

6. Literaturliste

1. Allan, C.B., G.M.Lacourciere, and T.C.Stadtman. 1999. Responsiveness of selenoproteins to dietary selenium. *Annu. Rev. Nutr.* 19:1-16.
2. Alpers, B. 1931. Diffuse progressive degeneration of the gray matter of the cerebrum. *Arch. Neurol. Psych.* 25:469-505.
3. Amberg, R., C.Urban, B.Reuner, P.Scharff, S.C.Pomerantz, J.A.McCloskey, and H.J.Gross. 1993. Editing does not exist for mammalian selenocysteine tRNAs. *Nucleic Acids Res.* 21:5583-5588.
4. Arthur, J.R., F.Nicol, and G.J.Beckett. 1990. Hepatic iodothyronine 5'-deiodinase. The role of selenium. *Biochem. J.* 272:537-540.
5. Axley, M.J., A.Bock, and T.C.Stadtman. 1991. Catalytic properties of an Escherichia coli formate dehydrogenase mutant in which sulfur replaces selenium. *Proc. Natl. Acad. Sci. U. S. A* 88:8450-8454.
6. Baehr, E.K., L.F.Fogg, and C.I.Eastman. 1999. Intermittent bright light and exercise to entrain human circadian rhythms to night work. *Am. J. Physiol* 277:R1598-R1604.
7. Beck, M.A. 2001. Antioxidants and viral infections: host immune response and viral pathogenicity. *J. Am. Coll. Nutr.* 20:384S-388S.

8. Behne, D., C.Hammel, H.Pfeifer, D.Rothlein, H.Gessner, and A.Kyriakopoulos. 1998. Speciation of selenium in the mammalian organism. *Analyst* 123:871-873.
9. Behne, D., H.Hilmert, S.Scheid, H.Gessner, and W.Elger. 1988. Evidence for specific selenium target tissues and new biologically important selenoproteins. *Biochim. Biophys. Acta* 966:12-21.
10. Behne, D., A.Kyriakopoulos, H.Meinhold, and J.Köhrle. 1990. Identification of type I iodothyronine 5'-deiodinase as a selenoenzyme. *Biochem. Biophys. Res. Commun.* 173:1143-1149.
11. Berry, M.J., L.Banu, Y.Y.Chen, S.J.Mandel, J.D.Kieffer, J.W.Harney, and P.R.Larsen. 1991a. Recognition of UGA as a selenocysteine codon in type I deiodinase requires sequences in the 3' untranslated region. *Nature* 353:273-276.
12. Berry, M.J., L.Banu, J.W.Harney, and P.R.Larsen. 1993. Functional characterization of the eukaryotic SECIS elements which direct selenocysteine insertion at UGA codons. *EMBO J.* 12:3315-3322.
13. Berry, M.J., L.Banu, and P.R.Larsen. 1991b. Type I iodothyronine deiodinase is a selenocysteine-containing enzyme. *Nature* 349:438-440.
14. Berry, M.J., A.L.Maia, J.D.Kieffer, J.W.Harney, and P.R.Larsen. 1992. Substitution of cysteine for selenocysteine in type I iodothyronine deiodinase reduces the catalytic efficiency of the protein but enhances its translation. *Endocrinology* 131:1848-1852.

15. Bock, A., K.Forchhammer, J.Heider, and C.Baron. 1991. Selenoprotein synthesis: an expansion of the genetic code. *Trends Biochem. Sci.* 16:463-467.
16. Bösl, M.R., K.Takaku, M.Oshima, S.Nishimura, and M.M.Taketo. 1997. Early embryonic lethality caused by targeted disruption of the mouse selenocysteine tRNA gene (Trsp). *Proc. Natl. Acad. Sci U. S. A* 94:5531-5534.
17. Buettner, C., J.W.Harney, and P.R.Larsen. 1998. The 3'-untranslated region of human type 2 iodothyronine deiodinase mRNA contains a functional selenocysteine insertion sequence element. *J. Biol. Chem.* 273:33374-33378.
18. Burk, R.F., D.G.Brown, R.J.Seely, and C.C.Scaief, III. 1972. Influence of dietary and injected selenium on whole-blody retention, route of excretion, and tissue retention of $^{75}\text{SeO}_3^{2-}$ in the rat. *J Nutr.* 102:1049-1055.
19. Burk, R.F. and K.E.Hill. 1994. Selenoprotein P. A selenium-rich extracellular glycoprotein. *J. Nutr.* 124:1891-1897.
20. Burk, R.F., K.E.Hill, M.E.Boeglin, F.F.Ebner, and H.S.Chittum. 1997. Selenoprotein P associates with endothelial cells in rat tissues. *Histochem. Cell Biol.* 108:11-15.
21. Burk, R.F., K.E.Hill, and A.K.Motley. 2001. Plasma selenium in specific and non-specific forms. *Biofactors* 14:107-114.
22. Burk, R.F., K.E.Hill, R.Read, and T.Bellew. 1991. Response of rat selenoprotein P to selenium administration and fate of its selenium. *Am. J Physiol* 261:E26-E30.

