Terni (ITALY);

2007 I organized the "Transcriptional and post-transcriptional regulation" Minisymposium at the IX FISV Congress, 26th-29th September, Riva del Garda (ITALY);

2010 I organized the "VII Dulbecco Telethon Institute" Meeting 21st-24th October, Palermo (ITALY);

2011 I organized the "Epigenetics Session" at the AGI-SIBV-SIGA Joint Meeting, 19th-22nd September, Assisi (ITALY);

2012 I organized the "8th SIBBM Seminars" Meeting 24th-26th May, Palermo (ITALY);

2012 I organized the "XVI Congresso Drosophila Italiana" Meeting 1st-3rd October, Palermo (ITALY);

UNIVERSITY ACTIVITIES

2007-2009 Member of the "Commissione Rapporti Internazionali" (International Relations Board) of the Università degli Studi di Palermo;

2010-2013 Member of "Commissione Scientifica Consultiva del Senato Accademico" (Academic Senate Scientific Committee) of the Università degli Studi di Palermo;

ASSOCIAZIONI SCIENTIFICHE

SCIENTIFIC SOCIETY MEMBERSHIP

From 2005 Member of SIB (Società Italiana di Biochimica e Biologia Molecolare);

From 2005 Member of SIBBM (Società Italiana di Biofisica e Biologia Molecolare);

From 2010 Member of EMBO YIP (European Molecular Biology Organization Young Investigator Programme)

From 2011 Member of AGI (Associazione Genetica Italiana);

PUBBLICAZIONE

Cernilogar FM, Onorati MC, Kothe GO, Burroughs AM, Parsi KM, Breiling A, Sardo FL, Saxena A, Miyoshi K, Siomi H, Siomi MC, Carninci P, Gilmour DS, Corona D, Orlando V (2011). Chromatin-associated RNA interference components contribute to transcriptional regulation in *Drosophila*. NATURE, vol. 480, p. 391-395, ISSN: 0028-0836

BURGIO, G, CIPRESSA, F, INGRASSIA AMR, CENCI, G, CORONA D (2011). The Histone De-acetylase Rpd3 Regulates Heterochromatin Structure of *Drosophila* Telomeres. JOURNAL OF CELL SCIENCE, vol. 185, p. 17-28, ISSN: 0021-9533

Onorati MC, Lazzaro S, Mallik M, Ingrassia AM, Carreca AP, Singh AK, Chaturvedi DP, Lakhota SC, Corona D (2011). The ISWI Chromatin Remodeler Organizes the *hsr* ncRNA-Containing Omega Speckle Nuclear Compartments. PLOS GENETICS, ISSN: 1553-7390, doi: 10.1371/journal.pgen.1002096

Sala A, Corona D (2011). Immunolocalization of Poly ADP-Ribose on *Drosophila* Polytene Chromosomes. METHODS IN MOLECULAR BIOLOGY, vol. 780, ISSN: 1064-3745

SALA A, TOTO M, PINELLO L, GABRIELE A, DI BENEDETTO V, INGRASSIA AMR, LO BOSCO G, DI GESU' V, GIANCARLO R, CORONA D (2011). Genome-wide characterization of chromatin binding and nucleosome spacing activity of the nucleosome remodelling ATPase ISWI. EMBO JOURNAL, vol. 30, p. 1766-1777, ISSN: 0261-4189, doi: 10.1038/emboj.2011.98

Di Stefano, L., Walker, J.A., Burgio, G., Corona D, Mulligan, P., Naar A.M., Dyson, N.J. (2011). Functional antagonism between histone H3K4 demethylases in vivo. GENES & DEVELOPMENT, vol. 25, p. 17-28, ISSN: 0890-9369

MERENDINO AM, BUCCHIERI F, CAMPANELLA C, MARCIANÒ V, RIBBENE A, DAVID S, ZUMMO G, BURGIO G, CORONA D, DE MACARIO EC, MACARIO AJ, CAPPELLO F (2010). Hsp60 is actively secreted by human tumor cells. PLOS ONE, vol. 5(2), ISSN: 1932-6203, doi: 10.1371/journal.pone.0009247

ARANCIO W, ONORATI MC, BURGIO G, COLLESANO M, INGRASSIA AM, GENOVESE SI, FANTO M, CORONA D (2010). The Nucleosome Remodeling Factor ISWI Functionally Interacts with an Evolutionarily Conserved Network of Cellular Factors. GENETICS, vol. 185, p. 129-140, ISSN: 0016-6731

