## **Gaetano** Irace

List of Publications by Year in descending order

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| #  | Article   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Determination of tyrosine exposure in proteins by second-derivative spectroscopy. Biochemistry, 1984, 23, 1871-1875.  | 2.5 | 266       |
| 2  | Second-Derivative Spectroscopy of Proteins. A Method for the Quantitiative Determination of Aromatic Amino Acids in Proteins. FEBS Journal, 1978, 90, 433-440.                              | 0.2 | 133       |
| 3  | Unfolding pathway of myoglobin: Molecular properties of intermediate forms. Archives of<br>Biochemistry and Biophysics, 1986, 244, 459-469.   | 3.0 | 94        |
| 4  | Differential effects of glycation on protein aggregation and amyloid formation. Frontiers in<br>Molecular Biosciences, 2014, 1, 9.  | 3.5 | 93        |
| 5  | Simultaneous determination of tyrosine and tryptophan residues in proteins by second-derivative spectroscopy. Analytical Biochemistry, 1982, 126, 251-257.                                  | 2.4 | 92        |
| 6  | The Effect of Glycosaminoglycans (GAGs) on Amyloid Aggregation and Toxicity. Molecules, 2015, 20, 2510-2528.  | 3.8 | 89        |
| 7  | Tryptophanyl fluorescence heterogeneity of apomyoglobins. Correlation with the presence of two distinct structural domains. Biochemistry, 1981, 20, 792-799.                                | 2.5 | 68        |
| 8  | Fibrillogenesis and Cytotoxic Activity of the Amyloid-forming Apomyoglobin Mutant W7FW14F.<br>Journal of Biological Chemistry, 2004, 279, 13183-13189.                                      | 3.4 | 68        |
| 9  | Unfolding pathway of myoglobin. Evidence for a multistate process. Biochemistry, 1983, 22, 4165-4170.   | 2.5 | 65        |
| 10 | Apomyoglobin folding intermediates characterized by the hydrophobic fluorescent probe<br>8-anilino-1-naphthalene sulfonate (ANS). BBA - Proteins and Proteomics, 1998, 1385, 69-77.         | 2.1 | 57        |
| 11 | Insights into Insulin Fibril Assembly at Physiological and Acidic pH and Related Amyloid Intrinsic<br>Fluorescence. International Journal of Molecular Sciences, 2017, 18, 2551.            | 4.1 | 57        |
| 12 | Heparin Induces Harmless Fibril Formation in Amyloidogenic W7FW14F Apomyoglobin and Amyloid<br>Aggregation in Wild-Type Protein In Vitro. PLoS ONE, 2011, 6, e22076.                        | 2.5 | 53        |
| 13 | Effect of Trehalose on W7FW14F Apomyoglobin and Insulin Fibrillization:  New Insight into Inhibition<br>Activity. Biochemistry, 2008, 47, 1789-1796.  | 2.5 | 50        |
| 14 | Second-derivative spectroscopy of proteins: Studies on tyrosyl residues. Analytical Biochemistry,<br>1980, 106, 49-54.  | 2.4 | 49        |
| 15 | Vanillin Affects Amyloid Aggregation and Non-Enzymatic Glycation in Human Insulin. Scientific<br>Reports, 2017, 7, 15086.   | 3.3 | 48        |
| 16 | Effect of molecular confinement on internal enzyme dynamics: Frequency domain fluorometry and molecular dynamics simulation studies. Biopolymers, 2002, 67, 85-95.                          | 2.4 | 46        |
| 17 | Tryptophanyl Substitutions in Apomyoglobin Determine Protein Aggregation and Amyloid-like Fibril<br>Formation at Physiological pH. Journal of Biological Chemistry, 2002, 277, 45887-45891. | 3.4 | 40        |
| 18 | Pressure-Induced Perturbation of Apomyoglobin Structure:Â Fluorescence Studies on Native and Acidic<br>Compact Formsâ€. Biochemistry, 1996, 35, 1173-1178.                                  | 2.5 | 37        |

