

## ISRAEL PECHT

### LIST OF PUBLICATIONS

1. M. Anbar and I. Pecht. Hydrogen isotope effects in sonochemical reactions in water. *J. Chem. Phys.* **40**, 608 (1964).
2. M. Anbar and I. Pecht. On the sonochemical formation of hydrogen peroxide in water. *J. Phys. Chem.* **68**, 352 (1964).
3. M. Anbar and I. Pecht. The sonolytic decomposition of organic solutes in dilute aqueous solutions. I. Hydrogen atoms abstraction from sodium formate. *J. Phys. Chem.* **68**, 1460 (1964).
4. M. Anbar and I. Pecht. The sonolytic decomposition of organic solutes in dilute aqueous solutions. II. The sonolysis of isopropyl alcohol. *J. Phys. Chem.* 1462, (1964).
5. A. Levitzki, I. Pecht and M. Anbar. Oxidase-like activity of the copper (II) poly-L-histidine complex. *Nature* **207**, 1386 (1965).
6. A. Weissler, I. Pecht and M. Anbar. Ultrasound chemical effects on pure organic liquids. *Science* **150**, 1288 (1965).
7. I. Pecht and Z. Luz. Oxygen exchange between periodate and water, studies by  $^{17}\text{O}$  nuclear magnetic resonance. *J. Am. Chem. Soc.* **87**, 4068 (1965).
8. Z. Luz and I. Pecht. Oxygen-17 nuclear magnetic resonance and oxygen exchange in aqueous solutions of telluric acid. *J. Am. Chem. Soc.* **88**, 1152 (1966).
9. M. Anbar and I. Pecht. The oxidation of water by tervalent copper ions. *Israel J. Chem.* **3**, 29p (1966).
10. M. Anbar, I. Pecht and G. Stein. On the formation of the molecular hydrogen peroxide in the radiolysis of aqueous solutions. *J. Chem. Phys.* **44**, 3635 (1966).
11. M. Anbar and I. Pecht. A 1:1 complex of  $\text{Cu(II)}\pi$  ions and hydrogen peroxide. Proceedings of the 9th International Conference on Coordination Chemistry, *Helv. Chim. Acta*, p. 74 (1966).
12. I. Pecht, A. Levitzki and M. Anbar. The copper-poly-L-histidine complex. I. The environmental effect of the polyelectrolyte on the oxidase activity of copper ions. *J. Am. Chem. Soc.* **89**, 1587 (1967).
13. M. Anbar and I. Pecht. The sonolytic decomposition of organic solutes in dilute aqueous solutions. III. Oxidative deamination of ethylenediamine by OH radicals. *J. Phys. Chem.* **71**, 1246 (1967).
14. M. Anbar and I. Pecht. The oxidation of water by cobaltic aquo ions. *J. Am. Chem. Soc.* **89**, 2553 (1967).
15. M. Anbar and I. Pecht. Oxygen isotope effects in the oxidation of water by transitionmetal ions. *Trans. Faraday Soc.* **64**, 744 (1968).

16. A. Levitzki, I. Pecht and A. Berger. The physicochemical properties of the poly-L-hystidine-Cu(II) complex. In Progress in Coordination Chemistry, Michael Cais, Ed., Elsevier Publishing Co., p. 480, (1968).
17. I. Pecht and M. Anbar. The oxidation of Bis (bipyridyl) copper (I) ions by oxygen and by hydrogen peroxide. J. Chem. Soc. (A), 1902 (1968).
18. I. Pecht. The reduction of O<sub>2</sub> by fungal laccase: A tracer investigation for products. 6th FEBS Meeting, Madrid, p. 150 (1969).
19. I. Pecht, V.I. Teichberg and N. Sharon. Fluorescence study of the binding dynamics of saccharides to lysozyme. FEBS Letters **10**, 364 (1970).
20. I. Pecht, E. Maron, R. Arnon and M. Sela. Specific excitation energy transfer from antibodies to their DNS labeled antigens. Eur. J. Biochem. **19**, 368 (1971).
21. I. Pecht and M. Faraggi. The reduction of cytochrome-c by hydrated electrons. FEBS Letters **13**, 221 (1971).
22. I. Pecht and M. Faraggi. The reduction of type 1 Cu (II) of laccase by hydrated electrons. Nature **233**, 116 (1971).
23. M. Faraggi and I. Pecht. The reaction of Pseudomonas azurin with hydrated electrons. Biochem. Biophys. Res. Comm. **45**, 842 (1971).
24. N. Lahav, S. Raziel and I. Pecht. Light scattering of Montmorillonite in NaCl and sodium phosphate solutions subjected to pulsed electric fields. Israel J. Chem. **9**, 607 (1971).
25. I. Pecht. Dynamics of electron transfer processes of redox proteins. Proc. 1st Eur. Biophysics Congress **VI**, 117 (1971).
26. I. Pecht and M. Farragi. Electron transfer to cytochrome-c: Reaction with hydrated electrons and the conformational transitions involved. Proc. Natl. Acad. Sci. U.S.A. **69**, 902 (1972).
27. I. Pecht, D. Givol and M. Sela. Dynamics of hapten-antibody interaction. Studies on a Myeloma protein with anti-2,4-dinitrophenyl specificity. J. Mol. Biol. **68**, 241-247 (1972).
28. I. Pecht, D. Haselkorn and S. Friedman. Kinetic mapping of antibody binding sites by chemical relaxation spectroscopy (invited paper). FEBS Letters **24**, 331-334 (1972).
29. A. Levitzki, I. Pecht and A. Berger. The poly-L-hystidine-Cu (II) complex: Physicochemical characterization of the complexes formed in acidic and alkaline solutions. J. Am. Chem. Soc. **94**, 9844 (1972).
30. I. Pecht and P. Rosen. The kinetics of the cytochrome-c-azurin redox equilibrium. Biochem. Biophys. Res. Comm. **50**, 853 (1973).
31. M. Faraggi and I. Pecht. The electron pathway to Cu (II) in ceruloplasmin. J. Biol. Chem. **248**, 3164 (1973).
32. J. Victor, D. Haselkorn and I. Pecht. Direct evaluation of rate constants for an assumed single step mechanism from chemical relaxation data. Computers Biomed. Res. **6**, 121 (1973).

33. M. Faraggi and I. Pecht. Elementary steps in the action of electron transfer proteins. 23rd Farkass Memorial Symposium, Israel J. Chem. **10**, 1021-1039 (1972).
34. A.J. Kalb and I. Pecht. Visible and circular dichroism of the cobalt complexes of Concanavalin A. Biochem. Biophys. Acta **203**, 264-268 (1973).
35. M. Shoham, A.J. Kalb and I. Pecht. Specificity of metal ions interaction with Concanavalin A. Biochemistry, **12**, 1914 (1973).
36. I. Pecht. Pulse radiolysis study of the reduction of spinach ferredoxin. FEBS Letters, **33**, 259 (1973).
37. D. Haselkorn, S. Friedman, D. Givol and I. Pecht. Kinetic mapping of the antibody combining site by chemical relaxation spectrometry. Biochemistry **13**, 2210 (1974).
38. J. Schlessinger, I.Z. Steinberg and I. Pecht. Antibody-hapten interactions: Circular and linear polarization of the fluorescence of dansyl bound to anti-dansyl antibodies. J. Mol. Biol. **87**, 724 (1974).
39. I. Pecht. Chemical relaxation study of the electron transfer between laccase and external redox couples. Israel J. Chem., (Arieh Berger Mem. Issue) **12**, 351 (1974).
40. I. Pecht and M. Goldberg. Electron transfer pathways to and within redox proteins: Pulse radiolysis studies. In "Fast processes in radiation chemistry and Biology". G.E. Adams, E.M. Fielden and B.D. Michael, eds. John Wiley, London (1975) p. 227-285.
41. I. Pecht. Kinetic mapping of antibody binding sites. In "The immune system: Genes, receptors, signals". C.F. Fox ed., Academic Press Inc. New York (1974) p. 15-35.
42. K. Rosenheck, P. Lindner and I. Pecht. Effect of electrical fields on the light scattering and fluorescence of chromaffin granules. J. Membrane Biol. **20**, 1-12 (1975).
43. I. Pecht. Antibody combining sites as a model for molecular recognition. Symposium on "Protein-ligand interactions", H. Sund, ed., Walter de Gruyter Verlag, Berlin (1975) 356-371.
44. M. Goldberg and I. Pecht. Fluorescence enhancement of laccase induced by reduction of Cu(II) sites. Proc. Natl. Acad. Sci. U.S.A., **71**, 4684-4687 (1974).
45. D. Givol, I. Pecht, J. Hochman, J. Schlessinger and I.A. Steinberg. Conformational changes in the Fab and Fc of the antibody as a consequence of antigen binding. Progr. Immunol. II, Vol. **1**, 39-48 (1974).
46. M. Faraggi, P. Hemmerich and I. Pecht. O<sub>2</sub> affinity of flavin radical species as studied by pulse radiolysis. FEBS Letters **51**, 47-51 (1975).
47. A. Grinvald, J. Schlessinger, I. Pecht and I.Z. Steinberg. Homogeneity and variability in the structure of azurin molecules studied by fluorescence decay and circular polarization. Biochemistry **14**, 1921-1929 (1975).
48. J. Schlessinger, I.Z. Steinberg, D. Givol, J. Hochman and I. Pecht. Antigen induced conformational changes in antibodies and the Fab fragments studied by circular polarization of fluorescence. Proc. Natl. Acad. Sci. U.S.A. **72**, 2776-2779 (1975).

