



CURRICULUM VITAE GABRIELE D'ANDREA

PERSONAL INFORMATION	Gabriele D'Andrea Dept. of Biotechnological and Applied Clinical Sciences Via Vetoio -Coppito 2 67100 L'Aquila Italy Institutional e-mail: gabriele.dandrea@univaq.it
CURRENT POSITION	Associate professor
EDUCATION OTHER QUALIFICATIONS	Biological Sciences degree
TEACHING EXPERIENCE	1989-2020: Lecturer at the Degree Course in Medicine and Surgery for the Scientific Disciplinary Sector BIO-10 (Biochemistry). 2013- Lecturer at the Degree Course in Chemical and Materials Sciences and Technologies for the Scientific Disciplinary Sector BIO-10 (Biochemistry).
RESEARCH ACTIVITIES	Purification and characterization of (glyco)proteins; Iron metabolism; Glycobiology; Proteomics.
RESPONSIBILITY IN ACADEMIC ACTIVITIES	2004-2007: Deputy Chairman of the Board of Directors of the Company for Studie Rights University of L'Aquila (ADSU), as representative of the Associates professors of the University of L'Aquila. 1992-2010: Financial and accounting manager of the Biomolecular Sciences Section, former Department of Biomedical Sciences and Technologies, University of L'Aquila.
SELECTED PUBLICATIONS	1) Oratore, A., Di Giulio, A., <b>D'Andrea, G.</b> , Bologna, M. and Strom, R.: Validity and limitations of bimodal parametric approach for the evaluation of antibody affinity distributions. <i>Immunol. Lett.</i> , <b>1</b> , 347-351 (1980). 2) Oratore, A., Amicosante, G., Di Giulio, A. and <b>D'Andrea, G.</b> : Use of chromatofocusing in purification of proteins. <i>Ital. J. Biochem.</i> , <b>33</b> , 359-360 (1984). 3) Oratore, A., <b>D'Andrea, G.</b> and D'Alessandro, A.M.: Use of IPG to investigate the microheterogeneity of amine oxidase from <i>Lens culinaris</i> and human seminal transferrin. <i>Prot. Biol. Fluids</i> , <b>34</b> , 803-805 (1986). 4) Oratore, A., <b>D'Andrea, G.</b> , Strom, R. and Finazzi-Agrò, A.: Relationship between immune lattice formation and compactness of holo- and apo- forms of amine oxidase from <i>Lens culinaris</i> . <i>Biochem. Int.</i> , <b>14</b> , 277-288 (1987).



- 5) Oratore, A., **D'Andrea, G.**, Floris, G., Rinaldi, G. and Finazzi-Agrò, A.: Microheterogeneity of lentil seedling (*Lens culinaris*) amine oxidase. *Ital. J. Biochem.*, **36**, 92-101 (1987).
- 6) D'Alessandro, A.M., **D'Andrea, G.** and Oratore, A.: Different patterns of human serum transferrin on isoelectric focusing using synthetic carrier ampholites or immobilized pH gradients. *Electrophoresis*, **9**, 80-83 (1988).
- 7) **D'Andrea, G.**, Bouwstra, J.B., Kamerling, J.P. and Vliegthart, J.F.G.: Primary structure of the xylose-containing *N*-linked carbohydrate moiety from ascorbic acid oxidase of *Cucurbita pepo medullosa*. *Glycoconj. J.*, **5**, 151-157 (1988).
- 8) Oratore, A., D'Alessandro, A.M., **D'Andrea, G.**, Avigliano, L., Finazzi-Agrò, A. and Strom, R.: Polyclonal antibodies as probes to study some structural and functional properties of copper enzymes. *Ital. J. Biochem.*, **37**, 236-238 (1988).
- 9) Oratore, A., **D'Andrea, G.**, D'Alessandro, A.M., Moreton, K. and Williams, J.: Site specificity and effect of iron presence in the binding of various ovotransferrin proteolytic fragments to chick embryo red blood cells. In Serono Symposia Publications, Vol. 51, "Advances in Biotechnology of Membrane Ion Transport" (Jorgensen, P.L. and Verna, R. eds.), pp. 93-98. Raven Press, New York, USA (1988).
- 10) **D'Andrea, G.**, Oratore, A., Avigliano, L., Rossi, A. and Finazzi-Agrò, A.: Characterization and cross-reactivity of antibodies against ascorbate oxidase from green zucchini marrows (*Cucurbita pepo medullosa*). *Plant Sci.*, **56**, 107-112 (1988).
- 11) Oratore, A., **D'Andrea, G.**, Moreton, K. and Williams, J.: Binding of various ovotransferrin fragments to chick embryo red blood cells. *Biochem. J.*, **257**, 301-304 (1989).
- 12) Oratore, A., D'Alessandro, A.M. and **D'Andrea, G.**: Effect of synthetic carrier ampholites on human serum transferrin saturation. *Biochem. J.*, **259**, 909-912 (1989).
- 13) **D'Andrea, G.**, Maccarrone, M., Oratore, A., Avigliano, L. and Messerschmidt, A.: Kinetic features of ascorbic acid oxidase after partial deglycation. *Biochem. J.*, **264**, 601-604 (1989).
- 14) Scarnati, E., Di Loreto, S., Florio, T. and **D'Andrea, G.**: The pontine input to dopaminergic cells of substantia nigra and nature of its neurotransmitter in the rat. *Experientia*, **45**, 3-4 (1989).
- 15) Bouwstra, J.B., Leeflang, B.R., **D'Andrea, G.**, Oerlemans, M., Kamerling, J.P. and Vliegthart, J.F.G.: Conformational studies on the branching region of a monosialo-bisected-diantennary glycopeptide isolated