23. Carlson, B.A., S.V.Novoselov, E.Kumaraswamy, B.J.Lee, M.R.Anver, V.N.Gladyshev, and D.L.Hatfield. 2004. Specific excision of the selenocysteine tRNA[Ser]Sec (Trsp) gene in mouse liver demonstrates an essential role of selenoproteins in liver function. *J. Biol. Chem.* 279:8011-8017.
24. Carlson, B.A., X.M.Xu, V.N.Gladyshev, and D.L.Hatfield. 2005. Selective rescue of selenoprotein expression in mice lacking a highly specialized methyl group in selenocysteine tRNA. *J. Biol. Chem.* 280:5542-5548.
25. Ceballos-Picot, I., M.Merad-Boudia, A.Nicole, M.Thevenin, G.Hellier, S.Legrain, and C.Berr. 1996. Peripheral antioxidant enzyme activities and selenium in elderly subjects and in dementia of Alzheimer's type--place of the extracellular glutathione peroxidase. *Free Radic. Biol. Med.* 20:579-587.
26. Chavatte, L., B.A.Brown, and D.M.Driscoll. 2005. Ribosomal protein L30 is a component of the UGA-selenocysteine recoding machinery in eukaryotes. *Nat. Struct. Mol. Biol.* 12:408-416.
27. Chittum, H.S., S.Himeno, K.E.Hill, and R.F.Burk. 1996. Multiple forms of selenoprotein P in rat plasma. *Arch. Biochem. Biophys.* 325:124-128.
28. Clark, L.C., G.F.Combs, Jr., B.W.Turnbull, E.H.Slate, D.K.Chalker, J.Chow, L.S.Davis, R.A.Glover, G.F.Graham, E.G.Gross, A.Krongrad, J.L.Lesher, Jr., H.K.Park, B.B.Sanders, Jr., C.L.Smith, and J.R.Taylor. 1996. Effects of selenium supplementation for cancer prevention in patients with carcinoma of the skin. A randomized controlled trial. Nutritional Prevention of Cancer Study Group. *JAMA* 276:1957-1963.

29. Clark, L.C., B.Dalkin, A.Krongrad, G.F.Combs, Jr., B.W.Turnbull, E.H.Slate, R.Witherington, J.H.Herlong, E.Janosko, D.Carpenter, C.Borosso, S.Falk, and J.Rounder. 1998. Decreased incidence of prostate cancer with selenium supplementation: results of a double-blind cancer prevention trial. *Br. J. Urol.* 81:730-734.
30. Combs, G.F., Jr., L.C.Clark, and B.W.Turnbull. 2001. An analysis of cancer prevention by selenium. *Biofactors* 14:153-159.
31. Combs, G.F., Jr. and S.B.Combs. 1984. The nutritional biochemistry of selenium. *Annu. Rev. Nutr.* 4:257-280.
32. Contempre, B., G.M.de Escobar, J.F.Denef, J.E.Dumont, and M.C.Many. 2004. Thiocyanate induces cell necrosis and fibrosis in selenium- and iodine-deficient rat thyroids: a potential experimental model for myxedematous endemic cretinism in central Africa. *Endocrinology* 145:994-1002.
33. Contempre, B., J.Vanderpas, and J.E.Dumont. 1991. Cretinism, thyroid hormones and selenium. *Mol. Cell Endocrinol.* 81:C193-C195.
34. Copeland, P.R. and D.M.Driscoll. 1999. Purification, redox sensitivity, and RNA binding properties of SECIS-binding protein 2, a protein involved in selenoprotein biosynthesis. *J. Biol. Chem.* 274:25447-25454.
35. Copeland, P.R., J.E.Fletcher, B.A.Carlson, D.L.Hatfield, and D.M.Driscoll. 2000. A novel RNA binding protein, SBP2, is required for the translation of mammalian selenoprotein mRNAs. *EMBO J.* 19:306-314.

