

## Literaturverzeichnis

1. Lander, E.S., Linton, L.M., Birren, B., Nusbaum, C., Zody, M.C., Baldwin, J., Devon, K., and Dewar, K. (2001). Initial sequence and analysis of the human genome. *Nature*, 860-921.
2. Venter, J.C., Adams, M.D., Myers, E.W., Li, P.W., Mural, R.J., Sutton, G.G., Smith, H.O., and Yandell, M. (2001). The sequence of the human genome. *Science* 291, 1304-1351.
3. Dos Remedios, C.G., Liew, C.C., Allen, P.D., Winslow, R.L., Van Eyk, J.E., and Dunn, M.J. (2003). Genomics, proteomics and bioinformatics of human heart failure. *J Muscle Res Cell Motil* 24, 251-260.
4. Swinbanks, D. (1995). Government backs proteome proposal. *Nature* 378, 653.
5. Pandey, A., and Mann, M. (2000). Proteomics to study genes and genomes. *Nature* 405, 837-846.
6. Mann, M., and Jensen, O.N. (2003). Proteomic analysis of post-translational modifications. *Nat Biotechnol* 21, 255-261.
7. Belmadani, S., Pous, C., Ventura-Clapier, R., Fischmeister, R., and Mery, P.F. (2002). Post-translational modifications of cardiac tubulin during chronic heart failure in the rat. *Mol Cell Biochem* 237, 39-46.
8. Neagoe, C., Kulke, M., del Monte, F., Gwathmey, J.K., de Tombe, P.P., Hajjar, R.J., and Linke, W.A. (2002). Titin isoform switch in ischemic human heart disease. *Circulation* 106, 1333-1341.
9. Hanash, S. (2003). Disease proteomics. *Nature* 422, 226-232.
10. Bjellqvist, B., Ek, K., Righetti, P.G., Gianazza, E., Gorg, A., Westermeier, R., and Postel, W. (1982). Isoelectric focusing in immobilized pH gradients: principle, methodology and some applications. *J Biochem Biophys Methods* 6, 317-339.
11. Gorg, A., Obermaier, C., Boguth, G., Harder, A., Scheibe, B., Wildgruber, R., and Weiss, W. (2000). The current state of two-dimensional electrophoresis with immobilized pH gradients. *Electrophoresis* 21, 1037-1053.
12. Klose, J., and Kobalz, U. (1995). Two-dimensional electrophoresis of proteins: an updated protocol and implications for a functional analysis of the genome. *Electrophoresis* 16, 1034-1059.
13. Aebersold, R., and Mann, M. (2003). Mass spectrometry-based proteomics. *Nature* 422, 198-207.
14. Tyers, M., and Mann, M. (2003). From genomics to proteomics. *Nature* 422, 193-197.
15. Yoshioka, J., and Lee, R.T. (2003). Cardiovascular genomics. *Cardiovasc Pathol* 12, 249-254.
16. Brown, G.C. (1991). Total cell protein concentration as an evolutionary constraint on the metabolic control distribution in cells. *J Theor Biol* 153, 195-203.
17. Zoghbi, H.Y. (2003). Postnatal neurodevelopmental disorders: meeting at the synapse? *Science* 302, 826-830.
18. Arrell, D.K., Neverova, I., and Van Eyk, J.E. (2001). Cardiovascular proteomics: evolution and potential. *Circ Res* 88, 763-773.
19. Haynes, P.A., and Yates, J.R., 3rd (2000). Proteome profiling-pitfalls and progress. *Yeast* 17, 81-87.

20. Oxenham, H., and Sharpe, N. (2003). Cardiovascular aging and heart failure. *Eur J Heart Fail* 5, 427-434.
21. de Simone, G., Devereux, R.B., Daniels, S.R., and Meyer, R.A. (1995). Gender differences in left ventricular growth. *Hypertension* 26, 979-983.
22. Lakatta, E.G. (2002). Age-associated cardiovascular changes in health: impact on cardiovascular disease in older persons. *Heart Fail Rev* 7, 29-49.
23. Simkhovich, B.Z., Marjoram, P., Poizat, C., Kedes, L., and Kloner, R.A. (2003). Age-related changes of cardiac gene expression following myocardial ischemia/reperfusion. *Arch Biochem Biophys* 420, 268-278.
24. Olivetti, G., Melissari, M., Capasso, J.M., and Anversa, P. (1991). Cardiomyopathy of the aging human heart. Myocyte loss and reactive cellular hypertrophy. *Circ Res* 68, 1560-1568.