49. J. C. Jaton, J. Huser, Y. Blatt and I. Pecht. Circular dichroism and fluorescence studies of homogeneous antibodies to type III pneumococcal polysaccharides. *Biochemistry* **14**, 5308-5312 (1975).
50. J.C. Jaton, H. Huser, D. Braun, D. Givol, I. Pecht and J. Schlessinger. Conformational changes induced in a homogeneous anti-type III pneumococcal antibody to oligosaccharides of increasing size. *Biochemistry* **14**, 5312-5315 (1975).
51. P. Rosen and I. Pecht. Conformational equilibria accompanying the electron transfer between cytochrome-c (P. 551) and azurin from *Ps. aeruginosa*. *Biochemistry* **15**, 775-786 (1976).
52. M. Goldberg and I. Pecht. Kinetics and equilibria of the electron transfer between azurin and the hexacyanoiron (II/III) couple. *Biochemistry* **15**, 4197-4208 (1976).
53. I. Pecht. Recognition and allostery in the mechanism of antibody action. In "The Immune System", K. Rajewski and F. Melchers. Eds., Springer-Verlag, Heidelberg, pp. 41-54 (1976).
54. D. Lancet and I. Pecht. Kinetic evidence for a conformational transition induced in an immunoglobulin by hapten binding. *Proc. Natl. Acad. Sci. U.S.A.* **73**, 3549-3553 (1976).
55. R.M. Keller, K. Wuthrich and I. Pecht. Structural studies of cytochrome-c 551 by <sup>1</sup>H NMR spectroscopy at 360 Mhz. *FEBS Letters* **70**, 180-184 (1976).
56. O. Farver, M. Goldberg, D. Lancet and I. Pecht. Oxidative titrations of *Rhus vernicifera* Laccase and its specific interaction with hydrogen peroxide. *Biochem. Biophys. Res. Commun.* **73**, 494-500 (1976).
57. I. Pecht, O. Farver and M. Goldberg. Electron transfer pathways in "blue" copper proteins. In "Bioinorganic Chemistry-II". *Adv. Chem. Series*, Vol. **162**, 179-206 (1977).
58. D. Givol, J. Hochman, M. Gavish, I. Pecht, I.Z. Steinberg and J. Schlessinger. Folding association and interactions of domains in the antibody molecule. *Symp. Quant. Biol.*, Vol. XLI, 667-675 (1977).
59. E.A. Padlan, D.R. Davies, I. Pecht, D. Givol and C.E.Wright. The antigen binding site of MOPC 315 immunoglobulin: A model building study. *Symp. Quant. Biol.*, Vol. XLI, 627-637 (1977).
60. I. Pecht, B. Ehrenberg, E. Calef and R. Arnon. Conformation changes and complement activation induced upon antigen binding to antibodies. *Biochem. Biophys. Res. Commun.* **74**, 1302-1319 (1977).
61. A. Licht, D. Lancet, I. Schechter and I. Pecht. Thermodynamic and spectroscopic comparison of the binding sites of the mouse myeloma protein 315 and of its light chain dimer. *FEBS Letters* **78**, 211-215 (1977).
62. S. Wain-Hobson, S.K. Dower, P. Gettins, D. Givol, A.A.McLaughlin, I. Pecht, C.A. Sunderland and R.A. Dwek. Specificity of interactions of hapten side chains with the combining site of the myeloma protein MOPC-315. *Biochem. J.* **165**, 227-235 (1977).
63. D. Lancet, A. Licht, I. Schechter and I. Pecht. Hapten induced allosteric transition in the light chain dimer of an immunoglobulin. *Nature* **269**, 827-829 (1977).

64. D. Lancet and I. Pecht. Spectroscopic and immunochemical studies with nitrobenzoxadiazole alanine, a fluorescent dinitrophenyl analogue. *Biochemistry* **16**, 5150-5157 (1977).
65. I. Pecht, M. Goldberg, S. Wherland and O. Farver. Electron distribution among the redox sites of rhus laccase and its reaction with O<sub>2</sub> and H<sub>2</sub>O<sub>2</sub>. In "Mechanisms of Oxidizing Enzymes", T.P. Singer and R.N. Ondarza. Eds. Elsevier/North Holland, p. 263-271 (1978).
66. G. Schepers, Y. Blatt, K. Himmelspach and I. Pecht. Binding site of a dextran-specific homogenous IgM: Thermodynamic and spectroscopic mapping by dansylated oligosaccharides. *Biochemistry* **17**, 2239-2245 (1978).
67. A.B. Schreiber, I. Pecht and A.D. Strosberg. Fluorescence of tryptophan residues in homogenous rabbit antibodies: Variability in quantum yields and degree of exposure to solvent. *Immunochemistry* **15**, 207-212 (1978).
68. S. Wherland and I. Pecht. Protein-Protein electron transfer: A Marcus theory analysis of reactions between *c type* cytochromes and blue copper proteins. *Biochemistry* **17**, 2585-2591 (1978).
69. S. Vuk-Pavlovic, Y. Blatt, C.P.J. Glaudemans, D. Lancet and I. Pecht. Hapten-linked conformations equilibria in immunoglobulins XRPC-24 and J-539 observed by chemical relaxation. *Biophys. J.* **24**, 161-174 (1978).
70. O. Farver, M. Goldberg and I. Pecht. Circular dichroic spectrum of the laccase-peroxide derivative. *FEBS Letters* **94**, 383-386 (1978).
71. O. Farver, M. Goldberg, S. Wherland and I. Pecht. Reductant-dependent electron distribution among the redox sites of laccase. *Proc. Natl. Acad. Sci. U.S.A.* **75**, 5245-5259 (1978).
72. D. Lancet, D. Isenman, J. Sjodahl, J. Sjoquist and I. Pecht. Interactions between staphylococcal protein A and immunoglobulin domains. *Biochem. Biophys. Res. Commun.* **85**, 608-614 (1978).
73. M. Goldberg and I. Pecht. The reaction of "blue" copper oxidases with O<sub>2</sub>. A pulse radiolysis study. *Biophys. J.* **24**, 371-373 (1978).
74. D. Lancet, A. Licht and I. Pecht. Allostery in an immunoglobulin light-chain dimer. A chemical relaxation study. *Biophys. J.* **24**, 247-249 (1978).
75. I. Munro, I. Pecht and L. Stryer. Subnanosecond motions of tryptophans in proteins. *Proc. Natl. Acad. Sci. U.S.A.* **76**, 56-60 (1979).
76. S. Vuk-Pavlovic, D.E. Isenman, G.A. Elgavish, A. Gafni, A. Licht and I. Pecht. Hapten induced structural changes in rabbit IgG with specifically mercuriated interheavy chain-disulfide. *Biochemistry* **18**, 1125-1129 (1979).
77. Y. Blatt and I. Pecht. Allosteric cooperative interactions among redox sites of pseudomonas cytochrome oxidase. *Biochemistry* **18**, 2917-2922 (1979).
78. D.E. Isenman, D. Lancet and I. Pecht. Folding pathways of immunoglobulin domains. *Biochemistry* **19**, 3327-3336 (1979).

79. P. Rosen, I. Pecht and J.C. Cohen. Monitoring the carbohydrate component of the Fc fragment of human IgG by  $^{13}\text{C}$  nuclear magnetic resonance spectroscopy. *Molecular Immunology* **16**, 435-436 (1979).
80. R. Zidovetski, A. Licht and I. Pecht. The effect of the inter-chain disulfide bond on the hapten binding properties of the light chain dimer of protein 315. *Proc. Natl. Acad. Sci. U.S.A.* **76**, 5848-5852 (1979).
81. M.F.M. Jonhston, I. Pecht, J.M. Sturtevant and B.G. Barisas. The distribution of hapten binding enthalpies in conventionally-raised antibody populations. *Mol. Immunol.* **16**, 681-689 (1979).
82. O. Farver, M. Goldberg and I. Pecht. A circular dichroism study of the reactions of Rhus laccase with dioxygen. *Eur. J. Biochem.* **104**, 71-77 (1980).
83. O. Farver and I. Pecht. Magnetic susceptibility study of the laccase-peroxide derivative. *FEBS Letters*, **108**, 436-438 (1980).
84. A.T. Morris, D. Lancet, I. Pecht, D. Givol and R.A. Dwek. N.M.R. investigation of hapten binding to the myeloma protein M-460. *Int. J. Biol. Macromol.* **2**, 39-44 (1980).
85. N. Mazurek, C. Geller-Bernstein and I. Pecht. Affinity of calcium ions to the anti-allergic drug, dicromoglycate. *FEBS Letters* **111**, 194-196 (1980).
86. R. Zidovetzki, Y. Blatt, C.P.J. Glaudemans, B.N. Manjula and I. Pecht. A common mechanism of hapten binding to immunoglobulins and their heterologous chain recombinants. *Biochemistry* **19**, 2790-2795 (1980).
87. O. Farver and I. Pecht. Affinity labeling of the electron transfer pathway in azurin by Cr(II) ions. *Israel J. Chem.* (invited paper) **21**, 13-17 (1981).
88. J.A. Fee, G.J. McClune, A.C. Lees, R. Zidovetzki and I. Pecht. The pH dependence of the spectral and anion binding properties of iron containing superoxide dismutase from *E. coli* B: An explanation for the azide inhibition of dismutase activity. *Israel J. Chem.* (invited paper) **21**, 54-58 (1981).
89. N. Mazurek, G. Berger and I. Pecht. A binding site on mast-cells and basophils for the anti-allergic drug-disodium cromoglycate. *Nature* **286**, 722-723 (1980).
90. R.V. Blanden, D.B.E.C. Gill, R. Zidovetzki and I. Pecht. Cooperativity in antigen binding as a potential element in Tc cell recognition. *Mol. Immunol.* **17**, 893-896 (1980).
91. M. Goldberg, O. Farver and I. Pecht. Interactions of Rhus laccase with dioxygen and its reduction intermediates. *J. Biol. Chem.* **255**, 7353-7361 (1980).
92. M. Goldberg, S. Vuk-Pavolic and I. Pecht.  $^1\text{H}$  and  $^{17}\text{O}$  magnetic resonance relaxation in Rhus-laccase solutions - proton exchange with type 2 Cu(II) ligands. *Biochemistry* **19**, 5181-5189 (1980).
93. I. Pecht. Insights into the mode of antibody action from intrinsic and extrinsic fluorescent probes. *Ann. N.Y. Acad. Sci.* **366**, 208-216 (1981).

