

Henriette Molinari: Curriculum Vitae

Current Positions: Full professor in Organic Chemistry at the Faculty of Science, Biotechnology Course, University of Verona, Italy.

Personal Data

Born November 19, 1952, in Milano, Italy. Italian citizen.

Education and Positions Held

- 1971-76 University of Milano, Italy. Ph.D Chemistry (110/110 with laudem) at University of Milano.
- 1976-78 Post-doctoral position at the University of Milano. Research project: Characterisation of organic polymers. Supervisor: Prof. F. Montanari
- 1979-81 Post-Doctoral training at Dyson Perrins Laboratory, Oxford (Supervisor: Prof. J.M. Brown). Research project on "NMR spectroscopic characterisation of organic and biologic polymers".
- 1981 Appointed Research assistant at the University of Milano
- 1986-89 Fellowships from CNR-NATO, Accademia dei Lincei, EMBO for visiting Queen Mary College, London (Prof. E.W. Randall), NMR Biological Center, Leicester (Prof. G.K. Roberts, dr. L.Y.Lian) and EMBL, Heidelberg (Dr. A. Pastore, Dr. A.Lesk). Research project: Structural characterisation via NMR and molecular dynamics simulations of biomolecules, especially glycopeptide antibiotics.
- 1989- Appointed with a free research contract at the NMR Laboratory of the Institute of Macromolecular Chemistry at the CNR of Milano (Dr. A. De Marco, Dr. L. Zetta), on projects concerning structural studies on biological macromolecules.
- 1991 Appointed associate professor in Organic Chemistry at the University of Sassari
- 1992 Appointed associate professor in Organic Chemistry at the University of Verona in 1992.
Teaching duties: Organic Chemistry and Biopolymers & NMR Analysis in the Biotechnology course.
- 2004- Appointed full Professor of Organic Chemistry at the University of Verona

Major Research Interests

Her expertise is well represented by the following activities:

- Development and application of nuclear magnetic resonance (NMR) techniques for macromolecular structure determination in solution
- Structure and function of macromolecules of biological interest, specifically proteins rich in disulphide bridges with antitumoral activity and proteins belonging to the calycin superfamily, playing a role in the regulation of cellular activity.
- Studies of accessible surfaces area in proteins, exploiting the use of soluble paramagnetic probes
- Study of folding mechanisms on proteins involved in alpha to beta transitions
- NMR interaction studies of lipids with transport proteins

Publications

She is the author of 118 publications on international journals.

She is editor and author of the book "NMR and Biomolecular Structure", Editors I. Bertini, H. Molinari, N. Niccolai, VCH Publisher, 1991.

Awards

2005 Gold medal from the Italian national NMR Discussion group for her contributions in the field of NMR.

Academies and Honorary Memberships in Societies

Since 1989 Free research contract at NMR Laboratory of the CNR, Milano.
1989 Invited as summer visitor at EMBL
1996-2000 Member of the Steering Committee of Italian NMR National Discussion Group
Since 1998 Member of the Administration Council of "A. De Marco Foundation"
2000-2004 President of the Division of Biological Systems Chemistry, a Division of the Italian Chemical Society
2001-2004 Elected in the "Administration Council" of the University of Verona.
Since 2004- Italian delegate of the Italian Chemical Society for the Working Group in Chemistry for Life Science, EuChemS.
2005-2007 Director of the Biotechnology Course, Faculty of Science.
Since 2007 Users representative within the European NMR Infrastructure Access
Since 2008 Member of the Working Group "O" within the INSTRUCT European program
2008-2010 Elected in the "Administration Council" of the University of Verona
2010-2013 Elected in the "Administration Council" of the University of Verona
2010-2013 Elected as President of the Italian Discussion Group on Magnetic Resonance