from IgM of a patient with Waldenstrom's macroglobulinemia. In Conformational studies on *N*-glycoprotein related carbohydrate chains (Bouwstra, J.B. Thesis) pp. 68-91. Rijksuniversiteit, Utrecht (The Netherlands) (1989).

16) Maccarrone, M, **D'Andrea, G.**, Oratore, A. and Avigliano, L.: Sequential deglycation of ascorbate oxidase by immobilized exoglycosidases. *Ital. J. Biochem.*, **39**, 358-359 (1990).

17) **D'Andrea, G.**, D'Alessandro, A.M., Impagnatiello, A. and Oratore, A.: Binding of ovotransferrin (OTf) and its proteolytic derived fragments to chick embryo red blood cells (CERBC). *Ital. J. Biochem.*, **39**, 354-355 (1990).

18) Maccarrone, M., Rossi, A., **D'Andrea, G.**, Amicosante, C. and Avigliano, L.: Electrophoretic detection of ascorbate oxidase activity by photoreduction of nitroblue tetrazolium. *Anal. Biochem.*, **188**, 101-104 (1990).

19) Oratore, A., **D'Andrea, G.**, D'Alessandro, A.M., Moreton, K. and Williams, J.: Binding and iron delivering of monoferric ovotransferrin to chick embryo red blood cells (CERBC). *Biochem. Int.*, **22**, 111-118 (1990).

20) D'Alessandro, A.M., **D'Andrea, G.**, van Beemen, J., Franceschini, N., Maurizi, G., Perilli, G. and Oratore, A.: Some structural features of human seminal transferrin (HSmT) in comparison with the human serum transferrin (HSrT). *Cell. Molec. Biol.*, **37**, 445-453 (1991).

21) **D'Andrea, G.**, Maurizi, G., D'Alessandro, A.M, Salucci, M.L., Impagnatiello, A., Saletti, M.A., and Oratore, A.: Structural analysis of seminal and serum human transferrin by second derivative spectrometry and fluorescence measurements. *J. Prot. Chem.*, **11**, 165-169 (1992).

22) **D'Andrea, G.** and Fantauzzi, F.: Heat of solution of Desferal at 298.15 K. *Thermochim. Acta*, **205**, 5-9 (1992).

23) **D'Andrea, G.**, Salucci, M.L., Di Giulio, A., Impagnatiello, A. and Oratore, A.: Effect of cholesterol depletion on the binding and iron delivering to chick embryo red blood cells. *Ital. J. Biochem.*, **41**, 141A-143A (1992).

24) Williams, J., Moreton, K., **D'Andrea, G.** and Oratore, A.: Polymeric ovotransferrin and its ability to bind and deliver iron to chick embryo red blood cells. *Biochem. Int.*, **28**, 155-160 (1992).

25) Maccarrone, M., **D'Andrea, G.**, Salucci, M.L., Avigliano, L. and Finazzi-Agrò, A.: Temperature, pH and UV irradiation effects on ascorbate oxidase. *Phytochemistry*, **32**, 795-798 (1993).