94. M. Goldberg, I. Pecht, H.E.A. Kramer, R. Traber and P. Hemmerich. Structure and properties of 5-deazaflavin radicals as compared to natural flavosemiquinones. *Biochem. Biophys. Acta* **673**, 570-593 (1981).
95. Y. Blatt, B. Benko, I. Pecht and S. Vuk-Pavlovic. Proton magnetic resonance relaxation in *Pseudomonas aeruginosa* cytochrome oxidase solutions. *J. Biol. Chem.* **256**, 2297-2301 (1981).
96. R. Zidovetzki, O. Farver and I. Pecht. Spectroscopic properties of light-chain derivatives of murine MOPC-315 immunoglobulin A. *Eur. J. Biochem.* **114**, 97-100 (1981).
97. R. Zidovetzki, A. Licht and I. Pecht. Positive cooperativity in the hapten binding by the V<sub>L</sub> dimer of protein 315. *Mol. Immun.* **18**, 491-497 (1981).
98. R. Zidovetzki, Y. Blatt and I. Pecht. A heterologous immunoglobulin chain recombinant carries a distinct site for dinitrophenyl and obeys the common hapten binding mechanism. *Biochemistry* **20**, 5011-5017 (1981).
99. O. Farver and I. Pecht. Identification of an electron transfer locus in plastocyanin by chromium (II) affinity labeling. *Proc. Natl. Acad. Sci. U.S.A.* **781**, 4190-4193 (1981).
100. N. Mazurek, I. Pecht, V.I. Teichberg and S. Blumberg. The role of the N-terminal tetrapeptide in the histamine releasing action of substance P. *Neuropharmacology* **20**, 1025-1027 (1981).
101. P. Rosen, M. Segal and I. Pecht. Electron transfer between azurin from *Alcaligenes faecalis* and cytochrome c<sub>551</sub> from *Pseudomonas aeruginosa*. *Eur. J. Biochem.* **120**, 339-344 (1981).
102. I. Pecht, N. Mazurek, A. Petrank and S. Margel. Drug conjugates of polymeric microspheres as tools in cell biology. In: "Targeting of Drugs". NATO-ASI, Series A. ed. G. Gregoriadis, Plenum Press, N.Y. 109-124 (1982).
103. O. Farver, Y. Shahak and I. Pecht. Resolution of distinct electron uptake and delivery sites on plastocyanin in its reactions with the photosynthetic electron transport system. *Biochemistry* **21**, 1885-1890 (1982).
104. G. Morpurgo and I. Pecht. Affinity labeling of stellacyanin by Cr(II) aquo ions. *Biochem. Biophys. Res. Comm.* **104**, 1592-1596 (1982).
105. O. Farver, Y. Blatt and I. Pecht. Resolution of two distinct electron transfer sites on azurin. *Biochemistry* **21**, 3556-3561 (1982).
106. J. Reidler, V.T. Oi, W. Carlsen, T.M. Vuong, I. Pecht, L.A. Herzenberg and L. Stryer. Rotational dynamics of monoclonal anti-dansyl immunoglobulins. *J. Mol. Biol.* **158**, 739-746 (1982).
107. N. Mazurek, P. Bashkin and I. Pecht. Isolation of a basophilic membrane protein binding the anti-allergic drug cromolyn. *EMBO J.* **1**, 585-590 (1982).
108. O. Farver, P. Frank and I. Pecht. Peroxide binding to the type 3 site in *Rhus vernicifera* laccase depleted of type 2 copper. *Biochem. Biophys. Res. Commun.* **108**, 273-278 (1982).

109. R. Sagi-Eisenberg, Z. Ben Neriah, I. Pecht, S. Terry and S. Blumberg. Structure-Activity relationship in the mast cell degranulation capacity of neurotensin fragments. *Neuropharmacology* **22**, 197-201 (1983).
110. R. Sagi-Eisenberg and I. Pecht. Membrane potential changes during IgE mediated histamine release from rat basophilic leukemia cells. *J. Mem. Biol.* **75**, 97-104 (1983).
111. R. Margalit, I. Pecht and H.B. Gray. Oxidation-reduction catalytic activity of a pentaammineruthenium(III) derivative of sperm whale myoglobin. *J. Am. Chem. Soc.* **105**, 301-302 (1983).
112. B. B. Hasinoff and I. Pecht. Pulse radiolysis kinetics of the reaction of hydrated electrons with ferric-, ferrous-, protoporphyrin IX - and apo-myoglobin. *Biochim. Biophys. Acta* **743**, 310-315 (1983).
113. N. Mazurek, P. Bashkin, A. Petrank and I. Pecht. Basophil variants with impaired cromoglycate binding, do not respond to an immunological stimulus. *Nature* **303**, 528-530 (1983).
114. I. Pecht. Dynamic aspects of antibody function in: "Mobility and recognition in cell Biology". H. Sund and C. Veeger eds. Walter de Gruyter Co. Berlin-N.Y. 155-171 (1983).
115. I. Pecht, R. Sagi-Eisenberg and N. Mazurek. Modulation of calcium ions fluxes as signals for mast cells and basophils degranulation. in: "Mobility and recognition in cell Biology". H. Sund and E. Veeger, eds. Walter de Gruyter Co., Berlin-N.Y. 409-427 (1983).
116. R. Parvari, I. Pecht and H. Soreq. A microfluorometric assay for cholinesterases, suitable for multiple kinetic determinations of picomoles of released thiocholine. *Anal. Biochem.* **133**, 450-456 (1983).
117. P. Frank, O. Farver and I. Pecht. The type 3 copper site is intact but labile in type 2 copper depleted laccase. *J. Biol. Chem.* **258**, 11112-11117 (1983).
118. R. Sagi-Eisenberg, C. Geller-Bernstein, Z. Ben-Neriah and I. Pecht. Direct measurements of dextran-dependent calcium uptake by rat peritoneal mast cells. *FEBS Letters* (1983). **161**, 37-40 (1983).
119. N. Mazurek, P. Bashkin, A. Loyter and I. Pecht. Restoration of Ca<sup>2+</sup> influx and degranulation capacity of variant RBL-2H3 cells upon implantation of isolated cromolyn binding protein. *Proc. Natl. Acad. Sci. USA* **80**, 6014-6018 (1983).
120. P. Frank and I. Pecht. Direct observation by EPR of a reductively decoupled Type 3 site in Type 2 depleted laccase. *Biochem. Biophys. Res. Comm.* **114**, 57-64 (1983).
121. I. Pecht. Antibody-hapten binding kinetics, conformational transitions and domains interactions In: "Protein Conformation as an Immunological Signal" Eds. Franco Celada, Verne N. Schumaker and Eli E. Sercarz Plenum Press N.Y., pp. 3-13, 1983.
122. I. Pecht and A. Oratore. Cross linking reactions of antibody molecules. *Progress in Immunology Vol V*. p. 87-93. T. Tada ed. Academic Press, Inc. Japan 1984.

123. R. Sagi-Eisenberg and I. Pecht. Resolution of cellular compartments involved in membrane potential changes accompanying IgE-mediated degranulation of rat basophilic leukemia cells. *EMBO J.* **3**, 497-500 (1984).
124. K.C. Cho, D.F. Blair, U. Banerjee, J.J. Hopfield, H.B. Gray, I. Pecht and S.I. Chan. NMR Spectroscopic identification of a hexacyanochromate(III) binding site on *Pseudomonas azurin* *Biochemistry* **23** 1858-1862 (1984).
125. N. Mazurek, H. Schindler, Th. Schurholz and I. Pecht. The cromolyn binding protein constitutes the  $Ca^{+2}$  channel of basophils opening upon immunological stimulus *Proc. Natl. Acad. Sci. USA.* **81**, 6841-6845 (1984).
126. R. Margalit, N.M. Kostic, C.M. Che, D.F. Blair, H.J. Chiang, I. Pecht, J.B. Shelton, J. R. Shelton, W.A. Schroeder and H.B. Gray. Preparation and characterization of pentaammineruthenium- (histidine-83)azurin. Thermodynamics of intra-molecular electron transfer from ruthenium to copper. *Proc. Natl. Acad. Sci. USA* **81**, 6554-6558 (1984).
127. P. Frank, O. Farver and I. Pecht. Peroxide and redox titrations of type 2 copper depleted laccase. *Inorganica Chim. Acta* **91**, 81-88 (1984).
128. B.B. Hasinoff, A. Licht and I. Pecht. Pulse radiolysis kinetics of the reaction of the hydrated electron and the carboxyl anion radical with *Pseudomonas Aeruginosa* cytochrome C551. *Biochem. Biophys. Acta* **767**, 627-634 (1984).
129. C. Geller-Bernstein, N. Mazurek and I. Pecht. Le role des ions de calcium dans le declenchement de la reaction allergique et dans le mode d'action de la cromolyn *Allergie et Immunologie* **16**, 39-41 (1984).
130. R. Sagi-Eisenberg and I. Pecht. Protein kinase C, a coupling element between stimulus and secretion of basophils. *Immunol. Lett.* **8**, 237-241 (1984).
131. R. Sagi-Eisenberg, N. Mazurek and I. Pecht.  $Ca^{2+}$  fluxes and protein phosphorylation in stimulus-secretion coupling of basophils. *Mol. Immunol.* **21**, 1175-1181 (1984)
132. B.B. Hasinoff, A. Licht and I. Pecht. Pulse radiolysis kinetics of the reaction of the hydrated electron and the carboxyl anion radical with *Pseudomonas aeruginosa* cytochrome C551. *Biochim. Biophys. Acta* **767**, 627-634 (1984).
133. R. Sagi-Eisenberg, H. Lieman and I. Pecht. Protein kinase C regulation of the receptor-coupled calcium signal in histamine-secreting rat basophilic leukaemia cells. *Nature* **313**, 59-60 (1985).
134. P. Frank, A. Licht, T.D. Tullius, K.O. Hodgson and I. Pecht. A selenomethionine containing azurin from an auxotroph of *Pseudomonas aeruginosa*. *J. Biol. Chem.*, **260**, 5518-5525 (1985).
135. F.I. Smith, A. Cumano, A. Licht, I. Pecht and K. Rajewsky. Low affinity of kappa chain bearing (4-hydroxy-3-nitrophenyl)acetyl (NP)-specific antibodies in the primary antibody repertoire of C57BL/6 mice may explain lambda chain dominance in primary anti-NP responses. *Mol. Immunol.* **22**, 1209-1216 (1985).

136. D.M. Phillips, P. Bashkin and I. Pecht. Structural changes induced in rat leukemic basophils by immunological stimulus. *J. Ultrastructure Research* **90**, 105-113 (1985).
137. D.F. Blair, G.W. Campbell, J.R. Schoonover, S.I. Chan, H.B. Gray, B.G. Malmstrom, I. Pecht, B.I. Swanson, W.H. Woodruff, W.K. Cho, A.M. English, H.A. Fry, V. Lum and K.A. Norton. Resonance raman studies of blue copper proteins: effect of temperature and isotopic substitutions. Structural and thermodynamic implications. *J. Amer. Chem. Soc.* **107**, 5755-5766 (1985).
138. I. Pecht, V. Dulic, B. Rivnay and A. Corcia. Transmembrane signalling in basophils: Ion conductance measurements on planar bilayers reconstituted with purified Fc $\epsilon$  receptor and the cromolyn binding protein in "Mast Cell Differentiation and Heterogeneity", Befus, A.D., Denburg, J.A. and Bienenstock, J. Eds. Raven Press, New York, p. 301-312 (1986).
139. N. Mazurek, V. Dulic, I. Pecht, H.G. Schindler and B. Rivnay. The role of the Fc $\epsilon$  receptor in calcium channel opening in rat basophilic leukemia cells. *Immunol. Letts.*, **12**, 31-35 (1986).
140. I. Pecht and R. Sagi-Eisenberg. Calcium channels formation and modulation in secreting basophils and mast cells In: *Calcium, Neuronal Function and Transmitter Release*, Intl. Con. of Physiol., Martinus Nyhoff Publishing Co. 1986, pp. 457-471.
141. A. Corcia, R. Schweitzer-Stenner, I. Pecht and B. Rivnay. Characterization of the ion channel activity in planar bilayers containing IgE-Fc $\epsilon$  receptor and the cromolyn binding protein. *EMBO J.*, **5**, 849-854 (1986).
142. B. Reck, R. Sagi-Eisenberg and I. Pecht. Cytosolic free Ca<sup>2+</sup> in mast cells and their mediators' release *J. Aller. Clin. Immunol. (Proc. 12th ICACI)* p. 164-170 (1986).
143. Y. Sussman, B. Reck and I. Pecht. Mutual relationship among cytosolic pH, Na<sup>+</sup> and Ca<sup>2+</sup> ions in the degranulation of rat leukemic basophils *Immunol. Letts.* **13**, 215-219 (1986).
144. I. Pecht, B. Rivnay and A. Corcia. Calcium channels linking antigen stimulation with secretion from mast cells and basophils. In: *Dynamics of Biochemical Systems*. S. Damjanovich, T. Keleti, L. Tron (eds.), Akademiai Kiado and Elsevier Science Publishers, Amsterdam: 473-482 (1986).
145. Y. Blatt and I. Pecht. *Pseudomonas aeruginosa* cytochrome oxidase: Product inhibition by low thermodynamic driving force. *Eur. J. Biochem.* **160**, 149-153 (1986).
146. P. Frank and I. Pecht. Redox titrations of type-2 copper-depleted Rhus laccase: reductive decoupling and oxidative reconstitution of the type 3 site. *J. Phys. Chem.* **90**, 3809-3814 (1986).
147. R. Schweitzer-Stenner, A. Licht, I. Luscher and I. Pecht. Oligomerization and ring closure of immunoglobulin E class antibodies by divalent haptens. *Biochemistry* **26**, 3602-3612 (1987).
148. I. Pecht, A. Corcia, M.P. Trisorio-Liuzzi, A. Alcover and E.L. Reinherz. Ion channels activated by specific T<sub>H</sub>1 or T<sub>H</sub>3 antibodies in plasma membranes of human T cells. *EMBO J.* **6**, 1935-1939 (1987).