36. Cornett, C.R., W.R.Markesbery, and W.D.Ehmann. 1998. Imbalances of trace elements related to oxidative damage in Alzheimer's disease brain. *Neurotoxicology* 19:339-345.
37. Crack, P.J., J.M.Taylor, N.J.Flentjar, J.de Haan, P.Hertzog, R.C.Iannello, and I.Kola. 2001. Increased infarct size and exacerbated apoptosis in the glutathione peroxidase-1 (Gpx-1) knockout mouse brain in response to ischemia/reperfusion injury. *J. Neurochem.* 78:1389-1399.
38. Croteau, W., J.C.Davey, V.A.Galton, and D.L.St Germain. 1996. Cloning of the mammalian type II iodothyronine deiodinase. A selenoprotein differentially expressed and regulated in human and rat brain and other tissues. *J. Clin. Invest* 98:405-417.
39. Damier, P., E.C.Hirsch, P.Zhang, Y.Agid, and F.Javoy-Agid. 1993. Glutathione peroxidase, glial cells and Parkinson's disease. *Neuroscience* 52:1-6.
40. De Haan, J.B., C.Bladier, P.Griffiths, M.Kelner, R.D.O'Shea, N.S.Cheung, R.T.Bronson, M.J.Silvestro, S.Wild, S.S.Zheng, P.M.Beart, P.J.Hertzog, and I.Kola. 1998. Mice with a homozygous null mutation for the most abundant glutathione peroxidase, Gpx1, show increased susceptibility to the oxidative stress-inducing agents paraquat and hydrogen peroxide. *J. Biol. Chem.* 273:22528-22536.
41. Delange, F. 1994. The disorders induced by iodine deficiency. *Thyroid* 4:107-128.

42. Diamond, A.M., I.S.Choi, P.F.Crain, T.Hashizume, S.C.Pomerantz, R.Cruz, C.J.Steer, K.E.Hill, R.F.Burk, J.A.McCloskey, and . 1993. Dietary selenium affects methylation of the wobble nucleoside in the anticodon of selenocysteine tRNA([Ser]Sec). *J. Biol. Chem.* 268:14215-14223.
43. Dreher, I., C.Schmutzler, F.Jakob, and J.Kohrle. 1997. Expression of selenoproteins in various rat and human tissues and cell lines. *J. Trace Elem. Med. Biol.* 11:83-91.
44. Dumitrescu, A.M., X.H.Liao, M.S.Abdullah, J.Lado-Abeal, F.A.Majed, L.C.Moeller, G.Boran, L.Schomburg, R.E.Weiss, and S.Refetoff. 2005. Mutations in SECISBP2 result in abnormal thyroid hormone metabolism. *Nat. Genet.* 37:1247-1252.
45. Duntas, L.H., E.Mantzou, and D.A.Koutras. 2003. Effects of a six month treatment with selenomethionine in patients with autoimmune thyroiditis. *Eur. J. Endocrinol.* 148:389-393.
46. Egger, J., B.N.Harding, S.G.Boyd, J.Wilson, and M.Erdohazi. 1987. Progressive neuronal degeneration of childhood (PNDC) with liver disease. *Clin. Pediatr. (Phila)* 26:167-173.
47. Esaki, N., T.Nakamura, H.Tanaka, and K.Soda. 1982. Selenocysteine lyase, a novel enzyme that specifically acts on selenocysteine. Mammalian distribution and purification and properties of pig liver enzyme. *J. Biol. Chem.* 257:4386-4391.

