

CURRICULUM VITAE
ALBERTO PASSI MD PhD

Full Professor of Biochemistry
Department of Surgical and Morphological Sciences (DSCM)
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e-mail: alberto.passi@uninsubria.it
Place and Birthday: Cremona, 18.3.1962

EDUCATION

1995 Specialization in Clinical Biochemistry cum laude, University of Pavia.
1992 Doctoral Degree Doctoral Degree in Biochemistry, Department of Biochemistry, University of Pavia and Genoa, Italy.
1987 Degree in Medicine and Surgery cum laude, University of Pavia, Italy.

ADDITIONAL EDUCATION

Graduate student, Medical School University of Munich (Germany) (1982)
Research Fellow, Chemical Morphology University of Manchester (UK) (1990)

ACADEMIC APPOINTMENTS

(2011-present) Full Professor of biochemistry, DSCM, University of Insubria, Varese, School of Medicine
(2008-2011) Full Professor of biochemistry, DSBSC, University of Insubria, Varese, School of Medicine
(2001-2007) Associate Professor, DSBSC, University of Insubria, Varese, School of Medicine
(1998-2001) Assistant Professor, DSBSC, 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.
(1998-present) Instructor of Biochemistry and Applied Biochemistry, University of Pavia School of Medicine.

EXPERIENCE

Research Scholar Cleveland Clinic Foundation (OH– USA) (2000-2001)
Postdoctoral fellow Department of Biochemistry University of Pavia (1991-1992)
Ph.D. student Department of Biochemistry University of Pavia and Genoa (1988-1991)
Military Service Military Service in Italian Air Force (Military Mountain Air Rescue) (1987-88).

CLINICAL APPOINTMENTS

Emergency service (1989-1992)

SOCIETIES

Italian Biochemistry Society (1990-present)
Italian Connective Tissue Society (1990-present).
International Society of Matrix Biology (1998-present)
American Society for Matrix Biology (2003-present)
American Society of Biochemistry and Molecular Biology (2006-present)

AWARDS

Hellenic Biochemistry Society Award (2009)
National Fellowship University of Manchester (1990)
Alumnus of Collegio Ghislieri , Pavia, (1981-1987)

BOARD CERTIFICATION AND LICENSURE

1988, Italian Medical Association.

ACADEMIC RESPONSABILITIES

Dean of Sport Sciences Faculty (University of Insubria)
Director of Biotechnology Centre for Human Health (University of Insubria)
Rector advisor for Sport Activities (University of Insubria)
Rector advisor for local University Centres
Scientific advisor of Greek Minister of University and Religious Affairs
Component of the board of "CUS (centre of university sports) dei Laghi" (Varese-Como)

JOURNAL EDITORIAL BOARD MEMBERSHIPS

- Editor Journal of Biological Chemistry (2011-2016)
- Associate Editor Connective Tissue Research
- Academic editor Plos ONE
- Editor Open Biology Journal
- Editor of Frontiers in membrane physiology and biophysics

Research funds

1990-present. University FAR.
 1991-93 Fonds from CNR and MURST for "Progetto finalizzato invecchiamento".
 1993-95. Regional funds for scientific research.
 1996. CNR funds for scientific research (Edema project).
 1997-1998 National Project "Proteoglycan metabolism in normal and pathologic conditions"
 1998. CNR funds for "Lung proteoglycans".
 2000-2002: National funds of excellence (PRIN): MMP and matrix
 2002-2004: National funds of excellence (PRIN): Hyaluronan in cancer
 2003-2004: National funds of excellence: Plasma MMPs and collagen peptides
 2004-2005: Special funds for Biotechnology: "Cloning of UDPglucose DH from *X.Laevis* and his role in embriogenesis and his biochemical characterization in eucariotic cells".
 2010-2013 IRSES, EU funds FP7: progetto "INFLAMA" n° 2475126, Project leader and European responsible.

BIBLIOGRAPHY

A. Passi is author of 91 peer reviewed papers than 60 international meetings presenting about 40 talks. His H-index is 24. He also gave several seminars in international institutions as University of Bern (Switzerland), NY University (USA), University of Harvard (USA), Cleveland Clinic Foundation (USA), Open University (UK), University of Kuopio (Finland), Uppsala University (Sweden), Patras University (Greece), Muenster University (Germany), Heinrich Heine University Duesseldorf (Germany).

