Curriculum vitae Dott Rossano Rossino

I, the undersigned Rossano Rossino, born in Cagliari on April 15, 1959, in 1979 enrolled in the degree course in Biological Sciences. From 1983, I attended the Institute of Genetics at the University of Cagliari to prepare my thesis, learning methods for setting up cell cultures, human chromosomal preparations, banding techniques (G, C, Q, R bands), high-resolution chromosome analysis, and identification of fragile sites.

In 1984, I graduated in Biological Sciences with a score of 110/110 and honors, discussing my thesis titled "DNA alterations as a primary cause of aging."

After graduation, I was offered by the professors of the Institute of Genetics to study the variability of heterochromatin in chromosomes 1, 9, 16, and Y in the Sardinian population.

Since 1986, I have attended the Institute of Medical Genetics at the Faculty of Medicine in Cagliari, developing my knowledge in tumor cytogenetics and the correlations between chromosomal abnormalities and the HLA system.

Additionally, in 1987, I had the opportunity to spend six months at the Department of Human Genetics, Faculty of Medicine, Sylvius Laboratory at the University of Leiden (Netherlands), where I learned key molecular biology techniques such as DNA extraction and purification, gel electrophoresis, Southern blotting, hybridization with specific probes, and molecular diagnosis of hemoglobinopathies (alpha and beta thalassemia).

For a period, I studied the mutagenicity of certain pharmacological compounds, evaluating them using the SCE technique, and I initiated a series of studies on DNA structure in human chromosomes fixed and treated with BrdU, using restriction enzymes directly on chromosomal preparations.

In December 1988, I participated in a competitive exam for a position as a technical officer (level 8) with a degree at the Institute of Zoological Biology of the Faculty of Medicine at the University of Cagliari, winning the position.

From January 1989, I served at the Institute of Zoological Biology of the Faculty of Medicine at the University of Cagliari, managing laboratories and actively participating in research and teaching activities carried out at the institute.

From December 1, 1997, to January 2002, I worked at the Department of Biomedical Sciences and Biotechnology at the Faculty of Medicine and Surgery (Microcitemico Hospital), focusing on prenatal cytogenetic diagnostics (amniocentesis and chorionic villus sampling) and postnatal diagnostics. In October 2000, I participated in a competition for a confirmed researcher position in grouping BIO 13 (Applied Biology), passing the selection.

Currently, I work as a confirmed researcher (BIO|13) on a permanent contract at the Pediatric Metabolic Diseases Laboratory located at the Microcitemico Hospital. My activities focus both on diagnostics and laboratory research, with particular attention to molecular diagnoses related to various diseases. Specifically, I handle molecular diagnostics for conditions such as Crohn's disease, lactose intolerance, celiac disease, and diabetes through HLA-SSP testing. Additionally, I am involved in the study and diagnosis of associated autoimmune diseases, contributing to the understanding and management of these complex conditions.

Educational Activities

Since 1991, Dr. R. Rossino has been teaching General Biology, both through formal lectures for degree courses in Nursing Sciences, Motor Sciences, and Speech Therapy, and through practical exercises in the Biology course at the Faculty of Medicine and Surgery, as well as in the Biology course at the Faculty of Education, as documented by the records of the Institute of General Biology at the Faculty of Medicine and Surgery of the University of Cagliari.

From 2002 to 2004, he organized and conducted five optional courses each year for Medical and Surgical students.

Since 2004, he has been a supervisor for six thesis projects.

List of publications

Clinical settings in which human leukocyte antigen typing is still useful in the diagnosis of celiac disease.
Schirru E, **Rossino R**, Jores RD, Corpino M, Muntoni S, Cucca F, Congia M.World J Gastroenterol. 2025 Apr 14;31(14):104397. doi: 10.3748/wjg.v31.i14.104397.PMID: 40248378

ECPUB5 Polyubiquitin Gene in *Euphorbia characias*: Molecular Characterization and Seasonal Expression Analysis.
Cannea FB, Diana D, **Rossino R**, Padiglia A.Genes (Basel). 2024 Jul 21;15(7):957. doi: 10.3390/genes15070957.PMID: 3906273

HLA Genotyping in Children With Celiac Disease Allows to Establish the Risk of Developing Type 1 Diabetes.
Schirru E, **Rossino R**, Diana D, Jores RD, Baldera D, Muntoni S, Spiga C, Ripoli C, Ricciardi MR, Cucca F, Congia M.Clin Transl Gastroenterol. 2024 Jul 1;15(7):e00710. doi: 10.14309/ctg.0000000000000710.PMID: 38713138

Peripheral blood mononuclear cells reactivity in recent-onset type I diabetes patients is directed against the leader peptide of preproinsulin, GAD65$_{271-285}$ and GAD65$_{431-450}$.