BURGIO G, ONORATI MC, CORONA D (2010). Chromatin Remodelling Regulation by Small Molecules and Metabolites. BIOCHIMICA ET BIOPHYSICA ACTA, ISSN: 0006-3002

2009 - Articolo in rivista

SALA A, CORONA D (2009). Poly-ADP-Ribose (PAR) as an epigenetic flag. EPIGENETICS, ISSN: 1559-2294

Di Gesù V, Lo Bosco G, Pinello L, Yuan GC, Corona D (2009). A Multi-Layer Method to Study Genome-Scale Positions of Nucleosomes. GENOMICS, vol. 93, p. 140-145, ISSN: 0888-7543, doi:YGENO-08044

MORCIANO P, CARRISI C, CAPOBIANCO L, MANNINI L, BURGIO G, CESTRA G, DE BENEDETTO G.E, CORONA D, MUSIO A, CENCI G (2009). A conserved role for the mitochondrial citrate transporter Sea/SLC25A1 in the maintenance of chromosome integrity. HUMAN MOLECULAR GENETICS, vol. 18, p. 4180-4188, ISSN: 0964-6906

SALA A, LA ROCCA G, BURGIO G, KOTOVA E, DI GESÙ, COLLESANO M, INGRASSIA A, TULIN A, CORONA D (2008). The Nucleosome Remodeling ATPase ISWI is Regulated by poly-ADP-ribosylation. PLOS BIOLOGY, vol. 6, p. e252, ISSN: 1544-9173, doi: 10.1371/journal.pbio.0060252

BURGIO G, LA ROCCA G, SALA A, ARANCIO W, DI GESÙ D, COLLESANO M, SPERLING A, ARMSTRONG J, VAN HEERINGEN S, LOGIE C, TAMKUN J, CORONA D (2008). Genetic Identification of a Network of Factors that Functionally Interact with the Nucleosome Remodeling ATPase ISWI. PLOS GENETICS, vol. 4, p. e1000089, ISSN: 1553-7390, doi: 10.1371/journal.pgen.1000089

SALA A, CORONA D (2008). Epigenetics: More than Genetics. FLY, vol. 2, p. 165-168, ISSN: 1933-6934

CORONA D, DI GESU' V, LO BOSCO G, PINELLO L, YUAN G (2007). A New Multi-Layers Method to Analyze Gene Expression. LECTURE NOTES IN COMPUTER SCIENCE, vol. LNCS 4694, p. 862-869, ISSN: 0302-9743

CORONA D, SIRIACO G, ARMSTRONG JA, SNARSKAYA N, MCCLYMONT SA, SCOTT MP, TAMKUN JW (2007). ISWI Regulates Higher-Order Chromatin Structure and Histone H1 Assembly In Vivo. PLOS BIOLOGY, vol. 5, p. e232, ISSN: 1544-9173, doi: 10.1371/journal.pbio.0050232

LA ROCCA G, BURGIO G, CORONA D (2007). A Protein Nuclear Extract from D. melanogaster Larval Tissues. FLY, vol. 1, p. 344-346, ISSN: 1933-6934
2007 - Articolo in rivista

COLLESANO M, CORONA D (2007). Flow Cytometry and Karyotype Analysis of D.melanogaster Eye Disc Cells. FLY, vol. 1, p. 242-244, ISSN: 1933-6934

CORONA D, ARMSTRONG JA, TAMKUN JW (2004). Genetic and Cytological Analysis of Drosophila Chromatin-Remodeling Factors. METHODS IN ENZYMOLOGY, vol. 377, p. 70-85, ISSN: 0076-6879

CORONA D, TAMKUN JW (2004). Multiple Roles for ISWI in Transcription, Chromosome Organization and DNA Replication. BIOCHIMICA ET BIOPHYSICA ACTA, N. GENE STRUCTURE AND EXPRESSION, vol. 1677, p. 113-119, ISSN: 0167-4781

GRUNE PB, BRZESKI J, EBERHARTER A, CLAPIER CR, CORONA D, BECKER PB, MULLER CW (2003). Crystal Structure and Functional Analysis of the Nucleosome Recognition Module of the Remodeling Factor ISWI. MOLECULAR CELL, vol. 12, p. 449-460, ISSN: 1097-2765

] CORONA D, CLAPIER C. R, BECKER P. B, AND TAMKUN J. W (2002). Modulation of ISWI function by site-specific histone acetylation. EMBO REPORTS, vol. 3, p. 242-247, ISSN: 1469-221X

