



**Alberto Passi**

 UNIVERSITY OF INSUBRIA



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## Contact data

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## Biography

### Education

1995 Specialization Specialization in Clinical Chemistry cum laude,  
University of Pavia.

1992 Doctoral Degree Doctoral Degree in Biochemistry, Department of  
Biochemistry, University of Pavia and Genova, Italy.

1987 Degree Degree in Medicine and Surgery cum laude, University of  
Pavia, Italy.

### ADDITIONAL EDUCATION

Graduate student, Medical School University of Munich (Germany)

Research Fellow, Chemical Morphology University of Manchester (UK)

### ACADEMIC APPOINTMENTS

(2001-present) Associate Professor, Department of Biomedical  
Experimental and Clinical Sciences, University of Insubria, Varese,  
School of Medicine

(1998-2001) Assistant Professor, Department of Biomedical  
Experimental and Clinical Sciences, University of Insubria, Varese,  
School of Medicine.

(1992-1998) Assistant Professor, Department of Biochemistry,  
University of Pavia, School of Medicine.

(1990-1998) Instructor of Biochemistry and Applied Biochemistry,  
University of Pavia School of Medicine.

### EXPERIENCE

Research Scholar Cleveland Clinic Foundation (2000-01)

Postdoctoral fellow Department of Biochemistry University of Pavia  
(1991-1992)

Ph.D. student Department of Biochemistry University of Pavia and  
Genova (1988-1991)

Military Service Military Service in Italian Air Force.

## **CLINICAL APPOINTMENTS**

Hospital emergency service (1989-1992)

## **Qualifications and awards**

National Fellowship University of Manchester (1990).

Alumnus of Collegio Ghislieri , Pavia, (1981-1987)

## **SOCIETIES**

Italian Biochemistry Society (1990-present)

Italian Connective Tissue Society (1990-present); member of the national board, treasurer of the society.

International Society of Matrix Biology (1998-present)

American Society for Matrix Biology (2003-present)

## **BOARD CERTIFICATION AND LICENSURE**

1988- present, Italian Medical Association

## **Research interests**

1989-1991 Proteoglycan metabolism in bovine cornea during oxygen and lactate supply. 1991-1992 Proteoglycan metabolism in cell cultures: rat embryo cultures, study on adhesivity replicative subcultures. 1992-94. Proteoglycan metabolism in cell cultures obtained from Pseudoxanthoma patients. 1992-present. Extracellular matrix metabolism in cultures of human cells in senescence. 1993-present. Antioxidative effect of proteoglycan from different mammalian tissues. 1995-2001. Extracellular matrix in lung edema. Rabbit model. 2000-present. Hyaluronan metabolism in tissue and cell models. 2002-present. Use of stem cells in human transplant (bone and cartilage) and animal model (hearth)

## **RESEARCH FUNDING**

1990-present. Italian University grants for scientific research.

1991-93 Italian CNR grants of Italian University Funds (MURST) "Progetto finalizzato invecchiamento".

1993-95. Lombardy Regional Funds for scientific Research.

1996. Italian CNR grant (Edema project).

1997-1998 Italian National Project on "Proteoglycan metabolism in normal and pathologic conditions"

1998. Italian CNR grant on Lung proteoglycan.

2000-2002: Excellence National project from Italian Minister of Research: MMP and matrix

2002-2004: Excellence National project from Italian Minister of Research: Hyaluronan in cancer

2003-2004: Excellence National project from Insubria Athenaeum: Plasma MMPs and collagen peptides

2004-2005: Biotechnology National Fund: Cloning of UDPglucose DH from X.Laevis and his role in embriogenesis and his biochemical characterization in eucariotic cells.

## Teaching experience and appointments

Professor of Medical Chemistry in the School of Medicine;  
Professor of Medical Chemistry in School of Dentistry  
Professor of Medical Chemistry in Motor Sciences  
Professor in Biochemistry in Motor Sciences  
Professor in Applied Biochemistry in the School of Medicine  
Professor in Scientific Communication in the School of Medicine  
Component of the University Commission for Research Funding  
Assignment for biological sciences  
Component of the University Commission for International Exchanges  
Component of the University Commission for Disabilities  
Component of the University Internal Evaluation Committee