48. Fagegaltier, D., N.Hubert, K.Yamada, T.Mizutani, P.Carbon, and A.Krol. 2000. Characterization of mSelB, a novel mammalian elongation factor for selenoprotein translation. *EMBO J.* 19:4796-4805.
49. Ferreiro, A., S.Quijano-Roy, C.Pichereau, B.Moghadaszadeh, N.Goemans, C.Bonnemann, H.Jungbluth, V.Straub, M.Villanova, J.P.Leroy, N.B.Romero, J.J.Martin, F.Muntoni, T.Voit, B.Estournet, P.Richard, M.Fardeau, and P.Guicheney. 2002. Mutations of the selenoprotein N gene, which is implicated in rigid spine muscular dystrophy, cause the classical phenotype of multimicore disease: reassessing the nosology of early-onset myopathies. *Am. J. Hum. Genet.* 71:739-749.
50. Flohe, L., W.A.Gunzler, and H.H.Schock. 1973. Glutathione peroxidase: a selenoenzyme. *FEBS Lett.* 32:132-134.
51. Forchhammer, K., W.Leinfelder, and A.Bock. 1989. Identification of a novel translation factor necessary for the incorporation of selenocysteine into protein. *Nature* 342:453-456.
52. Gartner, R., B.C.Gasnier, J.W.Dietrich, B.Krebs, and M.W.Angstwurm. 2002. Selenium supplementation in patients with autoimmune thyroiditis decreases thyroid peroxidase antibodies concentrations. *J. Clin. Endocrinol. Metab* 87:1687-1691.
53. Goody, T.A., S.E.Melcher, D.G.Norman, and D.M.Lilley. 2004. The kink-turn motif in RNA is dimorphic, and metal ion-dependent. *RNA.* 10:254-264.

54. Gross, M., M.Oertel, and J.Köhrle. 1995. Differential selenium-dependent expression of type I 5'-deiodinase and glutathione peroxidase in the porcine epithelial kidney cell line LLC-PK1. *Biochem. J.* 306 (Pt 3):851-856.
55. Guimaraes, M.J., D.Peterson, A.Vicari, B.G.Cocks, N.G.Copeland, D.J.Gilbert, N.A.Jenkins, D.A.Ferrick, R.A.Kastelein, J.F.Bazan, and A.Zlotnik. 1996. Identification of a novel seld homolog from eukaryotes, bacteria, and archaea: is there an autoregulatory mechanism in selenocysteine metabolism? *Proc. Natl. Acad. Sci. U. S. A* 93:15086-15091.
56. Harding, B.N. 1990. Progressive neuronal degeneration of childhood with liver disease (Alpers-Huttenlocher syndrome): a personal review. *J. Child Neurol.* 5:273-287.
57. Harding, B.N., N.Alsanjari, S.J.Smith, C.M.Wiles, D.Thrush, D.H.Miller, F.Scaravilli, and A.E.Harding. 1995. Progressive neuronal degeneration of childhood with liver disease (Alpers' disease) presenting in young adults. *J. Neurol. Neurosurg. Psychiatry* 58:320-325.
58. Hatfield, D.L. and V.N.Gladyshev. 2002. How selenium has altered our understanding of the genetic code. *Mol. Cell Biol.* 22:3565-3576.
59. Hawker, F.H., P.M.Stewart, and P.J.Snitch. 1990. Effects of acute illness on selenium homeostasis. *Crit Care Med.* 18:442-446.

60. Hill, K.E., P.R.Lyons, and R.F.Burk. 1992. Differential regulation of rat liver selenoprotein mRNAs in selenium deficiency. *Biochem. Biophys. Res. Commun.* 185:260-263.
61. Hill, K.E., J.Zhou, W.J.McMahan, A.K.Motley, J.F.Atkins, R.F.Gesteland, and R.F.Burk. 2003. Deletion of selenoprotein P alters distribution of selenium in the mouse. *J. Biol. Chem.* 278:13640-13646.
62. Hill, K.E., J.Zhou, W.J.McMahan, A.K.Motley, and R.F.Burk. 2004. Neurological dysfunction occurs in mice with targeted deletion of the selenoprotein p gene. *J. Nutr.* 134:157-161.
63. Ho, Y.S., J.L.Magenat, R.T.Bronson, J.Cao, M.Gargano, M.Sugawara, and C.D.Funk. 1997. Mice deficient in cellular glutathione peroxidase develop normally and show no increased sensitivity to hyperoxia. *J Biol. Chem.* 272:16644-16651.
64. Hondal, R.J., S.Ma, R.M.Caprioli, K.E.Hill, and R.F.Burk. 2001. Heparin-binding histidine and lysine residues of rat selenoprotein P. *J. Biol. Chem.* 276:15823-15831.
65. Khorana, H.G., H.Buchi, H.Ghosh, N.Gupta, T.M.Jacob, H.Kossel, R.Morgan, S.A.Narang, E.Ohtsuka, and R.D.Wells. 1966. Polynucleotide synthesis and the genetic code. *Cold Spring Harb. Symp. Quant. Biol.* 31:39-49.
66. Kien, C.L. and H.E.Ganther. 1983. Manifestations of chronic selenium deficiency in a child receiving total parenteral nutrition. *Am. J Clin. Nutr.* 37:319-328.