25. Anversa, P., Palackal, T., Sonnenblick, E.H., Olivetti, G., Meggs, L.G., and Capasso, J.M. (1990). Myocyte cell loss and myocyte cellular hyperplasia in the hypertrophied aging rat heart. *Circ Res* 67, 871-885.
26. Cain, B.S., Meldrum, D.R., Joo, K.S., Wang, J.F., Meng, X., Cleveland, J.C., Jr., Banerjee, A., and Harken, A.H. (1998). Human SERCA2a levels correlate inversely with age in senescent human myocardium. *J Am Coll Cardiol* 32, 458-467.
27. Tate, C.A., Taffet, G.E., Hudson, E.K., Blaylock, S.L., McBride, R.P., and Michael, L.H. (1990). Enhanced calcium uptake of cardiac sarcoplasmic reticulum in exercise-trained old rats. *Am J Physiol* 258, H431-435.
28. Kennedy, S. (2002). The role of proteomics in toxicology: identification of biomarkers of toxicity by protein expression analysis. *Biomarkers* 7, 269-290.
29. Banks, R.E., Dunn, M.J., Hochstrasser, D.F., Sanchez, J.C., Blackstock, W., Pappin, D.J., and Selby, P.J. (2000). Proteomics: new perspectives, new biomedical opportunities. *Lancet* 356, 1749-1756.
30. Thongboonkerd, V., and Klein, J.B. (2004). Proteomics and hypertension. *Contrib Nephrol* 141, 245-256.
31. Corbett, J.M., Why, H.J., Wheeler, C.H., Richardson, P.J., Archard, L.C., Yacoub, M.H., and Dunn, M.J. (1998). Cardiac protein abnormalities in dilated cardiomyopathy detected by two-dimensional polyacrylamide gel electrophoresis. *Electrophoresis* 19, 2031-2042.
32. Heinke, M.Y., Wheeler, C.H., Yan, J.X., Amin, V., Chang, D., Einstein, R., Dunn, M.J., and dos Remedios, C.G. (1999). Changes in myocardial protein expression in pacing-induced canine heart failure. *Electrophoresis* 20, 2086-2093.
33. Jungblut, P.R., Zimny-Arndt, U., Zeindl-Eberhart, E., Stulik, J., Koupilova, K., Pleissner, K.P., Otto, A., Muller, E.C., Sokolowska-Kohler, W., Grabher, G., and Stoffler, G. (1999). Proteomics in human disease: cancer, heart and infectious diseases. *Electrophoresis* 20, 2100-2110.
34. Weekes, J., Wheeler, C.H., Yan, J.X., Weil, J., Eschenhagen, T., Scholtysik, G., and Dunn, M.J. (1999). Bovine dilated cardiomyopathy: proteomic analysis of an animal model of human dilated cardiomyopathy. *Electrophoresis* 20, 898-906.
35. Hirano, M., Davidson, M., and DiMauro, S. (2001). Mitochondria and the heart. *Curr Opin Cardiol* 16, 201-210.
36. Leonard, J.V., and Schapira, A.H. (2000). Mitochondrial respiratory chain disorders I: mitochondrial DNA defects. *Lancet* 355, 299-304.

37. Melov, S. (2000). Mitochondrial oxidative stress. Physiologic consequences and potential for a role in aging. *Ann N Y Acad Sci* 908, 219-225.
38. Kagan, V.E., and Tyurina, Y.Y. (1998). Recycling and redox cycling of phenolic antioxidants. *Ann N Y Acad Sci* 854, 425-434.
39. Lopez, M.F., Kristal, B.S., Chernokalskaya, E., Lazarev, A., Shestopalov, A.I., Bogdanova, A., and Robinson, M. (2000). High-throughput profiling of the mitochondrial proteome using affinity fractionation and automation. *Electrophoresis* 21, 3427-3440.
40. Rabilloud, T., Kieffer, S., Procaccio, V., Louwagie, M., Courchesne, P.L., Patterson, S.D., Martinez, P., Garin, J., and Lunardi, J. (1998). Two-dimensional electrophoresis of human placental mitochondria and protein identification by mass spectrometry: toward a human mitochondrial proteome. *Electrophoresis* 19, 1006-1014.
41. Lopez, M.F., and Melov, S. (2002). Applied proteomics: mitochondrial proteins and effect on function. *Circ Res* 90, 380-389.