## Representative publications

1. Albertini R., Rindi S., Passi A., Bardoni A., Salvini R., Pallavicini G., De Luca G. "The effect of cornea proteoglycans on liposome peroxidation" (1996) **Arch.Biochem.Biophys.** 327, 209-214.
2. Albertini R., Rindi S., Passi A, Pallavicini G., De Luca G. "Heparin protection against Fe<sup>2+</sup> and Cu<sup>2+</sup> mediated oxidation of liposomes" (1996) **FEBS Letters** 383, 155-158.
3. Negrini, D.; Passi, A.; De Luca, G.; Miserocchi, G. "Pulmonary interstitial pressure and proteoglycans during development of pulmonary edema" (1996) **Am. J. Physiol.** 270 (Heart Circ. Physiol. 39), H2000-2007.
4. Albertini, R.; Ramos, P.; Giessauf, A.; Passi, A.; De Luca, G.; Hesterbauer, H. "Chondroitin-4-sulphate exhibits inhibitory effect during Cu<sup>2+</sup>-mediated LDL oxidation". (1997) **FEBS Letters** 403, 154-158.
5. Passi, A.; Albertini, R.; Campagnari, F. and De Luca G. "Modifications of proteoglycans secreted into the growth medium by young and senescent human skin fibroblasts". (1997) **FEBS Letters** 402, 286-290.
6. Passi, A.; Albertini, R.; Campagnari, F. and De Luca G. "Modifications of proteoglycans extracted from monolayer cultures of young and senescent fibroblasts". (1997) **FEBS Letters** 420, 175-178.
7. Negrini, D.; Passi, A.; De Luca, G.; Miserocchi, G. "Proteoglycan involvement during development of lesional pulmonary edema" (1998) **Am. J. Physiol.** vol. 274 (2 Pt 1), L203-211.
8. Passi, A., Negrini, D.; Albertini, R.; De Luca, G.; Miserocchi, G.:" Involvement of lung interstitial proteoglycans in development of hydraulic- and elastase-induced edema." (1998) **Am J Physiol.** Vol.275 (3Pt.1):L631-L635.
9. Passi, A., Negrini, D.; Albertini, R.; De Luca, G.; Miserocchi, G.:" The sensitivity of versican from rabbit lung to gelatinase A

- (MMP-2) and B (MMP-9) and its involvement in the development of hydraulic lung edema. " (1999) **FEBS Lett.** 30; 456 (1) :93-6.
10. Miserocchi, G., Passi, A., Albertini, R., Negrini, D., De Luca, G. " Interstitial pressure and proteoglycan degradation in hydraulic- and elastase-induced lung edema." (1999) **Chest.**;116:31.
  11. Albertini, R., De Luca, G., Passi, A., Moratti, R., Abuja, P." Chondroitin-4-sulfate protects high-density lipoprotein against copper-dependent oxidation. " (1999) **Arch Biochem Biophys.** 1;365(1):143-9.
  12. Albertini R, De Luca G, Palladini G, Passi A, Melzi d'Eril GV, Abuja PM " Mechanistic aspects of the relationship between low-level chemiluminescence and lipid peroxides in oxidation of low-density lipoprotein. " (1999) **FEBS Lett.**;459(1):47-50.
  13. Albertini R. Passi A. Abuja PM. De Luca G. The effect of glycosaminoglycans and proteoglycans on lipid peroxidation. (2000) **International Journal of Molecular Medicine.** 6 (2):129-136.
  14. Negrini D., Passi A., Bertin K., Bosi F., Wiig H. " Isolation of pulmonary interstitial fluid in rabbits by a modified wick technique". (2001) **Am J Physiol.** Lung Cellular & Molecular Physiology. 280(5):L1057-65.
  15. Miserocchi G., Negrini D., Passi A. De Luca G " Development of lung edema: interstitial fluid dynamics and molecular structure" (2001) **News Physiol Sci.** 16:66-71.
  16. Miserocchi G., Passi A.,Negrini D., Del Fabbro M., De Luca G. "Pulmonary interstitial pressure and tissue matrix structure in acute hypoxia" (2001) **Am J Physiol.** Lung Cellular & Molecular Physiology. 280(5):L881-7.
  17. Leoni V., Albertini R., Passi A., Abuja PM., Borroni P., Melzi d'Eril G., De Luca G. " Glucose accelerates copper-and ceruplasmin-induced oxidation of low density lipoprotein and whole serum". (2002) **Free Rad. Res;** 36(5); pp.521-529.
  18. Sciannamblo MT, Chigorno V, Passi A, Valaperta R, Zucchi I and Sandro Sonnino "Changes of the gangliosides pattern and content in human fibroblasts by high density population subculture progression" (2003) **Glycoconjugate Journal,** 19, 181-186.
  19. Vigetti D., Viola M., Gornati R., Ori M., Nardi I., Passi A., De Luca G., Bernardini G. "Molecular cloning, genomic organization and developmental expression of the *Xenopus laevis* hyaluronan synthase 3". (2003) In **Matrix biology,** 22, pagg 511-517.
  20. Karousou E., Porta G., De Luca G. and Passi A. Analysis of fluorophore-labelled hyaluronan and chondroitin sulfate disaccharides in biological samples (2003) **Journal of**