67. Klein, E.A., S.M.Lippman, I.M.Thompson, P.J.Goodman, D.Albanes, P.R.Taylor, and C.Coltman. 2003. The selenium and vitamin E cancer prevention trial. *World J. Urol.* 21:21-27.
68. Köhrle, J. 1999a. Local activation and inactivation of thyroid hormones: the deiodinase family. *Mol. Cell Endocrinol.* 151:103-119.
69. Köhrle, J. 1999b. The trace element selenium and the thyroid gland. *Biochimie* 81:527-533.
70. Köhrle, J. 2000. The deiodinase family: selenoenzymes regulating thyroid hormone availability and action. *Cell Mol. Life Sci* 57:1853-1863.
71. Köhrle, J., R.Brigelius-Flohé, A.Bock, R.Gartner, O.Meyer, and L.Flohé. 2000. Selenium in Biology: Facts and Medical Perspectives. *Biol. Chem.* 381:849-864.
72. Köhrle, J., M.Oertel, and M.Gross. 1992. Selenium supply regulates thyroid function, thyroid hormone synthesis and metabolism by altering the expression of the selenoenzymes Type I 5'-deiodinase and glutathione peroxidase. *Thyroidology.* 4:17-21.
73. Köhrle, J. and L. Schomburg. 2006. Selen. In: Ernährungsmedizin. 3. Auflage. Peter Schrauder, Urban & Fischer, Elsevier.
74. Kollmus, H., L.Flohe, and J.E.McCarthy. 1996. Analysis of eukaryotic mRNA structures directing cotranslational incorporation of selenocysteine. *Nucleic Acids Res.* 24:1195-1201.

75. Koonin, E.V., P.Bork, and C.Sander. 1994. A novel RNA-binding motif in omnipotent suppressors of translation termination, ribosomal proteins and a ribosome modification enzyme? *Nucleic Acids Res.* 22:2166-2167.
76. Kryukov, G.V., S.Castellano, S.V.Novoselov, A.V.Lobanov, O.Zehtab, R.Guigo, and V.N.Gladyshev. 2003. Characterization of mammalian selenoproteomes. *Science* 300:1439-1443.
77. Lacourciere, G.M. and T.C.Stadtman. 1998. The NIFS protein can function as a selenide delivery protein in the biosynthesis of selenophosphate. *J. Biol. Chem.* 273:30921-30926.
78. Low, S.C. and M.J.Berry. 1996. Knowing when not to stop: selenocysteine incorporation in eukaryotes. *Trends Biochem. Sci.* 21:203-208.
79. Low, S.C., E.Grundner-Culemann, J.W.Harney, and M.J.Berry. 2000. SECIS-SBP2 interactions dictate selenocysteine incorporation efficiency and selenoprotein hierarchy. *EMBO J.* 19:6882-6890.
80. Ma, S., K.E.Hill, R.F.Burk, and R.M.Caprioli. 2003. Mass spectrometric identification of N- and O-glycosylation sites of full-length rat selenoprotein P and determination of selenide-sulfide and disulfide linkages in the shortest isoform. *Biochemistry* 42:9703-9711.
81. Maiorino, M., L.Flohe, A.Roveri, P.Steinert, J.B.Wissing, and F.Ursini. 1999. Selenium and reproduction. *Biofactors* 10:251-256.

82. Mathieu, F., F.Begaux, Z.Y.Lan, C.Suetens, and M.Hinsenkamp. 1997. Clinical manifestations of Kashin-Beck disease in Nyemo Valley, Tibet. *Int. Orthop.* 21:151-156.
83. Matsumura, S., Y.Ikawa, and T.Inoue. 2003. Biochemical characterization of the kink-turn RNA motif. *Nucleic Acids Res.* 31:5544-5551.
84. McKenzie, R.C., J.R.Arthur, and G.J.Beckett. 2002. Selenium and the regulation of cell signaling, growth, and survival: molecular and mechanistic aspects. *Antioxid. Redox. Signal.* 4:339-351.
85. Mehta, A., C.M.Rebsch, S.A.Kinzy, J.E.Fletcher, and P.R.Copeland. 2004. Efficiency of mammalian selenocysteine incorporation. *J. Biol. Chem.* 279:37852-37859.
86. Meinhold, H., A.Campos-Barros, B.Walzog, R.Kohler, F.Muller, and D.Behne. 1993. Effects of selenium and iodine deficiency on type I, type II and type III iodothyronine deiodinases and circulating thyroid hormones in the rat. *Exp. Clin. Endocrinol.* 101:87-93.
87. Meseguer, I., J.A.Molina, F.J.Jimenez-Jimenez, M.V.Aguilar, C.J.Mateos-Vega, M.J.Gonzalez-Munoz, F.de Bustos, M.Orti-Pareja, M.Zurdo, A.Berbel, E.Barrios, and Martinez-Para MC. 1999. Cerebrospinal fluid levels of selenium in patients with Alzheimer's disease. *J. Neural Transm.* 106:309-315.
88. Mihara, H., T.Kurihara, T.Watanabe, T.Yoshimura, and N.Esaki. 2000. cDNA cloning, purification, and characterization of mouse liver selenocysteine lyase. Candidate for selenium delivery protein in selenoprotein synthesis. *J Biol. Chem.* 275:6195-6200.