149. O. Farver, A. Licht, S. Wherland and I. Pecht. Stellacyanin electron transfer reactivity affinity labeling and structural modeling. 3rd International Congress on Bioinorganic Chemistry, The Netherlands, 1987. Rec. Trav. Chim. Pays Bas **106**, 170-172 (1987).
150. O. Farver, A. Licht and I. Pecht. Electron-transfer pathways in stellacyanin: A possible homology with plastocyanin. Biochemistry **26**, 7317-7321 (1987).
151. I. Pecht, R. Schweitzer-Stenner, R. Gertler, M. Wolf, Y. Zisman and B. Reck. Immunological stimulation of mast cells degranulation: Role of cytosolic pH, Na<sup>+</sup> and Ca<sup>+2</sup> ions. In: Membrane Receptors, Dynamics, and Energetics, (1987) Edited by K.W. A. Wirtz, pp. 73-86
152. I. Pecht and A. Corcia. Stimulus-secretion coupling mechanisms in mast cells. Biophys. Chem. **26**, 291-301 (1987).
153. R. Zidovetzki, Y. Blatt, G. Schepers and I. Pecht. Thermodynamics of oligosaccharides binding to a dextran-specific monoclonal IgM. Mol. Immunol. **25**, 379-383 (1988).
154. O. Farver and I. Pecht. Preferred sites and pathways for electron transfer in blue copper proteins. in Oxidases and Related Redox Systems (1988), H.S. Mason, ed. Alan R. Liss, Inc., N.Y. 269-283.
155. R. Gertler and I. Pecht. Ionic signalling in mast cells; antigen and ionophore induced changes in cytosolic pH. Mol. Immunol. **25**, 1087-1092 (1988).
156. S. Wherland, O. Farver and I. Pecht. Three-dimensional model of stellacyanin and its implications for electron transfer reactivity. J. Mol. Biol. **204**, 407-415 (1988).
157. M.A. Beaven, H. Metzger and I. Pecht. Round table on IgE-receptor-mediated Ca<sup>2+</sup> translocation. In: Advances in Second Messenger and Phosphoprotein Research, Vol. 21, eds. R. Adelstein, C. Klee and M. Rodbell. Raven Press, N.Y. pp. 63-66 (1988).
158. S. Hemmerich and I. Pecht. Isolation and purification of an Fcε<sup>®</sup> receptor activated ion channel from the rat mast cell line RBL-2H3. Biochemistry **27**, 7488 (1988).
159. A. Corcia, I. Pecht, S. Hemmerich, S. Ran and B. Rivnay. Calcium specificity of the antigen-induced channels in rat basophilic leukemia cells. Biochemistry **27**, 7499-7506 (1988).
160. E. Ortega, R. Schweitzer-Stenner and I. Pecht. Possible orientational constraints determine secretory signals induced by aggregation of IgE receptors on mast cells. EMBO J. **7**, 4101-4109 (1988).
161. E. Ortega Soto and I. Pecht. A monoclonal antibody that inhibits secretion from rat basophilic leukemia cells and binds to a novel membrane component. J. Immunol. **141**, 4324-4332 (1988).
162. J.A. Verschoor, K. Janse Van Vuuren, L. Visser, I. Pecht and R. Arnon. Isotype restriction of murine antibodies towards the loop region of hen's egg white lysozyme. Immunol. Lett. **17**, 21-28 (1988).
163. O. Farver and I. Pecht. Preparation and characterization of a ruthenium labeled *Rhus* stellacyanin. FEBS Lett. **244**, 376-378 (1989).

164. O. Farver and I. Pecht. Long-range intramolecular electron transfer in *Rhus vernicifera* stellacyanin: a pulse radiolysis study. FEBS Lett. **244**, 379-382 (1989).
165. R. Arnon, M. Sela and I. Pecht. Immunological studies on one defined protein region. The "loop" of lysozyme. In: The Immune Response to Structurally Defined Proteins: The Lysozyme Model. S. Smith-Gill and E. Sercarz (eds.), Adenine Press: 315-323 (1989).
166. E. Ortega, R. Schweitzer-Stenner and I. Pecht. Receptor-effector coupling processes probed by monoclonal antibodies. In: Computer-Assisted Modeling of Receptor-Ligand Interactions: Theoretical Aspects and Applications to Drug Design. (R. Rein and A. Golombek, eds.) Alan R. Liss Inc. N.Y., 317-326 (1989).
167. O. Farver and I. Pecht. Long-range intramolecular electron transfer in azurins. Proc. Natl. Acad. Sci. **86**, 6968-6972 (1989).
168. I. Pecht, R. Schweitzer-Stenner and E. Ortega. Is there specificity involved in Fc $\epsilon$  receptor aggregation which leads to an effective secretory stimulus? Prog. Immunol. **7**, 676-682 (1989).
169. E. Mozes, M. Dayan, E. Zisman, S. Brocke, A. Licht and I. Pecht. Direct binding of a myasthenia gravis related epitope to MHC class II molecules on living murine antigen presenting cells. EMBO J. **8**, 4049-4052 (1989).
170. O. Farver and I. Pecht. Structure-reactivity studies of blue copper proteins. Affinity labeling of electron transfer proteins by transition metal coordination. In: Coordination Chemistry Reviews. (Lever, A.B.P., ed.) Elsevier Science Publishers B.V., Amsterdam 94, 17-45 (1989).
171. E. Ortega, B. Hazan, U. Zor and I. Pecht. Mast cell stimulation by monoclonal antibodies specific for the Fc $\epsilon$  receptor yields distinct responses of arachidonic acid and leukotriene C<sub>4</sub> secretion. Eur. J. Immunol. **19**, 2251-2256 (1989).
172. U. Pilatus, H. Degani and I. Pecht. <sup>31</sup>P and <sup>23</sup>Na nuclear magnetic resonance studies of resting and stimulated mast cells. FEBS Lett. **269**, 292-296 (1990).
173. E. Ortega, A. Licht, Y. Biener and I. Pecht. A glycolipid-specific monoclonal antibody modulates Fc $\epsilon$  receptor stimulation of mast cells. Mol. Immunol., **27**, 1269-1277 (1990).
174. G. Sarmay, I. Pecht and J. Gergely. Phosphorylation of type II Fc $\gamma$  receptor on activated human B lymphocytes. Internat. Immunol., **2**, 1235-1243 (1990).
175. O. Farver and I. Pecht. Energetics of intramolecular electron transfer in ruthenium-modified stellacyanin. Inorg. Chem., **29**, 4855-4858 (1990).
176. S. Hemmerich, D. Sijpkens and I. Pecht. A novel cell-permeable cromoglycate derivative inhibits type.1 Fc $\epsilon$  receptor-mediated Ca<sup>2+</sup>-influx and mediator secretion in rat mucosal mast cells. Biochemistry, **30**, 1523-1532 (1991).
177. I. Pecht, E. Ortega and T.M. Jovin. Rotational dynamics of the Fc $\epsilon$  receptor on mast cells monitored by specific monoclonal antibodies and IgE. Biochemistry, **30**, 3450-3458 (1991).
178. O. Farver and I. Pecht. Long range electron transfer in blue copper proteins. Mol. Crystals Liq. Crystals, **194**, 215-224 (1991).

179. E. Ortega, R. Schweizer-Stenner and I. Pecht. Kinetics of ligand binding to the Type 1 Fc $\epsilon$  receptor on mast cells. *Biochemistry*, **30**, 3473-3483 (1991).
180. E. Ortega, H. Schneider and I. Pecht. Possible interactions between the Fc $\epsilon$  receptor and a novel mast cell function-associated antigen. *Internat. Immunol.* **3**, 333-342 (1991).
181. I. Pecht, E. Ortega and R. Schweitzer-Stenner. Membrane receptor clustering as a cellular stimulus - the mast cell case. In: *Biological Signal Transduction* (Ross, E.M. and Wirtz, K.W.A., eds.) NATO ASI Series, Vol. H52, Springer-Verlag (1991) pp. 147-160.
182. U. Kubitscheck, M. Kircheis, R. Schweitzer-Stenner, W. Dreybrodt, T.M. Jovin and I. Pecht. Fluorescence resonance energy transfer on single living cells. *Biophys. J.* **60**, 307-318 (1991).
183. O. Farver and I. Pecht. Electron transfer in proteins: in search of preferential pathways. *FASEB J.* **5**, 2554-2559 (1991).
184. Chr. Romanin, M. Reinsprecht, I. Pecht and H. Schindler. Immunologically activated chloride channels involved in degranulation of rat mucosal mast cells. *EMBO J.* **10**, 3603-3608 (1991).
185. N.A. Rahman, I. Pecht, D.A. Roess and B.G. Barisas. Rotational dynamics of type I Fc $\epsilon$  receptors on individually-selected rat mast cells studied by polarized fluorescence depletion. *Biophys. J.* **61**, 334-346 (1992).
186. H. Schneider, A. Cohen-Dayag and I. Pecht. Tyrosine phosphorylation of phospholipase C $\gamma$ 1 couples the Fc $\epsilon$  receptor mediated signal to mast cells secretion. *Internat. Immunol.* **4**, 447-453 (1992).
187. S. Hemmerich, Y. Yarden and I. Pecht. A cromoglycate binding protein from rat mast cells of a leukemia line is a nucleoside diphosphate kinase. *Biochemistry* **31**, 4574-4579 (1992).
188. S. Hemmerich and I. Pecht. Oligomeric structure and autophosphorylation of nucleoside diphosphate kinase from rat mucosal mast cells. *Biochemistry* **31**, 4580-4587 (1992).
189. O. Farver and I. Pecht. Long range intramolecular electron transfer in azurins; the role of separating medium. *J. Am. Chem. Soc.* **114**, 5764-5767 (1992).
190. U. Kubitscheck, R. Levi, R.J. Horwitz, R. Arnon and I. Pecht. Peptide binding to Class I molecules of the major histocompatibility complex on the surface of living target cells. *Scand. J. Immunol.* **36**, 341-348 (1992).
191. O. Farver, L.K. Skov, M. van de Kamp, G.W. Canters and I. Pecht. The effect of driving force on intramolecular electron transfer in proteins; studies on single-site mutated azurins. *Eur. J. Biochem.* **210**, 399-403 (1992).
192. Cohen-Dayag, A., Schneider, H. and I. Pecht. Variants of the mucosal mast cell line (RBL-2H3) deficient in a functional membrane glycoprotein. *Immunobiology* **185**, 124-149 (1992).
193. R. Schweitzer-Stenner, A. Licht and I. Pecht. Dimerization kinetics of the IgE-class antibodies by divalent haptens. I. The Fab - hapten interactions. *Biophys. J.* **63**, 551-562 (1992).