42. Zhang, R., Barker, L., Pinchev, D., Marshall, J., Rasamoeliso, M., Smith, C., Kupchak, P., Kireeva, I., Ingratta, L., and Jackowski, G. (2004). Mining biomarkers in human sera using proteomic tools. *Proteomics* 4, 244-256.
43. Chao, J., Stallone, J.N., Liang, Y.M., Chen, L.M., Wang, D.Z., and Chao, L. (1997). Kallistatin is a potent new vasodilator. *J Clin Invest* 100, 11-17.
44. Chao, J., Chai, K.X., Chen, L.M., Xiong, W., Chao, S., Woodley-Miller, C., Wang, L.X., Lu, H.S., and Chao, L. (1990). Tissue kallikrein-binding protein is a serpin. I. Purification, characterization, and distribution in normotensive and spontaneously hypertensive rats. *J Biol Chem* 265, 16394-16401.
45. Festing, M.F., and Blackmore, D.K. (1971). Life span of specified-pathogen-free (MRC category 4) mice and rats. *Lab Anim* 5, 179-192.
46. Klose, J. (1999). Fractionated extraction of total tissue proteins from mouse and human for 2-D electrophoresis. *Methods Mol Biol* 112, 67-85.
47. Klose, J. (1999). Large-gel 2-D electrophoresis. *Methods Mol Biol* 112, 147-172.
48. Jungblut, P.R., and Seifert, R. (1990). Analysis by high-resolution two-dimensional electrophoresis of differentiation-dependent alterations in cytosolic protein pattern of HL-60 leukemic cells. *J Biochem Biophys Methods* 21, 47-58.
49. Heukeshoven, H.D., R. (1985). Simplified method for silver staining of proteins in polyacrylamide gels and the mechanism of silver staining. *Electrophoresis*, 103-112.
50. Shevchenko, A., Wilm, M., Vorm, O., Mann, M. (1996). Mass spectrometric sequencing of proteins from silver stained polyacrylamide gels. *Analytical Chemistry*, 850-858.
51. Fenn, J.B., Mann, M., Meng, C.K., Wong, S.F., and Whitehouse, C.M. (1989). Electrospray ionization for mass spectrometry of large biomolecules. *Science* 246, 64-71.
52. Lin, D., Tabb, D.L., and Yates, J.R., 3rd (2003). Large-scale protein identification using mass spectrometry. *Biochim Biophys Acta* 1646, 1-10.
53. Hillenkamp, F., and Karas, M. (1990). Mass spectrometry of peptides and proteins by matrix-assisted ultraviolet laser desorption/ionization

- Laser desorption ionization of proteins with molecular masses exceeding 10,000 daltons. *Methods Enzymol* 193, 280-295.
54. Karas, M., and Hillenkamp, F. (1988). Laser desorption ionization of proteins with molecular masses exceeding 10,000 daltons. *Anal Chem* 60, 2299-2301.
  55. Hofmann, B., Hecht, H.J., and Flohe, L. (2002). Peroxiredoxins. *Biol Chem* 383, 347-364.
  56. Wood, Z.A., Schroder, E., Robin Harris, J., Poole, L.B., Hofmann, B., Hecht, H.J., and Flohe, L. (2003). Structure, mechanism and regulation of peroxiredoxins  
 Peroxiredoxins. *Trends Biochem Sci* 28, 32-40.
  57. Sze, S.K., Ge, Y., Oh, H., and McLafferty, F.W. (2002). Top-down mass spectrometry of a 29-kDa protein for characterization of any posttranslational modification to within one residue. *Proc Natl Acad Sci U S A* 99, 1774-1779.
  58. Zhang, L.Y., Ying, W.T., Mao, Y.S., He, H.Z., Liu, Y., Wang, H.X., Liu, F., Wang, K., Zhang, D.C., Wang, Y., Wu, M., Qian, X.H., and Zhao, X.H. (2003). Loss of clusterin both in serum and tissue correlates with the tumorigenesis of esophageal squamous cell carcinoma via proteomics approaches. *World J Gastroenterol* 9, 650-654.
  59. Das, K.C. (2004). Thioredoxin system in premature and newborn biology. *Antioxid Redox Signal* 6, 177-184.
  60. Aplin, J. (2000). Maternal influences on placental development. *Semin Cell Dev Biol* 11, 115-125.
  61. Grune, T. (2000). Oxidative stress, aging and the proteasomal system. *Biogerontology* 1, 31-40.
  62. Ji, L.L. (2001). Exercise at old age: does it increase or alleviate oxidative stress? *Ann N Y Acad Sci* 928, 236-247.