89. Mizuno, K., S.Hirata, K.Hoshi, A.Shinohara, and M.Chiba. 2000. Analysis of the phospholipid hydroperoxide glutathione peroxidase mRNA in the rat spermatozoon and effect of selenium deficiency on the mRNA. *Biol. Trace Elem. Res.* 74:71-79.
90. Mizutani, T., K.Kanaya, and K.Tanabe. 1999. Selenophosphate as a substrate for mammalian selenocysteine synthase, its stability and toxicity. *Biofactors* 9:27-36.
91. Moghadaszadeh, B., N.Petit, C.Jaillard, M.Brockington, S.Q.Roy, L.Merlini, N.Romero, B.Estournet, I.Desguerre, D.Chaigne, F.Muntoni, H.Topaloglu, and P.Guicheney. 2001. Mutations in SEPN1 cause congenital muscular dystrophy with spinal rigidity and restrictive respiratory syndrome. *Nat. Genet.* 29:17-18.
92. Moreno, M., M.J.Berry, C.Horst, R.Thoma, F.Goglia, J.W.Harney, P.R.Larsen, and T.J.Visser. 1994. Activation and inactivation of thyroid hormone by type I iodothyronine deiodinase. *FEBS Lett.* 344:143-146.
93. Moreno-Reyes, R., F.Mathieu, M.Boelaert, F.Begaux, C.Suetens, M.T.Rivera, J.Neve, N.Perlmutter, and J.Vanderpas. 2003. Selenium and iodine supplementation of rural Tibetan children affected by Kashin-Beck osteoarthropathy. *Am. J. Clin. Nutr.* 78:137-144.
94. Moreno-Reyes, R., C.Suetens, F.Mathieu, F.Begaux, D.Zhu, M.T.Rivera, M.Boelaert, J.Neve, N.Perlmutter, and J.Vanderpas. 1998. Kashin-Beck osteoarthropathy in rural Tibet in relation to selenium and iodine status. *N. Engl. J. Med.* 339:1112-1120.

95. Neve, J. 1996. Selenium as a risk factor for cardiovascular diseases. *J. Cardiovasc. Risk* 3:42-47.
96. Nirenberg, M., T.Caskey, R.Marshall, R.Brimacombe, D.Kellogg, B.Doctor, D.Hatfield, J.Levin, F.Rottman, S.Pestka, M.Wilcox, and F.Anderson. 1966. The RNA code and protein synthesis. *Cold Spring Harb. Symp. Quant. Biol.* 31:11-24.
97. Prohaska, J.R. and H.E.Ganther. 1976. Selenium and glutathione peroxidase in developing rat brain. *J. Neurochem.* 27:1379-1387.
98. Ramaekers, V.T., M.Calomme, D.Vanden Berghe, and W.Makropoulos. 1994. Selenium deficiency triggering intractable seizures. *Neuropediatrics* 25:217-223.
99. Ramauge, M., S.Pallud, A.Esfandiari, J.Gavaret, A.Lennon, M.Pierre, and F.Courtin. 1996. Evidence that type III iodothyronine deiodinase in rat astrocyte is a selenoprotein. *Endocrinology* 137:3021-3025.
100. Rayman, M.P. 2000. The importance of selenium to human health. *Lancet* 356:233-241.
101. Rayman, M.P. and M.P.Rayman. 2002. The argument for increasing selenium intake. *Proc. Nutr. Soc.* 61:203-215.
102. Read, R., T.Bellew, J.G.Yang, K.E.Hill, I.S.Palmer, and R.F.Burk. 1990. Selenium and amino acid composition of selenoprotein P, the major selenoprotein in rat serum. *J. Biol. Chem.* 265:17899-17905.