Grants

1996 EU project (Concerted Action, Framework 4, Agriculture and Fisheries):
"Molecular description of aggregation, denaturation, gelation and surface activity of whey proteins" (Progetto MADGELAS, Contratto FAIR-CT96-1202; DG12-SSMI).
1998 Italian Ministry MURST **"Structural studies on proteins binding hydrophobic molecules"**, Principal investigator (€ 40000)
2000 Italian Ministry MURST **"Structural studies on proteins binding hydrophobic molecules"**, Principal investigator (€ 40000)
2000 Grant for a 3 years post doctoral fellowship **"Structural and Folding studies of lipocalins"** (€ 75000)
2002 Project PAIS-INFN **"Biophysical characterisation of lipocalins"** Coinvestigator (€ 20000)
2002 Italian Ministry MURST **"Structural, dynamic and interaction studies between proteins binding hydrophobic ligands and their ligands through heteronuclear NMR experiments"**, Principal Investigator (€ 50000)
2002 FIRB project: **"Site-directed mutagenesis, NMR structural characterisation and interaction properties of homologous proteins belonging to the lipocalin family for the identification of a common folding mechanism"**, Principal investigator (€ 100000)
2002 Grant for a 3 years post doctoral fellowship **"Structural and Folding studies of lipocalins"** (€ 75000)
2003 Grant for a post-doctoral fellowship from Consorzio Siena Ricerche **"Disulphide rich proteins with antitumoral activity"** (€ 18000)
2004- Italian Ministry MURST **"Structural, dynamic and interaction studies between proteins binding hydrophobic ligands and their ligands through heteronuclear NMR experiments"**, Principal Investigator (€ 50000)
2004 Grant from University of Verona for a post-doctoral fellowship **"Structural and Dynamics Studies of bile acid binding proteins"** (€ 18000)
2005 Grant for a 3 years post doctoral fellowship **"Structural Dynamics and Folding studies of bile acids binding proteins"** (€ 75000)
2005 INDO-ITALIAN PROGRAM OF COOPERATION IN SCIENCE &

TECHNOLOGY 2005-2007, “**NMR structural and functional studies of lycodelin: angiogenic and immunomodulating properties and their role in tumor development**” only traveling grants

- 2006 Grant for a 3 years post doctoral fellowship “**Structural and Folding studies of glycodeilin**” (€ 75000)
- 2007-2010 Grant from the University of Verona and Cariverona “**NMR applied to nanobiotechnology**” for the acquisition of a 600MHz spectrometer, equipped with the cryoprobe, installed in her laboratory in june 2007. (€ 940000)
- 2011 Coordinator of a Joint Project with Novartis on “**NMR structural studies on the mechanisms of pilus assembly in Gram-positive *Streptococcus agalactiae*** “

Invited to present plenary lectures in many national and international conferences and schools.

Organiser of many national and international conferences and school

List of publications (Prof. H. Molinari)