194. O. Dar and I. Pecht. Fcε receptor mediated Ca<sup>2+</sup> influx into mast cells is modulated by the concentration of cytosolic free Ca<sup>2+</sup> ions. *FEBS Letts.* **310**, 123-128 (1992).
195. M. Reinsprecht, I. Pecht, H. Schindler and Ch. Romanin. Potent block of Cl<sup>-</sup> channels by antiallergic drugs. *Biochem. Biophys. Res. Commun.* **188**, 957-963 (1992).
196. R. Schweitzer-Stenner, A. Licht and I. Pecht. Dimerization kinetics of the IgE-class antibodies by divalent haptens. II. The interactions between intact IgE and haptens. *Biophys. J.* **63**, 563-568 (1992).
197. O. Farver and I. Pecht. Low activation barriers characterize intramolecular electron transfer in ascorbate oxidase. *Proc. Natl. Acad. Sci. USA* **89**, 8283-8287 (1992).
198. D. Goldfarb, J.-M. Fauth, O. Farver and I. Pecht. Orientation selective ESEEM studies on the blue oxidase laccase and ascorbate oxidase. *Appl. Magn. Reson.* **3**, 333-351 (1992).
199. I. Tamir and I. Pecht. Antigen receptor clustering; Mobility, size and configurational requirements for effective cellular triggering. *Prog. Immunol.* **8**, 221-228 (1993).
200. U. Kubitscheck, R. Schweitzer-Stenner, D.J. Arndt-Jovin, T.M. Jovin and I. Pecht. Distribution of Type I Fcε-receptors on the surface of mast cells probed by fluorescence resonance energy transfer. *Biophys. J.* **64**, 110-120 (1993).
201. U. Pilatus and I. Pecht. <sup>86</sup>Rb<sup>+</sup> ion fluxes in resting and immunologically stimulated mucosal mast cells. *Eur. J. Immunol.* **23**, 1125-1133 (1993).
202. O. Farver, L.K. Skov, T. Pascher, B.G. Karlsson, M. Nordling, L.G. Lundberg, T. Vanngard and I. Pecht. Intramolecular electron transfer in single-site-mutated azurins. *Biochemistry* **32**, 7317-7322 (1993).
203. P. Bocek and I. Pecht. Cloning and sequence of the cDNA coding for rat type II FcRγ receptor of mast cells. *FEBS Lett.* **331**, 86-90 (1993).
204. I. Pecht. Peptide interactions with Class I and II MHC encoded molecules. *Isr. J. Med. Sci.* **29**, 1-4 (1993).
205. G. Sarmay, I. Pecht and J. Gergely. Protein tyrosine kinase activity tightly associated with human type two Fcγ receptors. *Proc. Natl. Acad. Sci. USA* **91**, 4140-4144 (1994).
206. M. Fridkis-Hareli, D. Teitelbaum, E. Gurevich, I. Pecht, C. Brautbar, Oh J. Kwon, T. Brenner, R. Arnon and M. Sela. Direct binding of myelin basic protein and synthetic copolymer 1 to class II major histocompatibility complex molecules on living antigen presenting cells - specificity and promiscuity. *Proc. Natl. Acad. Sci. USA* **91**, 4872-4876 (1994).
207. O. Farver and I. Pecht. Blue copper proteins as a model for investigating electron transfer processes within polypeptide matrices. *Biophys. Chem.* **50**, 203-216 (1994).
208. K. Dittes, D.M. Gakamsky, G. Haran, E. Haas, D.M. Ojcius, P. Kourilsky and I. Pecht. Picosecond fluorescence spectroscopy of a single-chain class I major histocompatibility complex encoded protein in its peptide loaded and unloaded states. *Immunol. Lett.* **40**, 125-132 (1994).

209. C.S. Hampe and I. Pecht. Protein tyrosine phosphatase activity enhancement is induced upon Fc $\epsilon$  receptor activation of mast cells. *FEBS Letts.* **346**, 194-198 (1994).
210. R. Schweitzer-Stenner, E. Ortega and I. Pecht. Kinetics of Fc $\epsilon$ RI-dimer formation by specific monoclonal antibodies on mast cells. *Biochemistry* **33**, 8813-8825 (1994).
211. O. Farver, S. Wherland and I. Pecht. Intramolecular electron transfer in ascorbate oxidase is enhanced in the presence of oxygen. *J. Biol. Chem.* **269**, 22933-22936 (1994).
212. C. Geller-Bernstein, A. Berrebi, L. Bassous Gedj, E. Ortega, A. Licht and I. Pecht. Antibodies specific to membrane components of rat mast cells are cross-reacting with human basophils. *Int. Arch. Allergy Immunol.* **105**, 269-273 (1994).
213. M. Gericke, O. Dar, G. Droogmans, I. Pecht and B. Nilius. Immunological stimulation of single rat basophilic leukemia RBL-2H3 cells co-activates Ca<sup>2+</sup>-entry and K<sup>+</sup>-channels. *Cell Calcium* **17**, 71-83 (1995).
214. R. Philosof-Oppenheimer, I. Pecht and M. Fridkin. The 2,4-dinitrophenyl group for protection of hydroxyl function of tyrosine during solid phase peptide synthesis. *Int. J. Peptide Protein Res.* **45**, 116-121 (1995).
215. D.M. Gakamsky, E. Haas, P. Robbins, J.L. Strominger and I. Pecht. Selective steady-state and time-resolved fluorescence spectroscopy of an HLA-A2-peptide complex. *Immunol. Letts.* **44**, 195-201 (1995).
216. M. Reinsprecht, M.H. Rohn, R.J. Spadinger, I. Pecht, H. Schindler and C. Romanin. Blockade of capacitive Ca<sup>2+</sup> influx by Cl<sup>-</sup> channel blockers inhibits secretion from rat mucosal-type mast cells. *Mol. Pharmacol.* **47**, 1014-1020 (1995).
217. M.D. Guthmann, M. Tal and I. Pecht. A new member of the C-type lectin family is a modulator of the mast cell secretory response. *Int. Arch. Allergy Immunol.* **107**, 82-86 (1995).
218. E. Rumpel, U. Pilatus, A. Mayer and I. Pecht. Na<sup>+</sup> and Ca<sup>2+</sup> gradients across the membrane modulate the secretory response of mast cells. *Int. Arch. Allergy Immunol.* **107**, 351-353 (1995).
219. A. Erdei, S. Andreev and I. Pecht. Complement-peptide C3a inhibits IgE-mediated triggering of rat mucosal mast cells. *Int. Immunol.* **7**, 1433-1439 (1995).
220. M.D. Guthmann, M. Tal and I. Pecht. A secretion inhibitory signal transduction molecule on mast cells is another C-type lectin. *Proc. Natl. Acad. Sci. USA* **92**, 9397-9401 (1995).
221. P. Bocek Jr., L. Dráberová, P. Dráber and I. Pecht. Characterization of Fc $\gamma$  receptors on rat mucosal mast cells using a mutant Fc $\epsilon$ RI deficient RBL line. *Eur. J. Immunol.* **25**, 2948-2955 (1995).
222. Jurgens, L., Arndt-Jovin, D., Pecht, I. and Jovin, T.M. Proximity relationships between the type I receptor for Fc $\epsilon$  (Fc $\epsilon$ RI) and the mast cell function-associated antigen (MAFA) studied by donor photobleaching fluorescence resonance energy transfer microscopy. *Eur. J. Immunol.* **26**, 84-91 (1996).

223. O. Farver, L.K. Skov, G. Gilardi, G. van Pouderooyen, G.W. Canters, S. Wherland and I. Pecht. Structure-function correlation of intramolecular electron transfer in wild type and single-site mutated azurins. *Chem. Phys.* **204**, 271-277 (1996).
224. V. Kofman, O. Farver, I. Pecht and D. Goldfarb. Two-dimensional pulsed EPR spectroscopy of the copper protein azurin. *J. Am. Chem. Soc.* **118**, 1201-1206 (1996).
225. O. Farver, N. Bonander, L.K. Skov and I. Pecht. The pH dependence of intramolecular electron transfer in azurins. *Inorg. Chim. Acta* **243**, 127-133 (1996).
226. I. Tamir, R. Schweitzer-Stenner and I. Pecht. Immobilization of the type I receptor for IgE initiates signal transduction in mast cells. *Biochemistry* **35**, 6872-6883 (1996).
227. D.M. Gakamsky, P.J. Bjorkman and I. Pecht. Peptide interaction with a class I major histocompatibility complex-encoded molecule: Allosteric control of the ternary complex stability. *Biochemistry* **35**, 14841-14848 (1996).
228. X. Rong and I. Pecht. Clustering the Mast cell Function-Associated antigen (MAFA) induces tyrosyl phosphorylation of the Fc $\epsilon$ RI- $\beta$  subunit. *Immunol. Lett.*, **54**, 105-108 (1996).
229. A. Erdei and I. Pecht. Complement peptides and mast cell triggering. *Immunol. Lett.*, **54**, 109-112 (1996).
230. P. Bocek Jr., M.D. Guthmann and I. Pecht. Analysis of the genes encoding the mast cell function-associated antigen and its alternatively spliced transcripts. *J. Immunol.*, **158**, 3235-3243 (1997).
231. O. Farver, L.K. Skov, S. Young, N. Bonander, B. Göran Karlsson, T. Vänngård and I. Pecht. Aromatic residues may enhance intramolecular electron transfer in azurin. *J. Am. Chem. Soc.* **119**, 5453-5454 (1997).
232. M. Fridkis-Hareli, D. Teitelbaum, I. Pecht, R. Arnon and M. Sela. Binding of copolymer 1 and myelin basic protein leads to clustering of class II major histocompatibility complex molecules on antigen-presenting cells. *Int. Immunol.* **9**, 925-934 (1997).
233. D.M. Gakamsky and I. Pecht. Does allostery control assembly of MHC class I-encoded molecules? *The Immunologist* 5/2, **49**, (1997)
234. A. Erdei, K. Kerekes and I. Pecht. Role of C3a and C5a in the Activation of Mast Cells. *Exp. Clin. Immunogenet*, **14**, 16-18 (1997).
235. G. Sarmay, G. Koncz, I. Pecht and J. Gergely. Fc $\gamma$  receptor type IIb induced recruitment of inositol and protein phosphatases to the signal transducing complex of human B-cell. *Immunology Letters* **57**, 159-164 (1997).
236. O. Farver and I. Pecht. The role of the medium in long-range electron transfer. *J. Biol. Inorg. Chem.* **2**, 387-392 (1997).
237. R. Schweitzer-Stenner, I. Tamir and I. Pecht. Analysis of Fc $\epsilon$ RI-mediated mast cell stimulation by surface-carried antigens. *Biophys. J.* **72**, 2470-2478 (1997).