  63. Nose, K. (2000). Role of reactive oxygen species in the regulation of physiological functions. *Biol Pharm Bull* 23, 897-903.
  64. Reffelmann, T., and Kloner, R.A. (2003). Cellular cardiomyoplasty--cardiomyocytes, skeletal myoblasts, or stem cells for regenerating myocardium and treatment of heart failure? *Cardiovasc Res* 58, 358-368.
  65. Nadal-Ginard, B., Kajstura, J., Leri, A., and Anversa, P. (2003). Myocyte death, growth, and regeneration in cardiac hypertrophy and failure. *Circ Res* 92, 139-150.
  66. Demple, B. (1998). A bridge to control. *Science* 279, 1655-1656.
  67. Woo, H.A., Kang, S.W., Kim, H.K., Yang, K.S., Chae, H.Z., and Rhee, S.G. (2003). Reversible oxidation of the active site cysteine of peroxiredoxins to cysteine sulfinic acid. Immunoblot detection with antibodies specific for the hyperoxidized cysteine-containing sequence. *J Biol Chem* 278, 47361-47364.
  68. Moore, R.B., Mankad, M.V., Shriver, S.K., Mankad, V.N., and Plishker, G.A. (1991). Reconstitution of Ca(2+)-dependent K<sup>+</sup> transport in erythrocyte membrane vesicles requires a cytoplasmic protein. *J Biol Chem* 266, 18964-18968.
  69. Lee, K., Park, J.S., Kim, Y.J., Soo Lee, Y.S., Sook Hwang, T.S., Kim, D.J., Park, E.M., and Park, Y.M. (2002). Differential expression of Prx I and II in mouse testis and their up-regulation by radiation. *Biochem Biophys Res Commun* 296, 337-342.

70. Butterfield, L.H., Merino, A., Golub, S.H., and Shau, H. (1999). From cytoprotection to tumor suppression: the multifactorial role of peroxiredoxins. *Antioxid Redox Signal* *1*, 385-402.
71. Halliwell, B. (1994). Free radicals, antioxidants, and human disease: curiosity, cause, or consequence? *Lancet* *344*, 721-724.
72. Kumar, J.K., Tabor, S., and Richardson, C.C. (2004). Proteomic analysis of thioredoxin-targeted proteins in *Escherichia coli*. *Proc Natl Acad Sci U S A* *101*, 3759-3764.
73. Rabilloud, T., Berthier, R., Vincon, M., Ferbus, D., Goubin, G., and Lawrence, J.J. (1995). Early events in erythroid differentiation: accumulation of the acidic peroxidoxin (PRP/TSA/NKEF-B). *Biochem J* *312* ( Pt 3), 699-705.
74. Hoang, V.M., Foulk, R., Clauser, K., Burlingame, A., Gibson, B.W., and Fisher, S.J. (2001). Functional proteomics: examining the effects of hypoxia on the cytotrophoblast protein repertoire. *Biochemistry* *40*, 4077-4086.
75. Little, R.E., and Gladen, B.C. (1999). Levels of lipid peroxides in uncomplicated pregnancy: a review of the literature. *Reprod Toxicol* *13*, 347-352.
76. Matsubara, S., and Sato, I. (2001). Enzyme histochemically detectable NAD(P)H oxidase in human placental trophoblasts: normal, preeclamptic, and fetal growth restriction-complicated pregnancy. *Histochem Cell Biol* *116*, 1-7.
77. Walsh, S.W., and Wang, Y. (1993). Secretion of lipid peroxides by the human placenta. *Am J Obstet Gynecol* *169*, 1462-1466.
78. Gabbita, S.P., Robinson, K.A., Stewart, C.A., Floyd, R.A., and Hensley, K. (2000). Redox regulatory mechanisms of cellular signal transduction. *Arch Biochem Biophys* *376*, 1-13.
79. Finkel, T., and Holbrook, N.J. (2000). Oxidants, oxidative stress and the biology of ageing. *Nature* *408*, 239-247.
80. Bauer, G. (2002). Signaling and proapoptotic functions of transformed cell-derived reactive oxygen species. *Prostaglandins Leukot Essent Fatty Acids* *66*, 41-56.
81. Kamata, H., and Hirata, H. (1999). Redox regulation of cellular signalling. *Cell Signal* *11*, 1-14.
82. Evans, P., and Halliwell, B. (1999). Free radicals and hearing. Cause, consequence, and criteria. *Ann N Y Acad Sci* *884*, 19-40.