1. Cinquini, S. Colonna, H. Molinari, F. Montanari, P. Tundo, Heterogeneous Phase-Transfer Catalysts: Onium Salts, Crown Ethers and Cryptands Immobilized on Polymer Supports, **J.C.S. Chem. Comm.**, 394 ,1976.
2. H. Molinari, F. Montanari, P. Tundo, Heterogeneous Phase-Transfer Catalysts: High Efficacy of Catalysts Bonded by a Long Chain to a Polymer Matrix, **J.C.S. Chem. Comm.**, 639 ,1977.
3. H. Molinari, F. Montanari, S. Quici, P. Tundo, Polymer- Supported Phase-Transfer Catalysts. High Catalytic Activity of Ammonium and Phosphonium Salts Bonded to a Polystyrene matrix, **J. Am. Chem. Soc.**, **101**, 3920,1979.
4. J.M. Brown, H. Molinari, Supported Rhodium-Phospine Hydrogenation Catalysts of High Mobility and Reactivity. **Tetrahedron Lett.**, **31**, 2933 ,1979.
5. S. Julia, J. Guixer, J. Masana, J. Rocas, S. Colonna, R. Annunziata, H. Molinari, Synthetic Enzymes. II. Catalytic Asymmetric Epoxidation by means of Polyaminoacids in a Triphase System, **J.C.S. Perkin Trans. I**, 1317 ,1982.
6. H. Molinari, S. Banfi, Synthesis of Optically Active α -Halogeno Phosphinates via Asymmetric Selection, **Synth. Commun.**, **12**, 749, 1982.
7. S. Julia, J. Masana, J. Rocas, S. Colonna, R. Annunziata, H. Molinari, Synthetic Enzymes. III. Highly Stereoselective Epoxidation of Chalcones in a Triphase Toluene-Water-Poly-(S)-Alanine System, **Ann. Quim.**, **79**, 102, 1983.
8. S. Colonna, H. Molinari, S. Banfi, S. Julia, J. Masana, A. Alvarez, Synthetic Enzymes. IV. Highly Enantioselective Epoxidation by means of Polyaminoacids in a Triphase System. Influence of Structural Variations within the Catalysts, **Tetrahedron**, **39**, 1635, 1983.
9. S. Banfi, S. Colonna, H. Molinari, S. Julia, High Stereoselective Synthesis of Optically Active α,β -Epoxy Alcohols, **Synth. Commun.**, **13**, 901, 1983.
10. S. Banfi, M. Cinquini, S. Colonna, H. Molinari, Synthesis of α -Aminoacids from Amidocyanoacetates, **Patent n. 22917** ,1983.
11. S. Banfi, M. Cinquini, S. Colonna, H. Molinari, Synthesis of α -Aminoacids from Amido-Esters, **Patent n. 22916**,1983.
12. S. Banfi, S. Colonna, H. Molinari, S. Julia, J. Guixer, Asymmetric Epoxidation of Electron-poor Olefins. V. Influence on Stereoselectivity of the Structure of Poly- α -Aminoacids used as Catalysts, **Tetrahedron**, **40**, 5207, 1984.

- 13.T. Beringhelli, G. Ciani, G. D'Alfonso, H. Molinari, A. Sironi, M. Freni, A novel Co-ordination mode of Nitric Oxide. Synthesis and Crystal Structure of the $[\{Re_3(u-H)_3(CO)_{10}\}_2(u_4-n^2-NO)]^-$ Anion, **J.C.S. Chem. Comm.**, 1327, 1984.
- 14.T. Beringhelli, G. Ciani, G. D'Alfonso, H. Molinari, A. Sironi, New Synthesis, Reinvestigation of the Solid-State Structure and NMR Analysis of the Unsaturated Anion Tetrakis(u-hydrido)decacarbonyl-triangulo-trirhenate(1⁻), **Inorg. Chem.**, **24**, 2666, 1985.
- 15.T. Beringhelli, H. Molinari, A. Pastore, Carbon-13 NMR Evidence of a Relaxation Process dominated by Scalar Coupling with a Quadrupolar Nucleus in $[Re_3(u-H)_4(CO)_{10}]^-$, **J.C.S. Dalton Trans.**, 1899, 1985.
- 16.T. Beringhelli, G. D'Alfonso, H. Molinari, Carbon-13 NMR Investigation of the Properties of the Anion $[Re_3(u-H)_3(CO)_{10}]^{2-}$ in Solution, **J. Organomet. Chem.**, **295**, C35-39, 1985.
- 17.T. Beringhelli, G. D'Alfonso, H. Molinari, Relaxation Studies of Carbonyl Rhenium Clusters. II. Relaxation Mechanisms and Estimation of the ¹³C Chemical Shielding Anisotropy in the $[Re_3(u-H)_4(CO)_{10}]^-$ Anion at Low Temperature, **Magn. Reson. Chem.**, **24**, 175, 1986.
- 18.M. Cinquini, A. Manfredi, H. Molinari, A. Restelli, Asymmetric Synthesis of β-Hydroxythioacetamides mediated by Enantiomerically Pure Sulphinyl Derivatives, **Tetrahedron**, **41**, 4929, 1985.
- 19.E.M. Beccalli, A. Marchesini, H. Molinari, The Vilsmeier-Haack Reaction with 3,4-Disubstituted Isosazolin-5-ones. A New Synthesis of 1,3-Oxazin-6-Ones and 1,3-Oxazine-2,6-Diones, **Tetrahedron Lett.**, **27**, 627, 1986.
- 20.T. Beringhelli, G. D'Alfonso, H. Molinari, B.E. Mann, B.T. Pickup, C.M. Spencer, -The Observation of Four Separate Fluxional Processes in $[Re_3(CO)_{10}H_3]^{2-}$, including an Example of the Rotation of a Re=Re Fragment on $ReH(CO)_4$, **J.C.S. Chem. Comm.**, 796, 1986.
- 21.F. Montanari, S. Quici, P.L. Anelli, H. Molinari, T. Beringhelli, New Lipophilic Multidentate Ligands: Effective Complexing Agents for Anions Activation in non Polar Media, **Gazz. Chim. Ital.**, **116**, 275, 1986.
- 22.P.L. Anelli, T. Beringhelli, H. Molinari, F. Montanari, S. Quici, ¹³C and ¹H Two-dimensional NMR Characterization of the Sodium Perchlorate Complex of a New Tetraoxatetraaza Lipophilic Cage Ligand, **Magn. Reson. Chem.**, **24**, 692, 1986.
- 23.S. Quici, P.L. Anelli, H. Molinari, T. Beringhelli, Lipophilic Cage Ligands: Synthesis, Spectroscopic Properties and Applications. -**Pure and Appl. Chem.**, **58**, 1503, 1986.