PRINCIPAL PAPERS last 10 years

1. Vigetti, D., Karousou, E., Viola, M., Deleonibus, S., De Luca, G., Passi, A. Hyaluronan: Biosynthesis and signalling (2014) **Biochimica et Biophysica Acta - General Subjects**, . Vol 1840, Issue 8, August 2014, Pages 2452–2459
2. Karousou E, Asimakopoulou A, Monti L, Zafeiropoulou V, Afratis N, Gartaganis P, Rossi A, Passi A, Karamanos NK. FACE Analysis as a Fast and Reliable Methodology to Monitor the Sulfation and Total Amount of Chondroitin Sulfate in Biological Samples of Clinical Importance. **Molecules**. 2014 Jun 12;19(6):7959-80.
1. Abbate GM, Borghi D, Passi A, Levrini L. Correlation between unstimulated salivary flow, pH and streptococcus mutans, analysed with real time PCR, in caries-free and caries-active children. **Eur J Paediatr Dent**. 2014 Mar;15(1):51-4.
2. Gialeli C, Viola M, Barbouri D, Kleitsas D, Passi A, Karamanos NK. Dynamic interplay between breast cancer cells and normal endothelium mediates the expression of matrix macromolecules, proteasome activity and functional properties of endothelial cells. **Biochim Biophys Acta**. 2014 Feb 26. pii:S0304-4165(14)00080-4. doi: 10.1016/j.bbagen.2014.02.019.
3. Vigetti D, Karousou E, Viola M, Deleonibus S, De Luca G, Passi A. Hyaluronan: Biosynthesis and signaling. **Biochim Biophys Acta**. 2014 Feb 7. S0304-4165(14)00047-6. doi: 10.1016/j.bbagen.2014.02.001.
4. Hascall VC, Wang A, Tammi M, Oikari S, Tammi R, Passi A, Vigetti D, Hanson RW, Hart GW. The dynamic metabolism of hyaluronan regulates the cytosolic concentration of UDP-GlcNAc. **Matrix Biol**. 2014 Jan 30. pii:S0945-053X(14)00035-3. doi: 10.1016/j.matbio.2014.01.014
5. Vigetti D, Viola M, Karousou E, De Luca G, Passi A. Metabolic control of hyaluronan synthases. **Matrix Biol**. 2013 Oct 14. Vigetti D, Viola M, Karousou E, De Luca G, Passi A. Metabolic control of hyaluronan synthases. **Matrix Biol**. 2013 Oct 14. pii: S0945-053X(13)00131-5. doi: 10.1016/j.matbio.2013.10.002.
6. Viola M, Bartolini B, Vigetti D, Karousou E, Moretto P, Deleonibus S, Sawamura T, Wight TN, Hascall VC, De Luca G, Passi A. Oxidized LDL affects Hyaluronan synthesis in human aortic smooth muscle cells. **J Biol Chem**. 2013 Aug 26. 288(41):29595-603.
7. Motolese A, Vignati F, Brambilla R, Cerati M, Passi A. Interaction between a Regenerative Matrix and Wound Bed in Nonhealing Ulcers: Results with 16 Cases. **Biomed Res Int**. 2013;2013:849321. doi: 10.1155/2013/849321.
8. Karousou E, Stachtea X, Moretto P, Viola M, Vigetti D, D'Angelo ML, Raio L, Ghezzi F, Pallotti F, De Luca G, Karamanos NK, Passi A. New insights into the pathobiology of Down syndrome - hyaluronan synthase-2 overexpression is regulated by collagen VI $\alpha 2$ chain. **FEBS J**. 2013 May;280(10):2418-30.