Jores RD, Baldera D, Schirru E, Muntoni S, **Rossino R**, Manchinu MF, Marongiu MF, Caria CA, Ripoli C, Ricciardi MR, Cucca F, Congia M.Front Immunol. 2023 Mar 9;14:1130019. doi: 10.3389/fimmu.2023.1130019. eCollection 2023.PMID: 36969220 **Free PMC article.**

Toward the renal vesicle: Ultrastructural investigation of the cap mesenchyme splitting process in the developing kidney.
Piras M, Gerosa C, Congiu T, Cau F, Fanni D, Pichiri G, Coni P, Lachowicz JI, Schirru E, Congia M, **Rossino R**, Muntoni S, Jaremko M, Piludu M.J Public Health Res. 2022 Oct 24;11(4):22799036221124076. doi: 10.1177/22799036221124076. eCollection 2022 Oct.PMID: 36310827

Antibodies targeting the European lobster (Palinurus elephas) vitellogenin developed by mRNA isolation and in-silico-designed antigenic peptides.
Cannea FB, Follesa MC, Porcu C, **Rossino R**, Olianas A, Rescigno A, Padiglia A.Biol Open. 2022 May 15;11(5):bio059019. doi: 10.1242/bio.059019. Epub 2022 May 13.PMID: 35452506 **Free PMC article.**

Low-Risk Human Leukocyte Antigen Genes and Mild Villous Atrophy Typify Celiac Disease With Immunoglobulin A Deficiency.
Schirru E, Jores RD, **Rossino R**, Corpino M, Cucca F, Congia M.J Pediatr Gastroenterol Nutr. 2021 Jun 1;72(6):889-893. doi: 10.1097/MPG.0000000000003129.PMID: 33908742

Schirru E, Danjou F, Cicotto L, Rossino R, Macis MD, Lampis R, Jores RD, Congia M. Anti-actin IgA antibodies identify celiac disease patients with a Marsh 3 Intestinal damage among subjects with moderate anti-TG2 levels. Biomed Res Int. 2013;2013:630463. doi: 10.1155/2013/630463. Epub 2013 Sep 5. PubMed PMID: 24083232; PubMed Central PMCID: PMC3780512.

Schirru E, Jores RD, Cicotto L, Frau F, De Virgiliis S, Rossino R, Macis MD, Lampis R, Congia M. High frequency of low-risk human leukocyte antigen class II genotypes in latent celiac disease. Hum Immunol. 2011 Feb;72(2):179-82. doi: 10.1016/j.humimm.2010.11.007. Epub 2010 Nov 12. PubMed PMID: 21075156.

Nucaro AL, Falchi M, Pisano T, Rossino R, Boscarelli F, Stoico G, Milia A, Montaldo C, Cianchetti C, Pruna D. Ring chromosome 14 mosaicism: an unusual case associated with developmental delay and epilepsy, characterized by genome array-CGH. Am J Med Genet A. 2010 Jan;152A(1):234-6. doi: 10.1002/ajmg.a.33167. PubMed PMID: 20034090.

Nucaro AL, Meloni M, Pisano T, Melis P, Rossi E, Rossino R, Corona S, Loi M, Achena F, Zuffardi O, Cianchetti C. Familial translocation t(3;10) (p26.3;p12.31) leading to trisomy 10p12.31-->pter and monosomy 3p26.3-->pter in seven members. Am J Med Genet A. 2008 Dec 15;146A(24):3242-5. doi: 10.1002/ajmg.a.32590. PubMed PMID: 19012344.

Nucaro AL, Melis P, Casini MR, Rossino R, Cau M, Melis MA, Loche S. Turner syndrome mosaicism: an unusual case with a de novo large dicentric marker chromosome: mos 45,X/46,X, ter rea(X;X)(p22.3;p22.3). J Appl Genet. 2008;49(3):301-3. doi: 10.1007/BF03195627. PubMed PMID: 18670067.

Nucaro A, Crisponi G, Minafra L, Rossino R, Cianchetti C. A family with segregation of an unbalanced translocation (7;13) (q36;q32) in three patients with severe mental retardation, microcephaly and dysmorphic features, detected by subtelomere FISH: genetic counselling and prenatal diagnosis. Genet Couns. 2008;19(1):37-42. PubMed PMID: 18564499.