103. Reid, M.E., A.J.Duffield-Lillico, A.Sunga, M.Fakih, D.S.Alberts, and J.R.Marshall. 2006. Selenium supplementation and colorectal adenomas: an analysis of the nutritional prevention of cancer trial. *Int. J. Cancer* 118:1777-1781.
104. Richardson, D.R. 2005. More roles for selenoprotein P: local selenium storage and recycling protein in the brain. *Biochem. J.* 386:e5-e7.
105. Rotruck, J.T., A.L.Pope, H.E.Ganther, A.B.Swanson, D.G.Hafeman, and W.G.Hoekstra. 1973. Selenium: biochemical role as a component of glutathione peroxidase. *Science* 179:588-590.
106. Saijoh, K., N.Saito, M.J.Lee, M.Fujii, T.Kobayashi, and K.Sumino. 1995. Molecular cloning of cDNA encoding a bovine selenoprotein P-like protein containing 12 selenocysteines and a (His-Pro) rich domain insertion, and its regional expression. *Brain Res. Mol. Brain Res.* 30:301-311.
107. Saiki, R.K., D.H.Gelfand, S.Stoffel, S.J.Scharf, R.Higuchi, G.T.Horn, K.B.Mullis, and H.A.Erlich. 1988. Primer-directed enzymatic amplification of DNA with a thermostable DNA polymerase. *Science* 239:487-491.
108. Saito, Y., T.Hayashi, A.Tanaka, Y.Watanabe, M.Suzuki, E.Saito, and K.Takahashi. 1999. Selenoprotein P in human plasma as an extracellular phospholipid hydroperoxide glutathione peroxidase. Isolation and enzymatic characterization of human selenoprotein p. *J Biol. Chem.* 274:2866-2871.

109. Saito, Y. and K.Takahashi. 2002. Characterization of selenoprotein P as a selenium supply protein. *Eur. J. Biochem.* 269:5746-5751.
110. Salvatore, D., T.Bartha, J.W.Harney, and P.R.Larsen. 1996. Molecular biological and biochemical characterization of the human type 2 selenodeiodinase. *Endocrinology* 137:3308-3315.
111. Salvatore, D., S.C.Low, M.Berry, A.L.Maia, J.W.Harney, W.Croteau, D.L.St Germain, and P.R.Larsen. 1995. Type 3 Iodothyronine deiodinase: cloning, in vitro expression, and functional analysis of the placental selenoenzyme. *J. Clin. Invest* 96:2421-2430.
112. Sanger, F., S.Nicklen, and A.R.Coulson. 1977. DNA sequencing with chain-terminating inhibitors. *Proc. Natl. Acad. Sci. U. S. A* 74:5463-5467.
113. Sappey, C., S.Legrand-Poels, M.Best-Belpomme, A.Favier, B.Rentier, and J.Piette. 1994. Stimulation of glutathione peroxidase activity decreases HIV type 1 activation after oxidative stress. *AIDS Res. Hum. Retroviruses* 10:1451-1461.
114. Savolainen, H. 1978. Superoxide dismutase and glutathione peroxidase activities in rat brain. *Res. Commun. Chem. Pathol. Pharmacol.* 21:173-176.
115. Schomburg, L., U.Schweizer, B.Holtmann, L.Flohé, M.Sendtner, and J.Köhrle. 2003. Gene disruption discloses role of selenoprotein P in selenium delivery to target tissues. *Biochem. J.* 370:397-402.

116. Schomburg, L., U.Schweizer, and J.Köhrle. 2004. Selenium and selenoproteins in mammals: extraordinary, essential, enigmatic. *Cell Mol. Life Sci.* 61:1988-1995.
117. Schrauzer, G.N. 2000. Selenomethionine: a review of its nutritional significance, metabolism and toxicity. *J. Nutr.* 130:1653-1656.
118. Schwarz, K. and C.M.Folz. 1957. Selenium as an integral part of factor 3 against dietary necrotic liver degeneration. *Nutrition* 15:255-264.
119. Schweizer, U., M.Michaelis, J.Köhrle, and L.Schomburg. 2004a. Efficient selenium transfer from mother to offspring in selenoprotein-P-deficient mice enables dose-dependent rescue of phenotypes associated with selenium deficiency. *Biochem. J.* 378:21-26.
120. Schweizer, U., L.Schomburg, and N.E.Savaskan. 2004b. The neurobiology of selenium: lessons from transgenic mice. *J. Nutr.* 134:707-710.
121. Schweizer, U., F.Streckfuss, P.Pelt, B.A.Carlson, D.L.Hatfield, J.Köhrle, and L.Schomburg. 2005. Hepatically derived selenoprotein P is a key factor for kidney but not for brain selenium supply. *Biochem. J.* 386:221-226.
122. Stadtman, T.C. 1996. Selenocysteine. *Annu. Rev. Biochem.* 65:83-100.