CLAPIER C. R, LANGST G, CORONA D, BECKER P. B, AND NIGHTINGALE K. P (2001). Critical role for the histone H4 N terminus in nucleosome remodeling by ISWI. MOLECULAR AND CELLULAR BIOLOGY, vol. 21, p. 875-883, ISSN: 0270-7306

CORONA D, EBERHARTER A, BUDDE A, DEURING R, FERRARI S, VARGA-WEISZ P, WILM M, TAMKUN J, AND BECKER P. B (2000). Two histone fold proteins, CHRAC-14 and CHRAC-16, are developmentally regulated subunits of chromatin accessibility complex (CHRAC). EMBO JOURNAL, vol. 19, p. 3049-3059, ISSN: 0261-4189

POOT R. A, DELLAIRE G, HULSMANN B. B, GRIMALDI M. A, CORONA D, BECKER P. B, BICKMORE W.A, AND VARGA-WEISZ P. D (2000). HuCHRAC, a human ISWI chromatin remodelling complex contains hACF1 and two novel histone-fold proteins. EMBO JOURNAL, vol. 19, p. 3377-3387, ISSN: 0261-4189

CORONA D, LANGST G, CLAPIER C. R, BONTE E. J, FERRARI S, TAMKUN J. W, AND BECKER P. B (1999). ISWI is an ATP-dependent nucleosome remodeling factor. MOLECULAR CELL, vol. 3, p. 239-245, ISSN: 1097-2765

DI CROCE L, KOOP R, VENDITTI P, WESTPHAL H. M, NIGHTINGALE K. P, CORONA D, BECKER P. B, AND BEATO M (1999). Two-step synergism between the progesterone receptor and the DNA-binding domain of nuclear factor 1 on MMTV minichromosomes. MOLECULAR CELL, vol. 4, p. 45-54, ISSN: 1097-2765

LANGST G, BONTE E. J, CORONA D, AND BECKER P. B (1999). Nucleosome movement by CHRAC and ISWI without disruption or trans-displacement of the histone octamer. CELL, vol. 97, p. 843-852,

ISSN: 0092-8674

GEBAUER F, CORONA D, PREISS T, BECKER P. B, AND HENTZE M. W (1999). Translational control of dosage compensation in *Drosophila* by Sex-lethal: cooperative silencing via the 5' and 3' UTRs of msl-2 mRNA is independent of the poly(A) tail. EMBO J 18, 6146-6154. EMBO JOURNAL, vol. 18, p. 6146-6154, ISSN: 0261-4189

AMBITI DI RICERCA

Research Experience:

1. Undergraduate Research, Laboratory of Dr. Mario La Farina

Dipartimento di Biologia Cellulare e dello Sviluppo, Università degli Studi di Palermo (Palermo, ITALY)

Research Topic: Analysis of ribosomal operon heterogeneity in *Streptomyces cerevisiae*;

1. Undergraduate Research, Laboratory of Dr. Vincenzo Sorrentino

DIBIT-Hospital San Raffaele (Milan, ITALY)

Research Topic: Dissection of TGF-Beta signaling pathway by yeast two-hybrid system;

1. Graduate Research, Laboratory of Dr. Peter Becker

EMBL - European Molecular Biology Laboratory (Heidelberg, GERMANY)

Research Topic: Biochemical analysis of chromatin remodeling reactions;

2000-2005 PostDoctoral Research, Laboratory of Dr. John Tamkun

University of California, Santa Cruz (Santa Cruz, USA)

Research Topic: Genetic analysis of chromatin remodeling factors;

2005-2009 Assistant Telethon Scientist, Dulbecco Telethon Institute

c/o Università degli Studi di Palermo, Dipartimento di Scienze Biochimiche (Palermo, ITALY)

Research Topic: Genetic and biochemical dissection of chromatin modification networks;

2010- present

Associate Telethon Scientist, Dulbecco Telethon Institute

c/o Universita' degli Studi di Palermo, Dipartimento di Biologia Cellulare e dello Sviluppo (Palermo, ITALY)

Research Topic: Role of Chromatin Remodeling in Stem Cell Identity and Epigenetic Memory Switch Occurring in Tissue Regeneration;

2006-present

Ricercatore SSD BIO/10, Facolta' di Medicina e Chirurgia, Universita' degli Studi di Palermo;