**Pharmaceutical and Biomedical Analysis** vol 34/4, 791-795.

21. Raio L., Ghezzi F., Cromi A., Cereda E., Passi A. Sonographic Morphology and Hyaluronan Content of Umbilical Cords of Healthy and Down Syndrome Fetuses (2004) **Early Gestation Earl Human Dev.** vol.77, 1-12
22. Passi A., Sadeghi P., Kawamura H., Anand S., Sato N., White L.E., Hascall V.C., Maytin E.V. hyaluronan suppresses late markers of epidermal differentiation in organotypic cultures of rat keratinocytes (2004) **Experimental Cell Research** 296/2, 123-134
23. Karousou E.G., Militopoulou M., Porta G., De Luca G., Hascall VC, Passi A. Polyacrylamide gel electrophoresis of fluorophore-labeled hyaluronan and chondroitin sulfate disaccharides. Application to the analysis in cells and tissues. (2004) **Electrophoresis** vol. Volume 25, Issue 17 , Pages 2919 - 2925
24. Daniela Quaglino; Luigi Sartor; Spiridione Garbisa; Federica Boraldi; Antonietta Croce; Alberto Passi; Giancarlo De Luca; Roberta Tiozzo; Ivonne Pasquali Ronchetti. Dermal fibroblasts from Pseudoxanthoma elasticum patients have raised MMP-2 degradative potential. (2005) **Biochim. Biophys. Acta - Molecular Basis of Disease**, 1741 (1-2): 42-47.
25. Luigi Raio, Antonella Cromi, Fabio Ghezzi, Alberto Passi, Eugenia Karousou, Manuela Viola, Davide Vigetti , Giancarlo De Luca and Pierfrancesco Bolis. Hyaluronan content of Wharton's jelly in healthy and Down syndrome fetuses. (2005) **Matrix biology**, vol 24 (2) : 166-74.
26. Evgenia G. Karousou, Manuela Viola, Anna Genasetti, Davide Vigetti, Giancarlo De Luca, Nikos K. Karamanos, Alberto Passi. Application of polyacrylamide gel electrophoresis of fluorophore labeled-saccharides for analysis of hyaluronan and chondroitin sulfate in human and animal tissues and cell cultures. (2005) **Biomedical Chromatography** vol 19 in press
27. Antoine Malek, N.E Bersinger, S. Di Santo, M.D. Mueller, R. Sanger, H. Schneider, F. Grezzi, E. Karousou, A. Passi, G. De Luca, L. Raio. C-Reactive Protein production in term human placental tissue. (2005) **Placenta** in press.
28. Negrini D, Tenstad O, **Passi A**, Wiig H. Differential degradation of matrix proteoglycans and edema development in rabbit. (2005) **Am J Physiol Lung Cell Mol Physiol**. 2005 Oct 7; [Epub ahead of print]
29. Mattarucchi E, Marsoni M, Binelli G, **Passi A**, Lo Curto F, Pasquali F, Porta G. Different real time PCR approaches for the fine quantification of SNP's alleles in DNA pools: assays development, characterization and pre-validation. (2005) **J Biochem Mol Biol**. 2005 Sep 30;38(5):555-62.

30. Viola M, Karousou EG, Vigetti D, Genasetti A, Pallotti F, Guidetti GF, Tira E, De Luca G, Passi A. Decorin from different bovine tissues: study of glycosaminoglycan chain by PAGEFS. (2005) **Journal of Pharmaceutical and Biomedical Analysis** in press.

### Clinical interests

Biochemical and molecular diagnosis of diseases involving extracellular molecules, as collagenopathies, mucopolysaccharidosis.  
Characterization of new molecular markers from extracellular matrix molecules for follow up of different type of cancer.