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|----|---|-----|-----------|
| 19 | Time-resolved small-angle x-ray scattering study of the early stage of amyloid formation of an apomyoglobin mutant. Physical Review E, 2011, 84, 061904.  | 2.1 | 36        |
| 20 | Heme and cysteine microenvironments of tuna apomyoglobin. Evidence of two independent unfolding regions. Biochemistry, 1982, 21, 212-215.   | 2.5 | 35        |
| 21 | The effect of tryptophanyl substitution on folding and structure of myoglobin. FEBS Journal, 2000, 267, 3937-3945.  | 0.2 | 35        |
| 22 | Misfolding and Amyloid Aggregation of Apomyoglobin. International Journal of Molecular Sciences, 2013, 14, 14287-14300.   | 4.1 | 35        |
| 23 | Tetracycline inhibits W7FW14F apomyoglobin fibril extension and keeps the amyloid protein in a prefibrillar, highly cytotoxic state. FASEB Journal, 2006, 20, 346-347.  | 0.5 | 34        |
| 24 | D-ribose-glycation of insulin prevents amyloid aggregation and produces cytotoxic adducts.<br>Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2016, 1862, 93-104.   | 3.8 | 34        |
| 25 | Glycation Accelerates Fibrillization of the Amyloidogenic W7FW14F Apomyoglobin. PLoS ONE, 2013, 8, e80768.  | 2.5 | 33        |
| 26 | Unfolding pathway of myoglobin: effect of denaturants on solvent accessibility to tyrosyl residues detected by second-derivative spectroscopy. Biochemistry, 1987, 26, 2130-2134.   | 2.5 | 31        |
| 27 | Multiple conformational states in myoglobin revealed by frequency domain fluorometry.<br>Biochemistry, 1989, 28, 1508-1512.   | 2.5 | 31        |
| 28 | Salt-induced refolding of myoglobin at acidic pH: Molecular properties of a partly folded intermediate. Archives of Biochemistry and Biophysics, 1992, 298, 624-629.  | 3.0 | 29        |
| 29 | Heme binding inhibits the fibrillization of amyloidogenic apomyoglobin and determines lack of aggregate cytotoxicity. Protein Science, 2007, 16, 507-516.   | 7.6 | 26        |
| 30 | Hexafluoroisopropanol and Acid Destabilized Forms of Apomyoglobin Exhibit Structural Differencesâ€.<br>Biochemistry, 2003, 42, 312-319.   | 2.5 | 25        |
| 31 | Inhibition of aggregate formation as therapeutic target in protein misfolding diseases: effect of tetracycline and trehalose. Expert Opinion on Therapeutic Targets, 2010, 14, 1311-1321.   | 3.4 | 25        |
| 32 | Perturbation of conformational dynamics, enzymatic activity, and thermostability of β-glycosidase<br>from archaeonSulfolobus solfataricus by pH and sodium dodecyl sulfate detergent. Proteins:<br>Structure, Function and Bioinformatics, 1997, 27, 71-79. | 2.6 | 23        |
| 33 | W7FW14F apomyoglobin amyloid aggregatesâ€mediated apoptosis is due to oxidative stress and AKT<br>inactivation caused by Ras and Rac. Journal of Cellular Physiology, 2009, 221, 412-423.   | 4.1 | 23        |
| 34 | Conformational substates of myoglobin detected by extrinsic dynamic fluorescence studies.<br>Biochemistry, 1989, 28, 7542-7545.   | 2.5 | 22        |
| 35 | Unfolding Pathway of Apomyoglobin. Journal of Molecular Biology, 1994, 241, 103-109.  | 4.2 | 20        |
| 36 | The effect of evolution on homologous proteins. Biochimica Et Biophysica Acta (BBA) - Protein<br>Structure, 1978, 532, 354-367.   | 1.7 | 19        |

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|----|---|-----|-----------|