83. Rabilloud, T., Heller, M., Gasnier, F., Luche, S., Rey, C., Aebersold, R., Benahmed, M., Louisot, P., and Lunardi, J. (2002). Proteomics analysis of cellular response to oxidative stress. Evidence for in vivo overoxidation of peroxiredoxins at their active site. *J Biol Chem* *277*, 19396-19401.
84. Chevallet, M., Wagner, E., Luche, S., van Dorsselaer, A., Leize-Wagner, E., and Rabilloud, T. (2003). Regeneration of peroxiredoxins during recovery after oxidative stress: only some overoxidized peroxiredoxins can be reduced during recovery after oxidative stress. *J Biol Chem* *278*, 37146-37153.
85. Koo, K.H., Lee, S., Jeong, S.Y., Kim, E.T., Kim, H.J., Kim, K., Song, K., and Chae, H.Z. (2002). Regulation of thioredoxin peroxidase activity by C-terminal truncation. *Arch Biochem Biophys* *397*, 312-318.

86. Cha, M.K., Yun, C.H., and Kim, I.H. (2000). Interaction of human thiol-specific antioxidant protein 1 with erythrocyte plasma membrane. *Biochemistry* 39, 6944-6950.
87. Chang, T.S., Jeong, W., Choi, S.Y., Yu, S., Kang, S.W., and Rhee, S.G. (2002). Regulation of peroxiredoxin I activity by Cdc2-mediated phosphorylation. *J Biol Chem* 277, 25370-25376.
88. Schroder, E., Willis, A.C., and Ponting, C.P. (1998). Porcine natural-killer-enhancing factor-B: oligomerisation and identification as a calpain substrate in vitro. *Biochim Biophys Acta* 1383, 279-291.
89. Krapfenbauer, K., Engidawork, E., Cairns, N., Fountoulakis, M., and Lubec, G. (2003). Aberrant expression of peroxiredoxin subtypes in neurodegenerative disorders. *Brain Res* 967, 152-160.
90. Cumming, R.C., Andon, N.L., Haynes, P.A., Park, M., Fischer, W.H., and Schubert, D. (2004). Protein disulfide bond formation in the cytoplasm during oxidative stress. *J Biol Chem* 279, 21749-21758.
91. Poppek, D., and Grune, T. (2004). [Protein oxidation and proteolysis during cellular senescence]. *Z Gerontol Geriatr* 37, 175-183.
92. Grune, T., Shringarpure, R., Sitte, N., and Davies, K. (2001). Age-related changes in protein oxidation and proteolysis in mammalian cells. *J Gerontol A Biol Sci Med Sci* 56, B459-467.
93. Trougakos, I.P., and Gonos, E.S. (2002). Clusterin/apolipoprotein J in human aging and cancer. *Int J Biochem Cell Biol* 34, 1430-1448.
94. Kapron, J.T., Hilliard, G.M., Lakins, J.N., Tenniswood, M.P., West, K.A., Carr, S.A., and Crabb, J.W. (1997). Identification and characterization of glycosylation sites in human serum clusterin. *Protein Sci* 6, 2120-2133.
95. de Silva, H.V., Stuart, W.D., Duvic, C.R., Wetterau, J.R., Ray, M.J., Ferguson, D.G., Albers, H.W., Smith, W.R., and Harmony, J.A. (1990). A 70-kDa apolipoprotein designated ApoJ is a marker for subclasses of human plasma high density lipoproteins. *J Biol Chem* 265, 13240-13247.
96. de Silva, H.V., Stuart, W.D., Park, Y.B., Mao, S.J., Gil, C.M., Wetterau, J.R., Busch, S.J., and Harmony, J.A. (1990). Purification and characterization of apolipoprotein J. *J Biol Chem* 265, 14292-14297.
97. Jones, S.E., and Jomary, C. (2002). Clusterin. *Int J Biochem Cell Biol* 34, 427-431.
98. Yang, C.R., Leskov, K., Hosley-Eberlein, K., Criswell, T., Pink, J.J., Kinsella, T.J., and Boothman, D.A. (2000). Nuclear clusterin/XIP8, an x-ray-induced Ku70-binding protein that signals cell death. *Proc Natl Acad Sci U S A* 97, 5907-5912.
99. Poon, S., Easterbrook-Smith, S.B., Rybchyn, M.S., Carver, J.A., and Wilson, M.R. (2000). Clusterin is an ATP-independent chaperone with very broad substrate specificity that stabilizes stressed proteins in a folding-competent state. *Biochemistry* 39, 15953-15960.