24. T. Beringhelli, G. D'Alfonso, M. Freni, G. Ciani, H. Molinari, An Unusual Species from the Reaction of the Unsaturated Anion $[\text{Re}_3(\text{m-H})_4(\text{CO})_{10}]^-$ with Me_3NO . Synthesis and Spectroscopic Characterisation of the Adduct Anion $[\text{Re}_3(\text{m-H})_3(\text{CO})_9(\text{m}_3\text{O}\cdots\text{H}\cdots\text{NMe})_3]^-$ and Crystal and Molecular structure of its Tetraethylammonium salt, **J. Organometall. Chem.**, **311**, 177, 1986.
25. P.L. Anelli, T. Beringhelli, H. Molinari, F. Montanari, S. Quici, ^{13}C and ^1H NMR Characterization of $\text{Na}^+\text{ClO}_4^-$ Complex of a New Lipophilic Cage Ligand. in "**Advanced Magnetic Resonance Techniques in Systems of High Molecular Complexity**", Birkhauser Boston Inc., 1986.
26. T. Beringhelli, G. D'Alfonso, H. Molinari, G. Ciani, Reduction of a Coordinated Monoxide to an Oxymethyl Bridging Group: Synthesis and X-Ray Characterization of the Dianion $[\text{Re}_3(\text{m-H})_3(\text{m}_3\text{-}\eta^2\text{CH}_2\text{O})(\text{CO})_9]^{2-}$, **Organometallics**, **6**, 194, 1987.
27. P.L. Anelli, T. Beringhelli, H. Molinari, S. Quici, NMR Investigation of Lipophilic Cage Ligands. Part 2. Structural Assignments and Conformational Properties of the Ligand 12-hexadecyl-7,17,22,27-tetraoxa-1,4,10,14-tetraazatricyclo (12.5.5.5^{4,10})nonacosane and of its Sodium, Potassium and Silver Complexes, **Magn. Res. Chem.**, **25**, 417, 1987.
28. T. Beringhelli, G. D'Alfonso, H. Molinari, G. Ciani, A Novel Unsaturated Tetrahedral Hydrido-Carbonyl Cluster Anion of Rhenium. Synthesis and X-Ray Characterization of $[\text{Re}_3(\text{u-H})_3(\text{m}_3\text{-H})_2(\text{CO})_{12}]^-$ **J.C.S. Chem. Comm.**, 486, 1987.
29. T. Beringhelli, G. D'Alfonso, H. Molinari, Relaxation Studies of Carbonyl Rhenium Clusters. Part 3. ^{13}C NMR Study of the Properties of the Unsaturated Anion $[\text{Re}_3(\text{m-H})_4(\text{CO})_9(\text{NCMe})]^-$ at Low Temperature, **J.C.S. Dalton Trans.**, 2083, 1987.
30. T. Beringhelli, G. D'Alfonso, L. Ghidorsi, G. Ciani, A. Sironi and H. Molinari, New Hydrido-Carbonyl Rhenates by Reduction of $\text{Re}_2(\text{CO})_{10}$ with Bases. X-Ray Crystal Structure of the Anion $[\text{Re}_2\text{H}_2(\text{m-H})(\text{CO})_8]^-$, **Organometallics**, **6**, 1365, 1987.
31. G.E. Hawkes, L. Lian, H. Molinari and S. Singh, ^{15}N NMR Studies of the Intermolecular Interactions between Vancomycin and Ac-D-Ala-D-Ala, **J. Magn. Reson.**, **74**, 188, 1987.
32. T. Beringhelli, G. Ciani, G. D'Alfonso, H. Molinari, A. Sironi, M. Freni, Synthesis and Characterization of a New Family of Unsaturated Triangular Rhenium Cluster Anions of Formula $[\text{Re}_3(\text{u-H})_4(\text{CO})_9\text{L}]^-$ (L=Neutral two-electron Donor Ligand). X-Ray Crystal and Molecular Structures of the Tetraethylammonium Salts of the Anions with L=Triphenylphosphine and Pyridine, **J.C.S. Dalton Trans.**, 2691, 1987.