| 37 | Pressureâ€induced perturbation of ANSâ€apomyoglobin complex: Frequency domain fluorescence studies<br>on native and acidic compact states. Protein Science, 1996, 5, 121-126.                                     | 7.6 | 19        |
| 38 | Myoglobin structure and regulation of solvent accessibility of heme pocket. International Journal of<br>Peptide and Protein Research, 1985, 26, 195-207.  | 0.1 | 19        |
| 39 | Structural and functional aspects of the heart ventricle myoglobin of bluefin tuna. Comparative<br>Biochemistry and Physiology A, Comparative Physiology, 1983, 76, 481-485.                                      | 0.6 | 18        |
| 40 | Solvent and thermal denaturation of the acidic compact state of apomyoglobin. FEBS Letters, 1994, 338, 11-15.   | 2.8 | 18        |
| 41 | Structure and dynamics of the acidic compact state of apomyoglobin by frequency-domain fluorometry. FEBS Journal, 1993, 218, 213-219.   | 0.2 | 16        |
| 42 | The effect of molecular confinement on the conformational dynamics of the native and partly folded state of apomyoglobin. FEBS Letters, 2001, 509, 476-480.   | 2.8 | 16        |
| 43 | Glycation in Demetalated Superoxide Dismutase 1 Prevents Amyloid Aggregation and Produces<br>Cytotoxic Ages Adducts. Frontiers in Molecular Biosciences, 2016, 3, 55.   | 3.5 | 16        |
| 44 | Intrinsic blue-green fluorescence in amyloyd fibrils. AIMS Biophysics, 2018, 5, 155-165.  | 0.6 | 16        |
| 45 | DYNAMIC FLUORESCENCE OF TRYPTOPHANYL RESIDUES IN LOW MOLECULAR WEIGHT MODEL COMPOUNDS AND PROTEINS. Photochemistry and Photobiology, 1989, 50, 165-168.   | 2.5 | 15        |
| 46 | Multitryptophan-Fluorescence-Emission Decay of beta-Glycosidase From the Extremely Thermophilic<br>Archaeon Sulfolobus Solfataricus. FEBS Journal, 1997, 244, 53-58.  | 0.2 | 15        |
| 47 | Kinetics of amyloid aggregation of mammal apomyoglobins and correlation with their amino acid sequences. FEBS Letters, 2006, 580, 1681-1684.  | 2.8 | 14        |
| 48 | Dynamic aspects of the heme-binding site in phylogenetically distant myoglobins. BBA - Proteins and Proteomics, 1987, 913, 150-154.   | 2.1 | 13        |
| 49 | Resolution of the effects induced by WÂ→ÂF substitutions on the conformation and dynamics of the amyloid-forming apomyoglobin mutant W7FW14F. European Biophysics Journal, 2012, 41, 615-627.                     | 2.2 | 13        |
| 50 | Glycation of Wild-Type Apomyoglobin Induces Formation of Highly Cytotoxic Oligomeric Species.<br>Journal of Cellular Physiology, 2015, 230, 2807-2820.  | 4.1 | 13        |
| 51 | Fluorescence lifetime distribution of 1,8-anilinonaphthalenesulfonate (ANS) in reversed micelles detected by frequency domain fluorometry. Biophysical Chemistry, 1992, 44, 83-90.                                | 2.8 | 12        |
| 52 | Resolution of Tryptophan–ANS Fluorescence Energy Transfer in Apomyoglobin by Site-directed<br>Mutagenesis¶. Photochemistry and Photobiology, 2002, 76, 381.   | 2.5 | 12        |
| 53 | RESOLUTION OF OVERLAPPING BANDS IN THE NEAR-UV ABSORPTION SPECTRUM OF INDOLE DERIVATIVES.<br>Photochemistry and Photobiology, 1985, 42, 505-508.  | 2.5 | 11        |
| 54 | Structural and dynamic aspects of ?-glycosidase from mesophilic and thermophilic bacteria by<br>multitryptophanyl emission decay studies. Proteins: Structure, Function and Bioinformatics, 1999, 35,<br>163-172. | 2.6 | 10        |

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|----|---|-----|-----------|