238. R. Binsack and I. Pecht. The mast cell function-associated antigen exhibits saccharide binding capacity. *Eur. J. Immunol.* **27**, 2557-2561 (1997).
239. S. Morecki, C. Nabet, P. Falk, M. Fridkis-Hareli, I. Pecht, J.J. Mond and S. Slavin. The effect of linomide, an immunoregulator in experimental autoimmune diseases, on humoral antibody responses in mice. *Autoimmunity* **25**, 223-232 (1997).
240. P.D.W. Kiely, I. Pecht and D.B.G. Oliveira. Mercuric chloride-induced vasculitis in the brown Norway rat:  $\alpha\beta$  T cell-dependent and -independent phases. *J. Immunol.* **159**, 5100-5106 (1997).
241. E. Rajnavölgyi, A. Horváth, P. Gogolák, G.K. Tóth, G. Fazekas, M. Fridkin and I. Pecht. Characterizing immunodominant and protective influenza hemagglutinin epitopes by functional activity and relative binding to major histocompatibility complex class II sites. *Eur. J. Immunol.* **27**, 3105-3114 (1997).
242. C.S. Hampe and I. Pecht. Purification and preliminary characterization of an Fc $\epsilon$ -receptor-activated protein-tyrosine phosphatase from mast cells. *Eur. J. Biochem.* **251**, 964-970 (1998).
243. A. Horváth, G.K. Tóth, P. Gogolák, Z. Nagy, I. Kurucz, I. Pecht and E. Rajnavölgyi. A hemagglutinin-based multi-peptide construct elicits enhanced protective immune response in mice against influenza A virus infection. *Immunol. Lett.* **60**, 127-136 (1998).
244. I. Pecht and O. Farver. Free radicals as reagents for electron transfer processes in proteins. In: "Free Radicals, Oxidative Stress, and Antioxidants: Pathological and Physiological Significance". Ed. T. Özben, Plenum Publ. Corp., N.Y. pp. 39-49 (1998)
245. I. Pecht and O. Farver. Pulse radiolysis: A tool for investigating long range electron transfer in proteins. In: "Photochemistry and Radiation Chemistry: Complementary Methods for the Study of Electron Transfer". *Adv. Chem. Series 254*, J.F. Wishart and D.G. Nocera, eds. American Chem. Soc. Washington (1998).
246. O. Farver and I. Pecht. Mechanisms and control of electron transfer processes in proteins. In: "Biological Electron Transfer Chains: Genetics, Composition and Mode of Operation". Eds. Canters, G.W. and Vijgenboom, E., Kluwer Academic Publ., Netherlands, pp. 63-74 (1998).
247. D. Izhaky and I. Pecht. What else can the immune system recognize? *Proc. Natl. Acad. Sci. USA* **95**, 11509-11510 (1998).
248. D. Bruder, A. Darji, D.M. Gakamsky, T. Chakraborty, I. Pecht, J. Wehland and S. Weiss. Efficient induction of cytotoxic CD8<sup>+</sup> T cells against exogenous proteins: establishment and characterization of a T cell line specific for the membrane protein ActA of *Listeria monocytogenes*. *Eur. J. Immunol.* **28**, 2630-2639 (1998).
249. O. Farver, R.R. Eady, Z.H.L. Abraham and I. Pecht. The intramolecular electron transfer between copper sites of nitrite reductase: a comparison with ascorbate oxidase. *FEBS Lett.* **436**, 239-242 (1998).
250. R. Zidovetzki, B. Rost and I. Pecht. Role of transmembrane domains in the functions of B- and T-cell receptors. *Immunol. Lett.* **64**, 97-107 (1998).

251. O. Farver, Y. Lu, M.C. Ang and I. Pecht. Enhanced rate of intramolecular electron transfer in an engineered purple Cu<sub>A</sub> azurin. Proc. Natl. Acad. Sci., USA **96**, 899-902 (1999).
252. D.M. Gakamsky, D.M. Davis, E. Haas, J.L. Strominger and I. Pecht. Photophysical analysis of class I major histocompatibility complex protein assembly using a Xanthene-derivatized  $\beta$ 2-microglobulin. Biophys. J. **76**, 1552-1560 (1999).
253. G. Koncz, I. Pecht, J. Gergely and G. Sármay. Fc $\gamma$  receptor-mediated inhibition of human B cell activation: the role of SHP-2 phosphatase. Eur. J. Immunol. **29**, 1980-1989 (1999).
254. R. Schweitzer-Stenner and I. Pecht. Parameters determining the stimulatory capacity of the type I Fc $\epsilon$  receptor. Immunol. Lett. **68**, 59-69 (1999).
255. J. Gergely, I. Pecht and G. Sármay. Immunoreceptor tyrosine-based inhibition motif-bearing receptors regulate the immunoreceptor tyrosine-based activation motif-induced activation of immune competent cells. Immunol. Lett. **68**, 3-15 (1999).
256. G. Sármay, G. Koncz, I. Pecht and J. Gergely. Cooperation between SHP-2, phosphatidylinositol 3-kinase and phosphoinositide 5-phosphatase in the Fc $\gamma$ RIIb mediated B cell regulation. Immunol. Lett. **68**, 25-34 (1999).
257. A. Erdei, G.K. Tóth, M. Andrásfalvy, J. Matkó, L. Bene, Z. Bajtay, A. Ischenko, X. Rong and I. Pecht. Inhibition of IgE-mediated triggering of mast cells by complement-derived peptides interacting with the Fc $\epsilon$ RI. Immunol. Lett., **68**, 79-82 (1999).
258. R. Schweitzer-Stenner, M. Engelke, A. Licht and I. Pecht. Mast cell stimulation by co-clustering the type I Fc $\epsilon$ -receptors with mast cell function-associated antigens. Immunol. Lett. **68**, 71-78 (1999).
259. R. Xu, R. Seger and I. Pecht. Cutting Edge: Extracellular signal-regulated kinase activates Syk: A new potential feedback regulation of Fc $\epsilon$  receptor signaling. J. Immunol. **163**, 1110-1114 (1999).
260. O. Farver, L. Bendahl, L.K. Skov and I. Pecht. Human ceruloplasmin: Intramolecular electron transfer kinetics and equilibration. J. Biol. Chem. **274**, 26135-26140 (1999).
261. R. Xu and I. Pecht. The mast cell function-associated antigen, a new member of the ITIM family. In: "Immunoreceptor Tyrosine-based Inhibition Motifs". Current Topics in Microbiology and Immunology", Springer-Verlag, Vol. **244**, 159-168 (1999).
262. D.M. Gakamsky, L.F. Boyd, D.H. Margulies, D.M. Davis, J.L. Strominger and I. Pecht. An allosteric mechanism controls antigen presentation by the H-2K<sup>b</sup> complex. Biochemistry **38**, 12165-12173 (1999).
263. I. Gromov, A. Marchesini, O. Farver, I. Pecht and D. Goldfarb. Azide binding to the trinuclear copper center in laccase and ascorbate oxidase. Eur. J. Biochem. **266**, 820-830 (1999).
264. C.E. Slutter, I. Gromov, J.H. Richards, I. Pecht and D. Goldfarb. Mutations of the weak axial ligand in the thermus Cu<sub>A</sub> center modulates its electronic structure. J. Am. Chem. Soc., **121**, 5077-5078 (1999).

265. N. Borovok, A.B. Kotlyar, I. Pecht, L.K. Skov and O. Farver. Photoinduced electron transfer in singly labeled thiouredopyrenetrisulfonate azurin derivatives. *FEBS Letters*, **457**, 277-282 (1999).
266. O. Farver and I. Pecht. Azurin. In: *Encyclopedia of Molecular Biology*, Wiley, J., ed., **1**, 232-233 (1999).
267. O. Farver and I. Pecht. Plastocyanin. In: *Encyclopedia of Molecular Biology*, Wiley, J., ed., T.E. Creighton, p.1867-1868, J. Wiley & Sons (1999).
268. R. Philosof-Oppenheimer, C.S. Hampe, K. Schlessinger, M. Fridkin and I. Pecht. An immunoreceptor tyrosine-based inhibitory motif, with serine at site Y-2, binds SH2-domain containing phosphatases. *Eur. J. Biochem.* **267**, 703-711 (2000).
269. A. Schwarz, L. Jurgens, A. Licht, H. Schneider, A.H. Futerman and I. Pecht. An IgE-dependent secretory response of mast cells can be induced by a glycosphingolipid-specific monoclonal body. *Eur. J. Immunol.* **30**, 217-226, (2000).
270. O. Farver, O. Einarsdottir, I. Pecht. Electron transfer rates and equilibrium within cytochrome c oxidase *Eur. J. Biochem*, **267**, 950-954 (2000).
271. O. Farver, Lars J.C. Jeuken, Gerard W. Canters and I. Pecht. Role of ligand substitution on long-range electron transfer in azurins. *Eur. J. Biochem*, **267**, 3123-3129 (2000).
272. D. Gakamsky, D. Davis, J. Strominger, and I. Pecht. Assembly and Dissociation of Human Leukocyte Antigen (HLA)-A2 Studied by Real-Time Fluorescence Resonance Energy Transfer. *Biochemistry*. **39**, 11163-11169 (2000).
273. E. Rumpel, U. Pilatus, A. Mayer and I. Pecht. Na<sup>+</sup>-Dependent Ca<sup>2+</sup> Transport Modulates the Secretory Response to the Fcε Receptor Stimulus of Mast Cells. *Biophys. J.* **79**, 2975-2986 (2000).
274. O.Farver, J.Zhang, O.Chi, I.Pecht and J.Ulstrup. Deuterium isotope effect on the intramolecular electron transfer in *Pseudomonas aeruginosa* azurin. *Proc. Natl. Acad. Sci. USA*, **98**, 4426-4430. (2001).
275. R.Xu and I.Pecht. The protein tyrosine kinase Syk activity is reduced by clustering the mast cell function-associated antigen. *Eur. J. Immunol.* **31**, 1571-1581 (2001).
276. C.E.Slutter, I.Gromov, B.Epel, I.Pecht, J.H.Richards, D.Goldfarb. Pulsed EPR/ENDOR Characterization of Perturbations of the CuA Center Ground State by Axial Methionine Ligand Mutations. *J. Am. Chem. Soc.* **123**, 5325-5336, (2001).
277. G. Koncz, G. K. Tóth, G. Bökönyi, G. Kéri, I. Pecht, D. Medgyesi, J. Gergely and G. Sármay. Co-clustering of Fcγ and B cell receptors induces dephosphorylation of the Grb2-associated binder 1 docking protein. *Eur. J. Biochem.* **268**, 3898-3906 (2001).
278. R. Xu, J. Abramson, M. Fridkin and I. Pecht. The Inositol 5'- Phosphatase, SHIP, is the Main Mediator of the Inhibitory Action of the Mast Cell Function-Associated Antigen (MAFA). *J.Immunol.* **167**, 6394-6402 (2001).