26) **D'Andrea, G.** and Salucci, M.L.: Structures and names for inositol phosphates and phosphatidylinositols. *Biochem. Educ.*, **21**, 98-101 (1993).



- 27) **D'Andrea, G.**, Salucci, M.L., Pitari, G. and Avigliano, L.: Exhaustive removal of *N*-glycans from ascorbate oxidase: effect on the enzymatic activity and immunoreactivity. *Glycobiology*, **3**, 563-565 (1993).
- 28) Di Giulio, A., **D'Andrea, G.**, Saletti, M.A., Lentini, A., Dini, L., D'Alessandro, A.M. and Oratore, A.: Liposomes reconstitution of native or reduced and alkylated forms of transferrin receptor. *J. Lipos. Res.*, **3**, 679-686 (1993).
- 29) Di Giulio, A., **D'Andrea, G.**, Saletti, M.A., Impagnatiello, A., D'Alessandro, AM. and Oratore, A.: The binding of human serum transferrin to its specific receptor reconstituted into liposomes. *Cell. Sign.*, **6**, 83-90 (1994).
- 30) **D'Andrea, G.**, D'Alessandro, A.M., Salucci, L. and Oratore, A.: Primary structure of the major glycan from human seminal transferrin. *J. Prot. Chem.*, **13**, 31-36 (1994).
- 31) D'Alessandro, A.M., **D'Andrea, G.** and Oratore, A.: Some fluorescence quencing studies upon seminal and serum human transferrin. *Ital. J. Biochem.*, **43**, 84-85 (1994).
- 32) **D'Andrea, G.**:  $\beta$ -Oxidation of polyunsaturated fatty acids. *Biochem. Educ.*, **22**, 89-91 (1994).
- 33) **D'Andrea, G.**, Di Giulio, A., Salucci, M.L. and Oratore, A.: Binding and iron delivering of ovotransferrin to cholesterol-depleted chick embryo red blood cells. *Cell. Sign.*, **7**, 67-74 (1995).
- 34) **D'Andrea, G.**, Mucciante, V. and Fantauzzi F.: Heat of saturation of apo and apo desialylated human serum transferrin at 298.15 K. *Termochim. Acta*, **273**, 287-292 (1996).
- 35) **D'Andrea, G.**, Salucci, M.L. and Avigliano, L.: Effect of lyoprotectants on ascorbate oxidase activity after freeze-drying and storage. *Process Biochem.*, **311**, 173-178 (1996).
- 36) Ruggiero, P., Bossu, P., Macchia, G., Del Grosso, E., Sabbatini, V., Bertini, R., Colagrande, A., Bizzarri, C., Maurizi, G., Di Cioccio, V., **D'Andrea, G.**, Di Giulio, A., Frigerio, F., Grifantini, R., Grandi, G., Tagliabue, A. and Boraschi, D.: Inhibitory activity of IL-1 receptor antagonist depends on the balance between binding capacity for IL-1 receptor type I and IL-1 receptor type II. *J. Immun.*, **158**, 3881-3887 (1997).
- 37) D'Alessandro A.M, **D'Andrea, G.** and Oratore, A.: Peroxidase-labelling of human serum transferrin by conjugation to oligosaccharide moieties. *Clin. Chim. Acta*, **274**, 189-197 (1998).



38) Gabriele, A., **D'Andrea, G.**, Cordeschi, G., Properzi, G., Giammatteo, M., De Stefano, C., Romano, R., Francavilla F. and Francavilla, S.: Carbohydrate binding activity in human spermatozoa: localization, specificity, and involvement in sperm-egg fusion. *Mol. Human Reprod.*, **4**, 543-553 (1998).

39) Pitari, G., **D'Andrea, G.**, Salucci, M.L., Rossi, A. and Avigliano, L.: Effect of tunicamycin on the activity and immunoreactivity of ascorbate oxidase (*Cucurbita pepo medullosa*) expressed in cultured green zucchini cells. *Glycoconj. J.*, **15**, 777-782 (1998).

40) Sorrentino, S., D'Alessandro, A.M., Maras, B., Di Ciccio, L., **D'Andrea, G.**, De Prisco, R., Bossa, F., Libonati, M. and Oratore, A.: Purification of a 76 kDa iron-binding protein from human seminal plasma by affinity chromatography specific for ribonuclease: Structural and functional identity with milk lactoferrin. *Biochim. Biophys. Acta*, **1430**, 103-110 (1999).