Schirru E, Corona V, Usai-Satta P, Scarpa M, Cucca F, De Virgiliis S, Rossino R, Frau F, Macis MD, Jores RD, Congia M. Decline of lactase activity and c/t-13910 variant in Sardinian childhood. J Pediatr Gastroenterol Nutr. 2007 Oct;45(4):503-6. PubMed PMID: 18030226.

Schirru E, Corona V, Usai-Satta P, Scarpa M, Oppia F, Loriga F, Cucca F, De Virgiliis S, Rossino R, Macis MD, Jores RD, Congia M. Genetic testing improves the diagnosis of adult type hypolactasia in the Mediterranean population of Sardinia. Eur J Clin Nutr. 2007 Oct;61(10):1220-5. Epub 2007 Feb 21. PubMed PMID: 17311063.

Rossino R, Vincis C, Alves S, Prata MJ, Macis MD, Nucaro AL, Schirru E, Congia M. Frequency of the thiopurine S-methyltransferase alleles in the ancient genetic population isolate of Sardinia. J Clin Pharm Ther. 2006 Jun;31(3):283-7. PubMed PMID: 16789994.

Nucaro AL, Rossino R, Pruna D, Rassu S, Cianchetti C, Cao A, Moi P. Prenatal diagnosis of a mosaic supernumerary marker iso (8p) (tetrasomy 8p): discordance between chorionic villi culture and amniotic fluid karyotypes. Prenat Diagn. 2006 May;26(5):418-9. PubMed PMID: 16532523.

Rossino R, Nucaro AL. Prenatal diagnosis of a double trisomy 48, XXY, +13: Klinefelter and Patau syndromes. Am J Med Genet A. 2005 Jan 30;132A(3):342. PubMed PMID: 15690383.

Nieddu M, Rossino R, Pichiri G, Rocchi M, Setzu MD, Mezzanotte R. The efficiency of in-situ hybridization on human chromosomes with alphoid DNAs is enhanced by previous digestion with AluI and TaqI. Chromosome Res. 1999;7(8):593-602. PubMed PMID: 10628660.

Rossino R, Gosalvez J, Mezzanotte R. The effects of enzyme inactivation and incubation buffer on digestion in situ with restriction endonucleases. Biotech Histochem. 1998 Nov;73(6):325-8. PubMed PMID: 9888358.

Pignone D, Galasso I, Rossino R, Mezzanotte R. Characterization of Dasypyrum villosum (L.) candargy chromosomal chromatin by means of in situ restriction endonucleases, fluorochromes, silver staining and C-banding. Chromosome Res. 1995 Mar;3(2):109-14. PubMed PMID: 7749559.

Mezzanotte R, Rossino R, Nieddu M, Bella JL, Lopez-Fernandez C, Gosalvez J. Sulphonation of cytosine residues in fixed chromosomes. Cytobios. 1995;83(334):167-70. PubMed PMID: 8620689.

Rossino R, Mezzanotte R. The effects of aging on fixed DNA. Cytobios. 1993;76(304):13-7. PubMed PMID: 8243109.

Mezzanotte R, Rossino R, Nieddu M, Lopez-Fernandez C, Gosalvez J. The DNA fragments produced by AluI and BstNI digestion of fixed mouse chromosomes. Chromosoma. 1992 Oct;101(10):641-4. PubMed PMID: 1424989.

Ferrucci L, Rossino R, Mezzanotte R. Factors affecting the digestion of restriction endonucleases in situ. Cytobios. 1991;68(272):45-51. PubMed PMID: 1663864.

Gosalvez J, Sumner AT, Lopez-Fernandez C, Rossino R, Goyanes V, Mezzanotte R. Electron microscopy and biochemical analysis of mouse metaphase chromosomes after digestion with restriction endonucleases. Chromosoma. 1990 Apr;99(1):36-43. PubMed PMID: 1692784.

Mezzanotte R, Peretti D, Orrνπ S, Rossino R, Ennas MG, Gosalvez J. DNA

alteration induced by ultraviolet light in human metaphase chromosomes substituted with 5'-bromodeoxy uridine: monitoring by monoclonal antibodies to double-stranded and single stranded DNA. Chromosoma. 1989 Mar;97(5):356-62. PubMed PMID: 2470554.

Mezzanotte R, Rossino R, Orru S, Mameli M, Peretti D. Nuclease activity in human metaphase chromosomes substituted with 5'-bromodeoxyuridine. Chromosoma. 1989 Jan;97(4):334-8. PubMed PMID: 2707104.