279. M. Lara, E. Ortega, I. Pecht, J.R. Pfeiffer, A.M. Martinez, R.J. Lee, Z. Surviladze, B.S. Wilson, and J. M. Oliver. Overcoming the Signal Defect of Lyn-Sequestering, Signal-Cuttrailing Fc $\epsilon$ RI Dimers: Aggregated Dimers Can Dissociate from Lyn and Form Signaling Complexes with Syk. *J.Immunol.* **167**, 4329-4337 (2001).
280. J. Song, G. Hagen, S. M.L. Smith, D. A. Roess, I. Pecht, B. G. Barisas. Interactions of the ast cell function-associated antigen with the type I Fc $\epsilon$  receptor. *Molecular Immunol.* **38**, 1315-1321 (2001).
281. O. Farver, P.M.H. Kroneck, W.G. Zumft and I. Pecht. Intramolecular Electron Transfer in Cytochrome *cd*<sub>1</sub> Nitrite reductase from *Pseudomonas Stutzeri*; Kinetics and Thermodynamics. *Biophys. Chem.* **98**, 27-34 (2002).
282. J. Song, G. Hagen, D.A. Roess, I. Pecht, and B.G. Barisas. The Mast Cell Function-Associated Antigen and its Interactions with the Type I Fc $\epsilon$  Receptor. *Biochemistry* **41**, 881-889 (2002).
283. J.Abramson, I.Pecht. Clustering the mast cell function-associated antigen (MAFA) leads to tyrosine phosphorylation of p62<sup>Dok</sup> and SHIP and affects RBL-2H3 cell cycle. *Immunol. Lett.* **82**, 23-28 (2002).
284. E. A. Barbu, A. Licht & I. Pecht. Control of Mast Cells' Secretory Response to the Fc $\epsilon$  Receptor Stimulus: Is there Desensitization? *J. Israel Med. Assoc.* **4**: 874-875 (2002).
285. B. Ebel, C.S. Slutter, F. Neese, P.M. Kroneck, W.G. Zumft, I. Pecht, O. Farver, Y. Lu and D. Goldfarb. Electron-mediating Cu(A) centers in proteins: a comparative high field (1)H ENDOR study. *J. Am. Chem. Soc.* **124**, 8152-62 (2002).
286. J. Abramson, G. Rozenblum & I. Pecht. Dok protein family members are involved in signaling mediated by the type 1 Fc $\epsilon$  receptor. *Eur. J. Immunol.* **33**: 85-91 (2003).
287. R.Zidovetzki, B.Rost, D.L.Armstrong & I.Pecht. Transmembrane Domains in the Functions of Fc Receptors. *Biophys. Chem.* **100**: 555-575 (2003).
288. O. Farver, G. W. Canters, I. van Amsterdam & I. Pecht. Intramolecular Electron Transfer in a Covalently Linked Mutated Azurin Dimer. *J. Phys. Chem A.* **107**: 35, 6757-6760 (2003).
289. O.Farver, P.M.H.Kroneck, W.G.Zumft & I.Pecht. Allosteric control of internal electron transfer in cytochrome *cd*<sub>1</sub> nitrite reductase. *Proc. Natl. Acad. Sciences USA.* Vol. **100**: 13, 7622-7625 (2003).
290. M. Lancovici Kidon, C. Geller-Bernstein, G. Dwin, A. Licht, R. Kemett, I. Pecht. Does Skin Prick Test Correlate with Basophil-Associated Mite-Specific IgE in Atopic Children? *J. Invest. Allergol. Clin. Immunol.* **3**: 73-75 (2003).
291. O. Farver, R. R. Eady, G. Sawers, M. Prudencio, I. Pecht. Met144Ala mutation of the copper-containing nitrite reductase from *Algaligenes Xylosoxidans* reverses the intramolecular electron transfer. *FEBS Letters* **561**: 173-176 (2004).
292. D. Medgyesi, K. Uray, K. Sallai, F. Hudecz, G. Koncz, J.Abramson, I.Pecht, G. Sarmay, J. Gergely. Functional mapping of the Fc $\gamma$ RII binding site on human IgG1 by synthetic peptides. *Eur. J. Immunol.* **34** (2004)

293. E. Erdei, M. Andrasfalvy, H. Peterfy, G. Toth and I. Pecht. Regulation of mast cell activation by complement-derived peptides. *Immunol. Letters*. **92**: 39-42 (2004)
294. J. Abramson, G. Rozenblum and I. Pecht. Stable knockdown of MAFA expression in RBL-2H3 cells by siRNA retrovirus-delivery system. *Immunol. Letters*. **92**: 179-184 (2004)
295. D. M. Gakamsky, I. E. Luescher, and I. Pecht. T cell receptor-ligand interactions: A conformational preequilibrium or an induced fit. *Proc.Natl.Acad.Sci. USA* **101**, **24**: 9063-9066 (2004)
296. O. Farver, R.R. Eady, and I. Pecht. Reorganization Energies of the Individual Copper Centers in Dissimilatory Nitrite Reductases; Modulation and Control of Internal Electron Transfer. *J. Phys. Chem.* **108**, 42, 9005-9007 (2004)
297. R.G. Posner, J.M. Paar, A. Licht, I. Pecht, D. H. Conrad, and W. S. Hlavacek. Interaction of a Monoclonal IgE-Specific Antibody with Cell-Surface IgE-FcεRI: Characterization of Equilibrium Binding and Secretory Response. *Biochemistry* **43**, 11352-11360 (2004)
298. S. Wherland, O. Farver and I. Pecht. Intramolecular Electron Transfer in Nitrite Reductases. *Chem. and Phys. Chemistry*. **6**, 1-8 (2005)
299. R. Schweitzer-Stenner and I. Pecht. Cutting Edge: Death of a Dogma or Enforcing the Artificial: Monomeric IgE Binding May Initiate Mast Cell Response by Inducing Its Receptor Aggregation. *J. Immunol.* **174**, 4461-4464. (2005)
300. A. Licht, I. Pecht and R. Schweitzer-Stenner. Regulation of mast cells' secretory response by co-clustering the type 1 Fcε receptor with the mast cell function-associated antigen. *Eur. J Immunol.* **35**, 1621-1633 (2005)
301. D. M. Gakamsky, I. F. Luescher, A. Pramanik, R. B. Kopito, F. Lemonnier, H. Vogel, R. Rigler, and I. Pecht. CD8 kinetically promotes ligand binding to the T-cell antigen receptor *Biophys. Journal.* **89**:2121-33 (2005)
302. I. Pecht and D.M. Gakamsky. Spatial coordination of CD8 and TCR molecules controls antigen recognition by CD8<sup>+</sup> T-cells. *FEBS Lett.* **579**, 3336-3341 (2005)
303. M. Andrásfalvy, H. Péterfy, G. Tóth, J. Matkó, J. Abramson, K. Kerekes, G. Vámosi, I. Pecht and A. Erdei. The b subunit of the type I Fce receptor is a target for peptides inhibiting IgE-mediated secretory response of mast cells. *J. Immunol.* **175**:2801-6 (2005)
304. A.E. Barbu and I. Pecht. Desensitization of mast cell's response to an immuno-receptor stimulus. *Immunol Lett.* **100**:78-87 (2005)
305. D. Bruder, A. K. Nussbaum, D. M. Gakmsky, M. Schirle, S. Stevanovic, H. Singh-Jasuja, A. Darji, T. Chakraborty, H. Schild, I. Pecht, S. Weiss. Multiple synergizing factors determine the strength of the CD8+T cell response against listeriolysin O. *Internat. Immunol.* **18**,89-100 (2005)
306. A. Licht, J. Abramson, I. Pecht. Co-clustering Activating and Inhibitory receptors; Impact of varying expression levels of the latter. *Imm. Lett.* **104**,166-70 (2005)