33. D. Landini, H. Molinari, M. Penso, A. Rampoldi, Convenient Procedures for the Preparation of Lipophilic Quaternary Onium Fluorides, Hydrogenofluorides and Dihydrogentrifluorides via Ion Exchange in Two-Phase Systems, **Synthesis**, **12**, 953, 1988.
34. T. Beringhelli, G. D'Alfonso, H. Molinari, G.E. Hawkes, K.D. Sales, Quantitative Analysis of 1- and 2-dimensional Magnetisation Transfer Experiments and the Mechanism of Rearrangement of $[\text{Re}_3(\text{m-H})_4(\text{CO})_9(\text{NCMe})]$, **J. Magn. Reson.**, **80**, 45, 1988.
35. T. Beringhelli, G. D'Alfonso, G. Ciani, A. Sironi, H. Molinari, X-ray Crystal Structures of Two Isomers of the Hydrido-Carbonyl Anion $[\text{Re}_7(\text{m-H})\text{C}(\text{CO})_2]^{2-}$. The Problematic Existence of triply Bridging Hydrides in Clusters Containing Interstitial Main-Group Elements, **J.C.S. Dalton Trans.**, 1281, 1988.
36. T. Beringhelli, G. D'Alfonso, G. Ciani, A. Sironi and H. Molinari, Synthesis, Solid State (X-Ray) and Solution (Nuclear Magnetic Resonance) Studies of the Hydridocarbido Carbonyl Cluster Anion $[\text{Re}_7\text{H}_2\text{C}(\text{CO})_2]^-$, **J.C.S. Dalton Trans.**, 1901, 1990.
37. H. Molinari, A. Pastore, L. Lian, G.E. Hawkes and K. Sales, The Structure of Vancomycin and a Vancomycin-D-Ala-D-Ala Complex in Solution. **Biochemistry**, **29**, 2271, 1990.
38. P. Dalla Croce, C. La Rosa, H. Molinari, Pyrano[3,2-c][1,2] Benzothiazine 5,5-dioxide derivatives: Synthesis and Structural Assignment, **Gazz. Chim. Ital.**, **120**, 443, 1990.
39. H. Molinari, S. Mammi, ^{15}N Reverse Detection of Little Gastrin in Micelle Solution, **J. Magn. Reson.**, **90**, 335, 1990.
40. G. Esposito, P. Mascagni, H. Molinari, N. Niccolai, Structural NMR Studies: From One to Multidimensional Frequency Spectra, in "**NMR and Biomolecular Structure**", Editors I. Bertini, H. Molinari, N. Niccolai, VCH Publisher, 1991.
41. L. Lattuada, E. Licandro, S. Maiorana, H. Molinari, A. Papagni, Opening of Oxirane Rings by the Conjugate Base of (MethoxyMethylCarbene)Pentacarbonyl Chromium in the Presence of $\text{BF}_3 \cdot \text{Et}_2\text{O}$: a General and Improved Synthesis of 2-Oxacyclopentylidene Pentacarbonyl Chromium, **Organometallics**, **10**, 807, 1991.
42. H. Molinari, R. Consonni, M. Pegna, L. Zetta, P. Neri, N. Niccolai, A. Bonci, L. Lozzi, M. Rustici, M. Scarselli, ^1H and Natural Abundance ^{15}N NMR Studies of a Derivative of a Rabies Glycoprotein Fragment, **Biopolymers**, 713, 1991.
43. N. Niccolai, A. Bonci, M. Rustici, M. Scarselli, P. Neri, G. Esposito, P. Mascagni, A. Motta and H. Molinari, NMR Delineation of Inner and Outer Protons from Paramagnetic Relaxation Perturbations in 1D and 2D Spectra of Peptides, **J. Chem. Soc. Perkin Trans. 2**, 1453, 1991.