9. Vigetti D, Deleonibus S, Moretto P, Karousou E, Viola M, Bartolini B, Hascall VC, Tammi M, De Luca G, Passi A. Role of UDP-GlcNAc and O-GlcNAcylation of hyaluronan synthase 2 in the control of chondroitin sulfate and Hyaluronan synthesis. **J Biol Chem**. 2012 Oct 12;287(42):35544-55.
10. Moriondo A, Marcozzi C, Bianchin F, Reguzzoni M, Severgnini P, Protasoni M, Raspanti M, Passi A, Pelosi P, Negrini D. Impact of mechanical ventilation and fluid load on pulmonary glycosaminoglycans. **Respir Physiol Neurobiol**. 2012 May 31;181(3):308-20.
11. Piccioni F, Malvicini M, Garcia MG, Rodriguez A, Atorrasagasti C, Kippes N, Piedra Buena IT, Rizzo MM, Bayo J, Aquino J, Viola M, Passi A, Alaniz L, Mazzolini G. Antitumor effects of hyaluronic acid inhibitor 4-methylumbelliferone in an orthotopic hepatocellular carcinoma model in mice. **Glycobiology**. 2012 Mar;22(3):400-10.
12. Vigetti D, Rizzi M, Moretto P, Deleonibus S, Dreyfuss JM, Karousou E, Viola M, Clerici M, Hascall VC, Ramoni MF, De Luca G, Passi A. Glycosaminoglycans and glucose prevent apoptosis in 4-methylumbelliferone-treated human aortic smooth muscle cells. **J Biol Chem**. 2011 Oct 7;286(40):34497-503.
13. Merrilees MJ, Beaumont BW, Braun KR, Thomas AC, Kang I, Hinek A, Passi A, Wight TN. Neointima formed by arterial smooth muscle cells expressing versican variant V3 is resistant to lipid and macrophage accumulation. **Arterioscler Thromb Vasc Biol**. 2011 Jun;31(6):1309-16.
14. Moriondo A, Marcozzi C, Bianchin F, Passi A, Boschetti F, Lattanzio S, Severgnini P, Pelosi P, Negrini D. Impact of respiratory pattern on lung mechanics and interstitial proteoglycans in spontaneously breathing anaesthetized healthy rats. **Acta Physiol (Oxf)**. 2011 Oct;203(2):331-41.
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16. Acquati F, Bertilaccio S, Grimaldi A, Monti L, Cinquetti R, Bonetti P, Lualdi M, Vidalino L, Fabbri M, Sacco MG, van Rooijen N, Campomenosi P, Vigetti D, Passi A, Riva C, Capella C, Sanvito F, Doglioni C, Gribaldo L, Macchi P, Sica A, Noonan DM, Ghia P, Taramelli R. Microenvironmental control of malignancy exerted by RNASET2, a widely conserved extracellular RNase. **Proc Natl Acad Sci U S A**. 2011 Jan 18;108(3):1104-9.
17. Vigetti D, Clerici M, Deleonibus S, Karousou E, Viola M, Moretto P, Heldin P, Hascall VC, De Luca G, Passi A. Hyaluronan synthesis is inhibited by adenosine monophosphate activated protein kinase through the regulation of Hyaluronan synthase 2 activity in human aortic smooth muscle cells. **J Biol Chem**. 2011 286(10):7917-24
18. Karangelis DE, Kanakis I, Asimakopoulou AP, Karousou E, Passi A, Theocharis AD, Triposkiadis F, Tsilimingas NB, Karamanos NK. Glycosaminoglycans as key molecules in atherosclerosis: the role of versican and hyaluronan. **Curr Med Chem**. 2010;17(33):4018-26.
19. Vigetti D, Genasetti A, Karousou E, Viola M, Moretto P, Clerici M, Deleonibus S, De Luca G, Hascall VC, Passi A. Proinflammatory cytokines induce Hyaluronan synthesis and monocyte adhesion in human endothelial cells through Hyaluronan synthase 2 (HAS2) and the nuclear factor-kappaB (NF-kappaB) pathway. **J Biol Chem**. 2010 Aug 6;285(32):24639-45.
20. Karousou E, Kamiryo M, Skandalis SS, Ruusala A, Asteriou T, Passi A, Yamashita H, Hellman U, Heldin CH, Heldin P. The activity of hyaluronan synthase 2 is regulated by dimerization and ubiquitination. **J Biol Chem**. 2010 Aug 6;285(32):24639-45.
21. Gualeni B, Facchini M, De Leonardis F, Tenni R, Cetta G, Viola M, Passi A, Superti-Furga A, Forlino A, Rossi A. Defective proteoglycan sulfation of the growth plate zones causes reduced chondrocyte proliferation via an altered Indian hedgehog signalling. **Matrix Biol**. 2010 Jul;29(6):453-60.
22. Karousou E, Ronga M, Vigetti D, Barcolli D, Passi A, Maffulli N. Molecular interactions in extracellular matrix of tendon. **Front Biosci (Elite Ed)**. 2010 Jan 1;2:1-12.
23. Vigetti D, Genasetti A, Karousou E, Viola M, Clerici M, Bartolini B, Moretto P, De Luca G, Hascall VC, Passi A. Modulation of hyaluronan synthase activity in cellular membrane fractions. **J Biol Chem**. 2009 Oct 30;284(44):30684-94.
24. Tajana MS, Murena L, Valli F, Passi A, Grassi FA. Correlations between biochemical markers in the synovial fluid and severity of rotator cuff disease. **Chir Organi Mov**. 2009 Apr;93 Suppl 1:S41-8.
25. Vigetti D, Rizzi M, Viola M, Karousou E, Genasetti A, Clerici M, Bartolini B, Hascall VC, De Luca G, Passi A. The effects of 4-methylumbelliferone on hyaluronan synthesis, MMP2 activity, proliferation, and motility of human aortic smooth muscle cells. **Glycobiology**. 2009 May;19(5):537-46.
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28. Vigetti D, Andrini O, Clerici M, Negrini D, Passi A, Moriondo A. Chondroitin sulfates act as extracellular gating modifiers on voltage-dependent ion channels. **Cell Physiol Biochem**. 2008;22(1-4):137-46.