100. Gleave, M., and Jansen, B. (2003). Clusterin and IGFbps as antisense targets in prostate cancer. *Ann N Y Acad Sci* 1002, 95-104.
101. Pucci, S., Bonanno, E., Pichiorri, F., Angeloni, C., and Spagnoli, L.G. (2004). Modulation of different clusterin isoforms in human colon tumorigenesis. *Oncogene* 23, 2298-2304.
102. Karow, J.K., Wu, L., and Hickson, I.D. (2000). RecQ family helicases: roles in cancer and aging. *Curr Opin Genet Dev* 10, 32-38.
103. Kumar, M.S., Carson, M., Hussain, M.M., and Murthy, H.M. (2002). Structures of apolipoprotein A-II and a lipid-surrogate complex provide

- insights into apolipoprotein-lipid interactions. *Biochemistry* 41, 11681-11691.
104. Holvoet, P., Peeters, K., Lund-Katz, S., Mertens, A., Verhamme, P., Quarck, R., Stengel, D., Lox, M., Deridder, E., Bernar, H., Nickel, M., Theilmeier, G., Ninio, E., and Phillips, M.C. (2001). Arg123-Tyr166 domain of human ApoA-I is critical for HDL-mediated inhibition of macrophage homing and early atherosclerosis in mice. *Arterioscler Thromb Vasc Biol* 21, 1977-1983.
  105. Castellani, L.W., and Lusis, A.J. (2001). ApoA-II versus ApoA-I: two for one is not always a good deal. *Arterioscler Thromb Vasc Biol* 21, 1870-1872.
  106. Davignon, J., Cohn, J.S., Mabile, L., and Bernier, L. (1999). Apolipoprotein E and atherosclerosis: insight from animal and human studies. *Clin Chim Acta* 286, 115-143.
  107. Stein, O., and Stein, Y. (1999). Atheroprotective mechanisms of HDL. *Atherosclerosis* 144, 285-301.
  108. Kelly, M.E., Clay, M.A., Mistry, M.J., Hsieh-Li, H.M., and Harmony, J.A. (1994). Apolipoprotein E inhibition of proliferation of mitogen-activated T lymphocytes: production of interleukin 2 with reduced biological activity. *Cell Immunol* 159, 124-139.
  109. Miyata, M., and Smith, J.D. (1996). Apolipoprotein E allele-specific antioxidant activity and effects on cytotoxicity by oxidative insults and beta-amyloid peptides. *Nat Genet* 14, 55-61.
  110. Heilbronn, L.K., Noakes, M., Morris, A.M., Kind, K.L., and Clifton, P.M. (2000). 360His polymorphism of the apolipoproteinA-IV gene and plasma lipid response to energy restricted diets in overweight subjects. *Atherosclerosis* 150, 187-192.
  111. Steinmetz, A., Barbaras, R., Ghalim, N., Clavey, V., Fruchart, J.C., and Ailhaud, G. (1990). Human apolipoprotein A-IV binds to apolipoprotein A-I/A-II receptor sites and promotes cholesterol efflux from adipose cells. *J Biol Chem* 265, 7859-7863.
  112. Arlt, S., Kontush, A., Muller-Thomsen, T., and Beisiegel, U. (2001). [Lipid peroxidation as a common pathomechanism in coronary heart disease and Alzheimer disease]. *Z Gerontol Geriatr* 34, 461-465.
  113. Navab, M., Anantharamaiah, G.M., Reddy, S.T., Van Lenten, B.J., Ansell, B.J., Fonarow, G.C., Vahabzadeh, K., Hama, S.Y., Hough, G.P., Kamranpour, N., Berliner, J.A., Lusis, A.J., and Fogelman, A.M. (2004). The oxidation hypothesis of atherogenesis: The role of oxidized phospholipids and HDL. *J Lipid Res*.
  114. Toth, M.J., Gardner, A.W., Arciero, P.J., Calles-Escandon, J., and Poehlman, E.T. (1998). Gender differences in fat oxidation and sympathetic nervous system activity at rest and during submaximal exercise in older individuals. *Clin Sci (Lond)* 95, 59-66.
  115. Blaak, E. (2001). Gender differences in fat metabolism. *Curr Opin Clin Nutr Metab Care* 4, 499-502.
  116. Kronenberg, F., Kuen, E., Ritz, E., Junker, R., Konig, P., Kraatz, G., Lhotta, K., Mann, J.F., Muller, G.A., Neyer, U., Riegel, W., Reigler, P., Schwenger, V., and Von Eckardstein, A. (2000). Lipoprotein(a) serum concentrations and apolipoprotein(a) phenotypes in mild and moderate renal failure. *J Am Soc Nephrol* 11, 105-115.