41) **D'Andrea, G.**, Salucci, M.L., Pitari, G. and Avigliano, L.: The carbohydrates of green zucchini ascorbate oxidase. *Recent Res. Devel. Phytochem.*, **2**, 219-225 (1998).

42) D'Alessandro, A.M., **D'Andrea, G.**, Di Ciccio, L., Brisdelli, F., Rinaldi, A.C., Argante, B. and Oratore, A.: 3'-Azido-3'-deoxythymidine reduces the rate of transferrin receptor endocytosis in K562 cells. *Biochim. Biophys. Acta*, **1450**, 232-241 (1999).

43) **D'Andrea, G.**, Gemini, L., D'Alessandro, A.M. and Oratore, A.: Deglycosylation of hen ovotransferrin under mild conditions: effect on the immunoreactivity and biological activity. *Glycobiology*, **9**, v-viii (1999).

44) **D'Andrea, G.**: Classifying amino acids as gluco(glyco)genic, ketogenic, or both. *Biochem. Ed.*, **28**, 27-28 (2000).

45) D'Alessandro, A.M., Rinaldi, A.C., **D'Andrea, G.**, Brisdelli, F., Di Ciccio, L., Di Giulio, A., Oratore, A. and Bozzi, A.: Evidences that zidovudine (AZT) could not be directly responsible of iron overload in AZT-treated patients: an in vitro study. *Clin. Chim. Acta*, **300**, 119-130 (2000).

46) Amoresano, A., Amedeo, S., **D'Andrea, G.**, Siciliano, R., Gagna, C., Castagnaro, M., Marino, G. and Guarda, F.: N-linked glycans of proteins from mitral valves of normal pigs and pigs affected by endocardiosis. *Eur. J. Biochem.*, **267**, 1299-1306 (2000).

47) **D'Andrea G.**, Di Ciccio, L., D'Alessandro, A.M., Oratore, A., Amedeo, S., Appino, S., Amoresano, A. and Guarda, F.: Glycoproteins hypersialylation and a different distribution of both glycans and some glycosyltransferases activities are found in pig endocardiosis. *Eur. J. Vet. Pathol.*, **7**, 3-10 (2001).



48) **D'Andrea, G.**, Mucciante, V. and Fantauzzi, F.: Solubilization and hydrolysis of ovotransferrin. Solubilization of  $\alpha$ -chymotrypsin. Enthalpy changes for three processes. *J. Therm. Anal. Cal.*, **65**, 727-743 (2001).

49) **D'Andrea, G.**, Di Ciccio, L., Brindelli, F., D'Alessandro, A.M., Bozzi, A. and Oratore, A.: Purification and partial characterization of an  $\alpha$ -2,8-sialyltransferase from human erythroleukemia K562 cells. *Prep. Biochem. & Biotechnol.*, **31**, 355-368 (2001).

50) Angelucci, A., Festuccia, C., **D'Andrea, G.**, Teti, A. and Bologna, M.: Osteopontin modulates prostate carcinoma invasive capacity through RDG-dependent upregulation of plasminogen activators. *Biol. Chem.*, **383**, 229-234 (2002).

51) **D'Andrea, G.** and Di Nicolantonio, G.: A graphical approach to determine the isoelectric point and charge of small peptides from pH 0 to 14. *J. Chem. Ed.*, **79**, 972-975 (2002).

52) Oratore, A., **D'Andrea, G.** and D'Alessandro A.M.: Structural properties of human seminal transferrin. *Recent Res. Devel. Proteins*, **1**, 407-419 (2002).

53) **D'Andrea, G.**, Lizzi, A.R., Brisdelli, F., D'Alessandro, A.M., Bozzi, A. and Oratore, A.: Protein glycans alteration and a different distribution of some enzymatic activities involved in glycan processing are found in AZT-treated cells. *Mol. Cell. Biochem.*, **252**, 45-51 (2003).

54) Bozzi, A., Brisdelli, F., D'Alessandro, A.M., **D'Andrea G.**, Lizzi, A.R., Rinaldi, A.C. and Oratore, A.: Effects of AZT on cellular iron homeostasis. *BioMetals*, **17**, 443-450 (2004).