- 44.A. De Marco, P. Gariboldi, H. Molinari and L. Verotta, NMR Elucidation of the Structure and Conformation of a Permethylated Alditol Acetate Oligosaccharide via ^1H - ^1H Correlation and ^1H - ^{13}C Correlation with Proton Detection, **Carbohydrate Research**, **226**, 15, 1992.
- 45.G. Esposito, A. M. Lesk, H. Molinari, A. Motta, N. Niccolai, A. Pastore, Probing Protein Structure by Solvent Perturbation of NMR Spectra: NMR Spectral Editing and Topological Mapping in Proteins by Paramagnetic Relaxation Filtering, **J. Mol. Biol.**, **224**, 659, 1992.
- 46.R. Consonni, H. Molinari, F. Greco, G. Zannoni, L. Zetta, G. Carrea and S. Riva, NMR Studies of native and fragmented Subtilisin Carlsberg, **Biochim. Biophys. Acta**, **39**, 1119, 1992.
- 47.H. Molinari, G. Esposito, R. Consonni, M. Pegna, L. Zetta, Distance Evaluation by means of heteronuclear SQC-NOESY Experiments, **J. Biomol. NMR**, **2**, 289-299, 1992.
48. Appendino, E. Wollenweber, P. Gariboldi, A. Sironi, H. Molinari, Triterpenes from the Frond Exudate of the Fern *Notholaena Gregii*, **Phytochemistry**, **31**, 923, 1992.
- 49.T. Beringhelli, G. D'Alfonso, H. Molinari and A. Sironi, Synthesis and crystal structures of the carbido cluster anions $[\text{Re}_6(\text{mH})(\text{mCO})(\text{CO})_{18}]^1$. **J. Chem. Soc. Dalton Trans.**, 689, 1992
- 50.F. Menegus, L. Cattaruzza, H. Molinari, E. Ragg, Rice and wheat seedlings as plant models of high and low tolerance to anoxia, In "Surviving hypoxia: mechanisms of control and adaptation", Chapter 5, P.W. Hochachka Eds., CRC Press Inc. Boca Raton, FL, USA, Chapter 5, p.53, 1992.
51. A.D'Ursi, M. Pegna, P. Amodeo, H. Molinari, A. Verdini, L. Zetta, P. Temussi, Solution Conformation of Tuftsin, **Biochemistry**, **31**, 9581-9586, 1992.
- 52.G. Esposito, F. Fogolari, H. Molinari, M. Pegna, L. Zetta, Proton Strong Coupling in heteronuclear systems. Theoretical and experimental evaluation in quantitative analysis of SQC-NOESY spectra of biopolymers, **J. Magn. Reson.**, **B 101**, 240-247, 1993.
- 53.G. Esposito, A. M. Lesk, H. Molinari, A. Motta, N. Niccolai and A. Pastore, Probing Protein Structure by Solvent Perturbation of NMR Spectra: II. Determination of Surface and Buried Residues in Homologous Proteins, **Biopolymers**, **33**, 839-846, 1993.
- 54.M. Gussoni, F. Greco, R. Consonni, H. Molinari, G. Zannoni, G. Bianchi and L. Zetta, Application of NMR microscopy to the histochemistry study of olives (*Olea Europea L.*), **Magnetic Resonance Imaging**, **11**, 259-268, 1993.
- 55.G. Esposito, H. Molinari, M. Pegna, N. Niccolai and L. Zetta, A ^1H NMR study on the interaction of aminoxyl paramagnetic probes with unfolded peptides, **Chem. Soc. Perkin Trans. 2**, 1531-1534, 1993.