117. Paultre, F., Tuck, C.H., Boden-Albala, B., Kargman, D.E., Todd, E., Jones, J., Paik, M.C., Sacco, R.L., and Berglund, L. (2002). Relation of Apo(a) size to carotid atherosclerosis in an elderly multiethnic population. *Arterioscler Thromb Vasc Biol* 22, 141-146.
118. Lusis, A.J. (2000). Atherosclerosis. *Nature* 407, 233-241.
119. Zaman, A.G., Helft, G., Worthley, S.G., and Badimon, J.J. (2000). The role of plaque rupture and thrombosis in coronary artery disease. *Atherosclerosis* 149, 251-266.
120. Kronenberg, F., Kronenberg, M.F., Kiechl, S., Trenkwalder, E., Santer, P., Oberhollenzer, F., Egger, G., Utermann, G., and Willeit, J. (1999). Role of lipoprotein(a) and apolipoprotein(a) phenotype in atherogenesis: prospective results from the Bruneck study. *Circulation* 100, 1154-1160.
121. Kiechl, S., and Willeit, J. (1999). The natural course of atherosclerosis. Part II: vascular remodeling. Bruneck Study Group. *Arterioscler Thromb Vasc Biol* 19, 1491-1498.
122. Lomas, D.A., and Mahadeva, R. (2002). Alpha1-antitrypsin polymerization and the serpinopathies: pathobiology and prospects for therapy. *J Clin Invest* 110, 1585-1590.
123. Forsyth, S., Horvath, A., and Coughlin, P. (2003). A review and comparison of the murine alpha1-antitrypsin and alpha1-antichymotrypsin multigene clusters with the human clade A serpins. *Genomics* 81, 336-345.
124. Silverman, G.A., and Lomas, D.A. (2004). Serpin identification, production, and characterization. *Methods* 32, 71-72.
125. Potempa, J., Korzus, E., and Travis, J. (1994). The serpin superfamily of proteinase inhibitors: structure, function, and regulation. *J Biol Chem* 269, 15957-15960.
126. Silverman, G.A., Bird, P.I., Carrell, R.W., Church, F.C., Coughlin, P.B., Gettins, P.G., Irving, J.A., Lomas, D.A., Luke, C.J., Moyer, R.W., Pemberton, P.A., Remold-O'Donnell, E., Salvesen, G.S., Travis, J., and Whisstock, J.C. (2001). The serpins are an expanding superfamily of structurally similar but functionally diverse proteins. Evolution, mechanism of inhibition, novel functions, and a revised nomenclature. *J Biol Chem* 276, 33293-33296.
127. Desiderio, D.M., and Zhan, X. (2003). The human pituitary proteome: the characterization of differentially expressed proteins in an adenoma compared to a control. *Cell Mol Biol (Noisy-le-grand)* 49, 689-712.
128. Sellers, T.A., and Yates, J.R. (2003). Review of proteomics with applications to genetic epidemiology. *Genet Epidemiol* 24, 83-98.
129. Klose, J. (1999). Genotypes and phenotypes. *Electrophoresis* 20, 643-652.
130. Wilkins, M.R., Sanchez, J.C., Williams, K.L., and Hochstrasser, D.F. (1996). Current challenges and future applications for protein maps and post-translational vector maps in proteome projects. *Electrophoresis* 17, 830-838.
131. Papp-Jambor, C., Jaschinski, U., and Forst, H. (2002). [Cytochrome P450 enzymes and their role in drug interactions]. *Anaesthesist* 51, 2-15.
132. Chang, G.W., and Kam, P.C. (1999). The physiological and pharmacological roles of cytochrome P450 isoenzymes. *Anaesthesia* 54, 42-50.

133. Tanaka, E. (1999). Update: genetic polymorphism of drug metabolizing enzymes in humans. *J Clin Pharm Ther* 24, 323-329.
134. Cunliffe, M. (2001). Codeine phosphate in children: time for re-evaluation? *Br J Anaesth* 86, 329-331.
135. Thiery, J., and Teupser, D. (1998). [Genetic factors in the development of atherosclerosis]. *Z Kardiol* 87, 777-788.
136. Hellstern, P., Bach, J., Haubelt, H., Preiss, A., Winkelmann, B.R., and Senges, J. (2001). [Gene polymorphisms of hemostasis and coronary risk]. *Med Klin (Munich)* 96, 217-227.