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30. Vigetti D, Moretto P, Viola M, Genasetti A, Rizzi M, Karousou E, Clerici M, Bartolini B, Pallotti F, De Luca G, Passi A. Aortic smooth muscle cells migration and the role of metalloproteinases and hyaluronan. **Connect Tissue Res.**2008;49(3):189-92.
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34. Karousou E, Ronga M, Vigetti D, Passi A, Maffulli N. Collagens, proteoglycans, MMP-2, MMP-9 and TIMPs in human achilles tendon rupture. **Clin Orthop Relat Res.** 2008 Jul;466(7):1577-82.
35. Negrini D, Passi A, Moriondo A. The role of proteoglycans in pulmonary edema development. **Intensive Care Med.** 2008 Apr;34(4):610-8.
36. Vigetti D, Viola M, Karousou E, Rizzi M, Moretto P, Genasetti A, Clerici M, Hascall VC, De Luca G, Passi A. Hyaluronan-CD44-ERK1/2 regulate human aortic smooth muscle cell motility during aging. **J Biol Chem.** 2008 Feb 15;283(7):4448-58.
37. Genasetti A, Valentino ML, Carelli V, Vigetti D, Viola M, Karousou EG, Melzi d'Eril GV, De Luca G, Passi A, Pallotti F. Assessing heteroplasmic load in Leber's hereditary optic neuropathy mutation 3460G->A/MT-ND1 with a real-time PCR quantitative approach. **J Mol Diagn.** 2007 Sep;9(4):538-45.
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40. Negrini D, Passi A. Interstitial matrix and transendothelial fluxes in normal lung. **Respir Physiol Neurobiol.** 2007 Dec 15;159(3):301-10.
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44. Vigetti D, Ori M, Viola M, Genasetti A, Karousou E, Rizzi M, Pallotti F, Nardi I, Hascall VC, De Luca G, Passi A. Molecular cloning and characterization of UDP-glucose dehydrogenase from the amphibian *Xenopus laevis* and its involvement in hyaluronan synthesis. **J Biol Chem.** 2006 Mar 24;281(12):8254-63.
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46. Negrini D, Tenstad O, Passi A, Wiig H. Differential degradation of matrix proteoglycans and edema development in rabbit lung. **Am J Physiol Lung Cell Mol Physiol.** 2006 Mar;290(3):L470-7.
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49. 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** 19(10):761-5.

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51. 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
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56. 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