56. H. Molinari, G. Esposito, M. Pegna, A. Motta, N. Niccolai, R. Consonni and L. Zetta The use of spin labels to map protein surfaces, **J. of Cell. Biochem.**, Supplement 17C, 256, 1993.
57. M. Gussoni, A. Vezzoli, F. Greco, R. Consonni, M. Pegna, H. Molinari and L. Zetta, A quantitative determination of lactate in muscle by selective excitation NMR spectroscopy, **Quart. Mag. Res. Biol. and Med.**, **1**, 9, 1994.
58. M. Gussoni, A. Vezzoli, F. Greco, R. Consonni, M. Pegna, H. Molinari and L. Zetta, NMR studies on phantoms for an unequivocal determination of lactate in tissues by ¹H NMR spectroscopy, **Quart. Mag. Res. Biol. and Med.** **1**, 39, 1994.
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62. R. Consonni, R. Limiroli, H. Molinari, P. Fusi, M. Grisa, M. Vanoni and P. Tortora, ¹H-NMR and Photo-CIDNP Spectroscopies show a possible Role for Trp23 and Phe31 in Nucleic Acid Binding by P2 Ribonuclease from the archaeon *Sulfolobus solfataricus*, **FEBS Letters**, **372**, 135-139, 1995.
63. M. Pegna, H. Molinari, L. Zetta, G. Melacini, W.A. Gibbons, F. Brown, D. Rowlands, E. Chan and P. Mascagni, The Solution Conformational Features of Two Highly Homologous Antigenic Peptides of Foot-and-mouth disease virus serotype A, variant A and USA, Correlate with their Serological Properties, **J. of Peptide Science**, **2**, 91-105, 1996.
64. M. Pegna, H. Molinari, L. Zetta, W.A. Gibbons, F. Brown, D. Rowlands, G. Siligardi and P. Mascagni, The solution structure of the Immunodominant and Cell receptor Binding Regions of Foot-and-mouth disease virus serotype A, variants A, **J. of Peptide Science**, **2**, 75-90, 1996.
65. L. Ragona, H. Molinari, L. Zetta, R. Longhi, D. Marchini, R. Dallai, L.F. Bernini, M. Scarselli and N. Niccolai, CD and NMR Structural characterization of Ceratotoxins, Natural Peptides with Antimicrobial Activity, **Biopolymers**, **39**, 653-664, 1996.
66. H. Molinari, L. Ragona, L. Varani, R. Consonni, L. Zetta and H. Monaco, Partially folded structure of monomeric bovine β -Lactoglobulin, **FEBS Letters**, **381**, 237-243, 1996.

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- 70.H. Molinari, G. Esposito, M. Pegna, L. Ragona, N. Niccolai, R.M. Brunne, A. Lesk and L. Zetta, Probing Protein Structure by Solvent Perturbation of ¹H Nuclear Magnetic Resonance Spectra: the Surface Accessibility of BPTI, **Biophys. Journal**, **73**, 382-396, 1997.
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- 72.R.P. Bonomo, L. Casella, L. DeGioia, H. Molinari, G. Impellizzeri, T. Jordan, G. Pappalardo, R. Purrello and E. Rizzarelli, Metal ion and proton stabilization of turn motif in the synthetic octapeptide L-Histidyl-(Glycyl-L-Histidyl)3-Glycine, **Chem. Soc. Dalton Trans.**, 2387-2389, 1997.
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