123. Streckfuss, F., I.Hamann, L.Schomburg, M.Michaelis, R.Sapin, M.O.Klein, J.Kohrle, and U.Schweizer. 2005. Hepatic deiodinase activity is dispensable for the maintenance of normal circulating thyroid hormone levels in mice. *Biochem. Biophys. Res. Commun.* 337:739-745.
124. Sudre, P. and F.Mathieu. 2001. Kashin-Beck disease: from etiology to prevention or from prevention to etiology? *Int. Orthop.* 25:175-179.
125. Suppmann, S., B.C.Persson, and A.Bock. 1999. Dynamics and efficiency in vivo of UGA-directed selenocysteine insertion at the ribosome. *EMBO J.* 18:2284-2293.
126. Takizawa, S., K.Matsushima, Y.Shinohara, S.Ogawa, N.Komatsu, H.Utsunomiya, and K.Watanabe. 1994. Immunohistochemical localization of glutathione peroxidase in infarcted human brain. *J. Neurol. Sci.* 122:66-73.
127. Tamura, T., S.Yamamoto, M.Takahata, H.Sakaguchi, H.Tanaka, T.C.Stadtman, and K.Inagaki. 2004. Selenophosphate synthetase genes from lung adenocarcinoma cells: Sps1 for recycling L-selenocysteine and Sps2 for selenite assimilation. *Proc. Natl. Acad. Sci U. S. A* 101:16162-16167.
128. Tujebajeva, R.M., P.R.Copeland, X.M.Xu, B.A.Carlson, J.W.Harney, D.M.Driscoll, D.L.Hatfield, and M.J.Berry. 2000. Decoding apparatus for eukaryotic selenocysteine insertion. *EMBO Rep.* 1:158-163.
129. Ursini, F., S.Heim, M.Kiess, M.Maiorino, A.Roveri, J.Wissing, and L.Flohe. 1999. Dual function of the selenoprotein PHGPx during sperm maturation. *Science* 285:1393-1396.

130. Vanderpas, J., P.Bourdoux, R.Lagasse, M.Rivera, M.Dramaix, D.Lody, G.Nelson, F.Delange, A.M.Ermans, and C.H.Thilly. 1984. Endemic infantile hypothyroidism in a severe endemic goitre area of central Africa. *Clin. Endocrinol. (Oxf)* 20:327-340.
131. Vanderpas, J.B., B.Contempre, N.L.Duale, W.Goossens, N.Bebe, R.Thorpe, K.Ntambue, J.Dumont, C.H.Thilly, and A.T.Diplock. 1990. Iodine and selenium deficiency associated with cretinism in northern Zaire. *Am. J. Clin. Nutr.* 52:1087-1093.
132. Vinton, N.E., K.A.Dahlstrom, C.T.Strobel, and M.E.Ament. 1987. Macrocytosis and pseudoalbinism: manifestations of selenium deficiency. *J. Pediatr.* 111:711-717.
133. Weber, G.F., P.Maertens, X.Z.Meng, and C.E.Pippenger. 1991. Glutathione peroxidase deficiency and childhood seizures. *Lancet* 337:1443-1444.
134. Worle, H., B.Kohler, W.Schlote, P.Winkler, and C.K.Bastanier. 1998. Progressive cerebral degeneration of childhood with liver disease (Alpers Huttenlocher disease) with cytochrome oxidase deficiency presenting with epilepsia partialis continua as the first clinical manifestation. *Clin. Neuropathol.* 17:63-68.
135. Xia, Y., K.E.Hill, D.W.Byrne, J.Xu, and R.F.Burk. 2005. Effectiveness of selenium supplements in a low-selenium area of China. *Am. J. Clin. Nutr.* 81:829-834.
136. Yang, J.G., K.E.Hill, and R.F.Burk. 1989. Dietary selenium intake controls rat plasma selenoprotein P concentration. *J. Nutr.* 119:1010-1012.