| 55 | Unraveling amyloid toxicity pathway in NIH3T3 cells by a combined proteomic and <sup>1</sup> Hâ€NMR<br>metabonomic approach. Journal of Cellular Physiology, 2013, 228, 1359-1367.  | 4.1 | 10        |
| 56 | Folding and dynamics of melittin in reversed micelles. Biochimica Et Biophysica Acta - Biomembranes,<br>1993, 1146, 213-218.  | 2.6 | 9         |
| 57 | RESOLUTION OF THE INDIVIDUAL TRYPTOPHANYL CONTRIBUTIONS TO THE NEAR-ULTRAVIOLET DICHROIC ACTIVITY OF APOMYOGLOBIN. Photochemistry and Photobiology, 1994, 59, 611-614.  | 2.5 | 8         |
| 58 | Tryptophanyl contributions to apomyoglobin fluorescence resolved by site-directed mutagenesis. BBA<br>- Proteins and Proteomics, 2000, 1476, 173-180.   | 2.1 | 8         |
| 59 | Tryptophanyl fluorescence lifetime distribution of hyperthermophilic βâ€glycosidase from molecular<br>dynamics simulation: A comparison with the experimental data. Protein Science, 2000, 9, 1730-1742.  | 7.6 | 8         |
| 60 | Plateletâ€Activating Factor Mediates the Cytotoxicity Induced by W7FW14F Apomyoglobin Amyloid<br>Aggregates in Neuroblastoma Cells. Journal of Cellular Biochemistry, 2014, 115, 2116-2122.   | 2.6 | 8         |
| 61 | TEMPERATURE DEPENDENCE OF PHOSPHORESCENCE PARAMETERS OF PHYLOGENETICALLY DISTANT APOMYOGLOBINS. Photochemistry and Photobiology, 1987, 45, 741-744.   | 2.5 | 7         |
| 62 | W-F Substitutions in Apomyoglobin Increase the Local Flexibility of the N-terminal Region Causing<br>Amyloid Aggregation: A H/D Exchange Study. Protein and Peptide Letters, 2013, 20, 898-904.   | 0.9 | 6         |
| 63 | Amyloid toxicity and plateletâ€activating factor signaling. Journal of Cellular Physiology, 2013, 228, 1143-1148.   | 4.1 | 5         |
| 64 | Molecular organization and dynamics of the outer membrane of Salmonella thyphimurium mutant<br>strains detected by frequency domain fluorometry. Archives of Biochemistry and Biophysics, 1991, 286,<br>518-523.                                | 3.0 | 4         |
| 65 | Tryptophanyl substitutions in apomyoglobin affect conformation and dynamic properties of AGH subdomain. Biopolymers, 2003, 70, 649-654.   | 2.4 | 3         |
| 66 | Role of Glycation in Amyloid: Effect on the Aggregation Process and Cytotoxicity. , 2016, , .   |     | 3         |
| 67 | SPECTROSCOPIC PROPERTIES OF RHODAMINE B-LABELED THYROID HORMONE. Annals of the New York Academy of Sciences, 1981, 366, 253-264.  | 3.8 | 1         |
| 68 | Dynamic fluorescence of extrinsic fluorophores as a tool for studying protein conformational substates. Biology of Metals, 1990, 3, 131-132.  | 1.1 | 1         |
| 69 | High-performance liquid chromatographic purification of sodium bis(2-ethyl-1-hexyl)sulphosuccinate<br>from commercial preparations containing near-UV absorbing and fluorescent impurities. Journal of<br>Chromatography A, 1994, 662, 263-267. | 3.7 | 1         |
| 70 | RESOLUTION OF THE INDIVIDUAL TRYPTOPHANYL CONTRIBUTIONS TO THE NEAR-ULTRAVIOLET DICHROIC ACTIVITY OF APOMYOGLOBIN. Photochemistry and Photobiology, 1994, 59, 611-614.  | 2.5 | 1         |
| 71 | Conformational dynamics of native, compact and fully unfolded states of proteins detected by frequency domain fluorometry. Studies in Organic Chemistry, 1993, 47, 197-204.   | 0.2 | 1         |
| 72 | Resolution of Tryptophan-ANS Fluorescence Energy Transfer in Apomyoglobin by Site-directed<br>Mutagenesis¶. Photochemistry and Photobiology, 2007, 76, 381-384.   | 2.5 | 0         |