307. J. Abramson, A. Licht, I. Pecht. Selective inhibition of the FcεRI-induced *de novo* synthesis of mediators by an inhibitory receptor. *EMBO J.* **25**,323-4 (2006)
308. O. Farver, E.Grell, B.Ludwig, H.Michel and I. Pecht. Rates and equilibrium of CuA to Heme a Electron transfer in *Paracoccus denitrificans* Cytochrome c oxidase. *Biophysical J.* **90**,2131-7 (2006)
309. O.Farver, Y. Chen,J.A. Fee and I.Pecht. Electron transfer among the CuA-,heme b- and a<sub>3</sub>-centers in *Thermus thermophilus* cytochrome ba<sub>3</sub>. *FEBS Lett.* **580**, 3417-21 (2006)
310. B.G. Barisas, S.M. Smith, J. Liu, J. Song, G.M. Hagen, I. Pecht and D.A. Roess. Compartmentalization of the type I Fcε receptor and MAFA on mast cell membranes. *Biophysical Chem.* **126**, 209-217 (2007)
311. H. J. Wijma, I. MacPherson, O. Farver, E.I. Tocheva, I. Pecht. M. Ph. Verbeet, M. E. P. Murphy, and G. W. Canters. Effect of the Methionine Ligand on the Reorganization Energy of the Type-1 Copper Site of Nitrite Reductase . *J. Am. Chem Soc.* **129**, 519-525 (2007)
312. O. Farver, H. J.Hwang, Yi Lu, and I. Pecht. Reorganization energy of the Cu<sub>A</sub> center in purple azurin: Impact of the mixed valence to trapped valence state transition *J.Phys.Chem.* **111**, 6690-6694 (2007)
313. R.G. Posner, D. Geng, S. Haymore, J. Bogert, I. Pecht, A. Licht and P.B. Savage. Trivalent antigens for degranulation of mast cells. *Organic Letters* **9**, 3551-4 (2007)
314. A. E. Barbu and I. Pecht. Desensitization of mast cells delayed response to the type I Fcε receptor. *Isr. Med. Asssoc. J.* **9**, 469-71 (2007)
315. D. M. Gakamsky, E. Lewitzki, E. Grell, X. Saulquin B. Malissen, F. Montero-Julian, M. Bonneville and I. Pecht. Kinetic evidence for a ligand-binding-induced conformational transition in the T cell receptor. *Proc. Natl. Acad. Sci. USA* **104**, 16639-44 (2007)
316. H. Péterfy, G. Tóth, I. Pecht and A. Erdei. C3a-derived peptide binds to the type I FcεR and inhibits proximal-coupling signal processes and cytokine secretion by mast cells. *Int Immunol.* **10**, 1239-45 (2008)
317. O. Farver, E. Vitu,S. Wherland, D. Fass and I. Pecht. Electron Transfer Reactivity of the Arabidopsis thaliana Sulfhydryl Oxidase AtErv1.c*J. Biol. Chem.* **284**(4), 2098-105 (2009)
318. O. Farver, M. Brunori, F. Cutruzzola, S. Rinaldo, S. Wherland and I. Pecht. Intramolecular Electron Transfer in Pseudomonas aeruginosa cd1 Nitrite Reductase: Thermodynamics and Kinetics. *Biophysical Journal* **96**, 2849-56 (2009)
319. M. Radoul, F. Centoala, S. Rinaldo, F. Cutruzzola, I. Pecht and D. Goldfarb. Heme d1nitrosyl complex of cd1 nitrate reductase studied by high-field-pulse electron paramagnetic resonance spectroscopy. *Inorganic Chemistry* **48**, 3913-5 (2009)
320. F. Cutruzzola, S. Rinaldo, N. Castiglione, G. Giardina, I. Pecht and M. Brunori. Nitrite reduction: a ubiquitous function from a pre-aerobic past*Bioessays* **31**, 885-891 (2009)
321. O. Farver, A.W. Tepper, S. Wherland, G.W. Canters and I. Pecht. Site-site interactions enhances intramolecular electron transfer in *Streptomyces coelicolor* laccase. *J. Am. Chem. Soc.* **131**(51), 18226-7 (2009)

322. A. Potapov, I. Pecht and D. Goldfarb. Resolving ligand hyperfine couplings of type 1 and 2 Cu(II) in ascorbate oxidase by high field pulse EPR correlation spectroscopy. *Phys. Chem Chem Phys.* **12(1)**, 62-5 (2010)
323. I. Ron, L. Sepunaru, S. Itzhakov, T. Belenkova, N. Friedman, I. Pecht, M. Sheves and D. Cahen. Proteins as electronic materials: electron transport through solid-state protein monolayer junctions. *J. Am. Chem. Soc.* **132(12)**, 4131-40 (2010)
324. I. Ron I. Pecht, M Sheves and D. Cahen. Proteins as solid-state electronic conductors. *Acc Chem. Res.* **43(7)**, 945-53 (2010)
325. O. Farver, S. Wherland, W.E. Antholine, G.J. Gemmen, Y. Chen, I. Pecht and J.A. Fee. Pulse radiolysis studies of temperature dependent electron transfers among redox centers in ba(3)-Cytochrome C Oxidase from *Thermus thermophilus*: comparison of A- and B- type enzymes. *Biochemistry* Nov. 8 (2010)
326. L. Sepunaru, I. Pecht, M. Sheves and D. Cahen. Solid-state electron transport across azurin: from a temperature-independent to a temperature-activated mechanism. *J. Am. Che. Soc.* **133(8)**, 2421-3 (2011)
327. K.M. Lancaster, O. Farver, S. Wherland, E.J. Crane 3<sup>rd</sup>, J.H. Richards, I. Pecht and H.B. Gray. Electron transfer reactivity of type zero *Pseudomonas aeruginosa* azurin. *J.Am. Chem. Soc.* **133(13)** 4865-73 (2011)
328. O. Farver, S. Wherland, O. Koroleva, D.S. Loginov and I. Pecht. Intramolecular electron transfer in laccases. *FEBS J.* **278(18)**, 3463-71 (2011)

## REVIEW ARTICLES

1. I. Pecht. Reactions chimiques rapides en solutions. *Sciences (French)***74**, 75 (1971).
2. I. Pecht and D. Lancet. Kinetics of antibody-hapten interactions. In "Chemical Relaxation in Molecular Biology". I. Pecht and R. Rigler, eds., Springer-Verlag, Heidelberg, 306-336 (1977).
3. O. Farver and I. Pecht. Electron transfer processes of blue copper proteins. In "Copper Proteins". T.G. Spiro, ed., John Wiley, N.Y., 153-192 (1981).
4. I. Pecht. Dynamic aspects of antibody function. In "The Antigens". M. Sela, ed., Academic Press, N.Y., Vol. VI, 1-68 (1982).
5. I. Pecht. Application of synchrotron radiation to biochemical fluorescence spectroscopy. In "Uses of Synchrotron Radiation in Biology". H.B. Stuhrman, ed., Academic Press, London, 71-81 (1982).
6. O. Farver and I. Pecht. The reactivity of copper sites in the "blue" copper proteins. In "Copper Proteins and Copper Enzymes". R. Lontie, ed., CRC Press, Vol. I, 183-214 (1984).
7. O. Farver and I. Pecht. Structure-Reactivity correlation studies of blue copper proteins. Affinity labeling of electron transfer proteins by transition metal coordination. *Coordination Chemistry Reviews*, **94**, 17-45 (1989).
8. E. Razin, I. Pecht and J. Rivera. Signal transduction in the activation of mast cells and basophils. *Immunol. Today* **16**, 370-373 (1995).
9. M. Sela and I. Pecht. The nature of the Antigen. In: "Advances Protein Chemistry", **49**, 289-328 (1996).
10. O. Farver and I. Pecht. Electron transfer reactions in multi-copper oxidases. In: *Multi-Copper Oxidases*. (Messerschmidt, A., ed.) World Scientific Publishing Co., Singapore, Chapter 12, pp. 355-389, 1997.
11. O. Farver and I. Pecht. Copper proteins as model systems for investigating intramolecular electron transfer processes. In: "Electron Transfer: From Isolated Molecules to Biomolecules", Part Two. Eds. J. Jortner and M. Bixon, John Wiley & Sons, Inc., N.Y., Vol. **107**, 555-589, 1999.
12. R. Xu & I. Pecht. The Regulation of Mast Cells' Secretory Response by ITAM and ITIM. In *Molecular Mechanisms of Transcellular Signalling*. J.P. Thiery (Ed.) IOS Press. pp. 189-202 (1999)
13. D. M. Gakamsky, I. Pecht and R. G. Posner. Evaluating Receptor Stoichiometry by Fluorescence Resonance Energy Transfer. In: "Receptors: A Practical Approach", (Dr. S C Stanford and Prof. R W Horton) IRL PRESS at Oxford University Press, Oxford New York Tokyo pp. 113-135 (2001)
14. J. Abramson, R. Xu and I. Pecht. An unusual inhibitory receptor – the MAst cell Function-associated Antigen (MAFA). In: *Molecular Immunology*, **38**, pp. 1307-1313 (2001)

- 15 J. Abramson, I. Pecht. Regulation of Immunoreceptor Activities: The paradigm of the Type 1 Fc $\epsilon$  receptor. In: Biophysical Aspects of Transmembrane Signaling, (ed. S. Damjanovich, Springer-Verlag, Germany, pp. 211-263 (2005)
- 16 O. Farver, P.M.H. Kroneck, W.G. Zumft and I. Pecht. Allosteric control of internal electron transfer in cytochrome cd1 nitrite reductase. In "Allosteric Proteins" ed. M. Brunori, G. Careri, J.P. Changeux and H.K. Schachman, Academia Nazionale dei Lincei, pp. 213-220, (2005)
- 17 J. Abramson, E.A. Barbu and I. Pecht. Regulation of mast cell secretory response to the type I Fc $\epsilon$  receptor: inhibitory elements and desensitization. Novartis Found. Symp. **271**, 78-79 (2005)
- 18 J. Abramson and I. Pecht. Regulation of the mast cell response to the type I Fc $\epsilon$  receptor. Immunological Reviews, **217**, 231-254 (2007)
- 19 O. Farver and I. Pecht. Elucidation of Electron-transfer Pathways in Copper and iron Proteins by Pulse radiolysis Experiments. Prog. Inorg. Chem., **55**, 1-78 (2007)
- 20 I. Pecht and U.Z. Littauer. Early development of biochemistry and molecular biology in Israel. IUBMB Life. 60(6), 418-20 (2008)
- 21 I. Pecht. Signalling by Immunoreceptors. FEBS Lett. **584(24)**, 4813 (2010)

## PATENTS

I. Pecht, N. Mazurek, S. Hemmerich  
DSCG binding protein and process for preparing same  
U.S. patent number: 0475-00-00, April 10, 1988.

E. Mozes and I. Pecht  
An assay for direct binding of peptides that are T-cell epitopes to MHC gene products on intact antigen-presenting cells and the use thereof for screening susceptibility of autoimmune diseases.  
U.S. patent number: 07/624,730, December 10, 1990  
European patent number: 90123692.7

I. Pecht, S. Hemmerich  
Cromolyn binding protein in highly purified form, and methods for the isolation thereof.  
U.S. patent number: 4,996,296, February 26, 1991.

I. Pecht, M. Tal, M. Guthman  
A DNA molecule encoding a mast cell function-associated antigen (MAFA).  
Israel patent number: 109257, April 6, 1994.  
Patent cooperat.: PCT/US95/0425, April 6, 1994.

M. Fridkin, I. Pecht, O. Rosen  
Pharmaceutical compositions comprising peptides and some novel peptides (anti-allergic peptides)  
Israel patent number: 115773, October 26, 1995.

A. Erdei and I. Pecht  
Peptides derived from complement peptide C3a sequence and antiallergic compositions comprising them  
U.S. patent application: No. 09/446,464, November 9, 2001.

I. Pecht and D. Gakamsky  
Methods of determining the affinity of the interaction of T cell receptors and antigen presenting molecule-antigen complexes and uses thereof for selecting T cell receptors and antigen presenting molecule-antigen complexes suitable for diagnosis and treatment of diseases

A. Erdei and I. Pecht  
Peptides derived from complement peptide C3a sequence and antiallergic compositions comprising them  
European patent Specification EP 1 015 484 B 1  
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Yeda Research and development Co. Ltd.  
Application No. 10710453.1-2107 PCT/IL2010000126  
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Priority: US/12.02.09/USP 151859

Title: Complement C3a derived dimeric peptides and uses thereof