137. Braunstein, J.B., Kershner, D.W., Bray, P., Gerstenblith, G., Schulman, S.P., Post, W.S., and Blumenthal, R.S. (2002). Interaction of hemostatic genetics with hormone therapy: new insights to explain arterial thrombosis in postmenopausal women. *Chest* 121, 906-920.
138. Mahley, R.W., Hui, D.Y., Innerarity, T.L., and Beisiegel, U. (1989). Chylomicron remnant metabolism. Role of hepatic lipoprotein receptors in mediating uptake. *Arteriosclerosis* 9, 114-18.
139. Puglielli, L., Tanzi, R.E., and Kovacs, D.M. (2003). Alzheimer's disease: the cholesterol connection. *Nat Neurosci* 6, 345-351.
140. Luc, G., Bard, J.M., Arveiler, D., Evans, A., Cambou, J.P., Bingham, A., Amouyel, P., Schaffer, P., Ruidavets, J.B., Cambien, F., and et al. (1994). Impact of apolipoprotein E polymorphism on lipoproteins and risk of myocardial infarction. The ECTIM Study. *Arterioscler Thromb* 14, 1412-1419.
141. Utermann, G., Hardewig, A., and Zimmer, F. (1984). Apolipoprotein E phenotypes in patients with myocardial infarction. *Hum Genet* 65, 237-241.
142. Strittmatter, W.J., Saunders, A.M., Schmechel, D., Pericak-Vance, M., Enghild, J., Salvesen, G.S., and Roses, A.D. (1993). Apolipoprotein E: high-avidity binding to beta-amyloid and increased frequency of type 4 allele in late-onset familial Alzheimer disease. *Proc Natl Acad Sci U S A* 90, 1977-1981.
143. Herz, J., and Beffert, U. (2000). Apolipoprotein E receptors: linking brain development and Alzheimer's disease. *Nat Rev Neurosci* 1, 51-58.
144. Schachter, F., Faure-Delanef, L., Guenot, F., Rouger, H., Froguel, P., Lesueur-Ginot, L., and Cohen, D. (1994). Genetic associations with human longevity at the APOE and ACE loci. *Nat Genet* 6, 29-32.
145. Koochmeshgi, J., Hosseini-Mazinani, S.M., Morteza Seifati, S., Hosein-Pur-Nobari, N., and Teimoori-Toolabi, L. (2004). Apolipoprotein E Genotype and Age at Menopause. *Ann N Y Acad Sci* 1019, 564-567.
146. Halliwell, B. (1994). Free radicals and antioxidants: a personal view. *Nutr Rev* 52, 253-265.
147. Yagi, T., Seo, B.B., Di Bernardo, S., Nakamaru-Ogiso, E., Kao, M.C., and Matsuno-Yagi, A. (2001). NADH-Dehydrogenases: from basic science to biomedicine. *J Bioenerg Biomembr* 33, 233-242.
148. Lopez Farre, A., and Casado, S. (2001). Heart failure, redox alterations, and endothelial dysfunction. *Hypertension* 38, 1400-1405.
149. Griendling, K.K., Sorescu, D., and Ushio-Fukai, M. (2000). NAD(P)H oxidase: role in cardiovascular biology and disease. *Circ Res* 86, 494-501.
150. Cai, H., and Harrison, D.G. (2000). Endothelial dysfunction in cardiovascular diseases: the role of oxidant stress. *Circ Res* 87, 840-844.

151. Hohler, B., Holzapfel, B., and Kummer, W. (2000). NADPH oxidase subunits and superoxide production in porcine pulmonary artery endothelial cells. *Histochem Cell Biol* 114, 29-37.
152. Ueda, Y., Duncan, M.K., and David, L.L. (2002). Lens proteomics: the accumulation of crystallin modifications in the mouse lens with age. *Invest Ophthalmol Vis Sci* 43, 205-215.
153. Lampi, K.J., Shih, M., Ueda, Y., Shearer, T.R., and David, L.L. (2002). Lens proteomics: analysis of rat crystallin sequences and two-dimensional electrophoresis map. *Invest Ophthalmol Vis Sci* 43, 216-224.
154. Cho, Y.M., Bae, S.H., Choi, B.K., Cho, S.Y., Song, C.W., Yoo, J.K., and Paik, Y.K. (2003). Differential expression of the liver proteome in senescence accelerated mice. *Proteomics* 3, 1883-1894.