55) **D'Andrea, G.**, Lizzi, A.R. and Oratore, A.: First synthetic probe for the detection and quantification of a protein with a potential  $\alpha$ -(2-8)sialyltransferase activity. *Bioconjugate Chem.*, **15**, 1084-1087 (2004).

56) Lizzi, A.R., D'Alessandro, A.M., Zeolla, N., Brindelli, F., **D'Andrea, G.**, Pitari, G., Oratore, A., Bozzi, A. and Ippoliti R.: The effect of AZT and chloroquine on the activities of ricin and a saporin-transferrin chimeric toxin. *Biochem. Pharmacol.*, **70**, 560-569 (2005).

57) **D'Andrea, G.**, Lizzi, A.R., Venditti, S., Di Francesco, L., Giorgi, A., Mignogna, G., Oratore, A. and Bozzi, A.: Proteins pattern alteration in AZT-treated K562 cells detected by two-dimensional gel-electrophoresis and peptide mass fingerprinting. *Proteome Sci.*, **4**, 1-7 (2006).

58) Lizzi, A.R., D'Alessandro, A.M., Bozzi, A., Cinque, B., Oratore, A. and **D'Andrea G.**: Pattern expression of glycan residues in AZT-treated K562 cells analyzed by lectin cytochemistry. *Mol. Cell. Biochem.*, **300**, 29-37



	<p>(2007).</p> <p>59) Di Genova, E. and <b>D'Andrea, G.</b>: Permanent urinary incontinence after subarachnoid anesthesia with 0.5% hyperbaric bupivacaine. <i>Anesth. Analg.</i>, <b>105</b>, 1517-1518 (2007)</p> <p>60) <b>D'Andrea, G.</b>, Brisdelli, F. and Bozzi, A.: AZT: An old drug with new perspectives. <i>Curr. Clin. Pharm.</i>, <b>3</b>, 20-37 (2008).</p> <p>61) Brisdelli, F., <b>D'Andrea, G.</b> and Bozzi, A.: Resveratrol: a natural polyphenol with multiple chemopreventive properties. <i>Curr. Drug Metab.</i>, <b>10</b>:530-546 (2009).</p> <p>62) <b>D'Andrea, G.</b>: Pycnogenol: A blend of procyanidins with multifaceted therapeutic applications? <i>Fitoterapia</i> <b>81</b>, 724-736 (2010).</p> <p>63) <b>D'Andrea, G.</b>, Venditti, S., Di Francesco, L., Bernabei, V., Schininà, M.E. and Bozzi, A.: Differential phosphoproteome analysis of K562 cells exposed to 3'-azido-3'-deoxythymidine (AZT). <i>Curr. Proteomics</i>, <b>9</b>, 40-54 (2012).</p> <p>64) Cecconi, S., Rossi, G., Castellucci, A., <b>D'Andrea, G.</b> and Maccarrone, M.: Endocannabinoid signaling in mammalian ovary. <i>Eur. J. Obstet. Gynecol. Reprod. Biol.</i>, <b>178</b>, 6-11 (2014).</p> <p>65) <b>D'Andrea, G.</b>: Quercetin: A flavonol with multifaceted therapeutic applications? <i>Fitoterapia</i>, <b>106</b>, 256-271 (2015).</p> <p>66) Rapino, C., Castellucci, A., Lizzi, A.R., Sabatucci, A., Angelucci, C.B., Tortolani, D., Rossi, G., <b>D'Andrea, G.</b>, Maccarrone, M.: Modulation of endocannabinoid-binding receptors in human neuroblastoma cells by tunicamycin. <i>Molecules</i>, <b>24</b>, 1432-1446 (2019).</p> <p>67) Rossi, G., Dufrusine, B., Lizzi, A.R., Luzi, C., Piccoli, A., Fezza, F., Iorio, R., <b>D'Andrea, G.</b>, Dainese, E., Cecconi, S., and Maccarrone, M.: . Bisphenol A deranges the endocannabinoid system of primary Sertoli cells with an impact on inhibin B production. <i>Int. J. Mol. Sci.</i>, <b>21</b>, 8986-9001 (2020).</p> <p>68) <b>D'Andrea, G.</b>, Bruno, G. e Rubeo, S.: Effetto batteriostatico/battericida di dieci collutori su sei ceppi batterici. Uno studio <i>in vitro</i>. <i>Rivista Italiana di Igiene Dentale</i>, <b>16</b>, 67-74 (2020).</p>
--	--