6 Literaturverzeichnis

1. www.onkologiepartner.de
2. www.krebshilfe.de, Deutsche Krebshilfe
3. N. N.: *Tumorätiologie - Zellen außer Rand und Band*, Dtsch. Apoth. Ztg., **16**, 39-40, (2005)
4. Medinger, M.; Soltau, J.; Unger, C.; Drevs, J.: *Rezeptor-Tyrosinkinasen,* Med. Monatsschr. Pharm., **27**, 50-58, (2004)
5. Ullrich, A.; Coussens, L.; Hayflick, J. S.; Dull, T. J.; Gray, A.; Tam, A. W.; Lee, J.; Yarden, Y.; Libermann, T. A.; Schlessinger, J.; Downyard, J.; Mayes, E. L. V.; Whittle, N.; Waterfield, M. D.; Seeburg, P. H.: *Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene in A431 epidermoid carcinoma cells,* Nature, **309**, 418-425, (1984)
6. Downyard, J.; Yarden, Y.; Mayes, E.; Scrace, G.; Totty, N.; Stockwell, P.; Ullrich, A.; Schlessinger, J.; Waterfield, M.D.: *Close similarity of epidermal growth factor receptor and v-erb-B oncogene protein sequences,* Nature, **307**, 521-527, (1984)
7. Schlessinger, J.: *Cell signaling by receptor tyrosine kinases,* Cell, **103**, 211-225, (2000)
8. www.lungenkarzinom-info.de/aerzte
9. Salomon, D.; Gullick, W.: *The ErbB family of receptors and their ligands: multiple targets for therapy,* Signal, **2**, 4-11, (2001)
10. Riese D. J.; Stern, D.F.: *Specificity within the EGF family/ErbB receptor family signaling network,* BioEssays, **20**, 41-48, (1998)
11. Wells, A.: *EGF receptor,* Int. J. Biochem. Cell Biol., **31**, 637-643, (1999)
12. Stryer, L.: *Biochemie*, Spektrum der Wissenschaft Verlagsgesellschaft mbH, Heidelberg, **5. Auflage**, 1035, (1990)
13. Tibes, R.; Trent, J.; Kurzrock, R.: *Tyrosine kinase inhibitors and the dawn of molecular cancer therapeutics*, Annu. Rev. Pharmacol. Toxicol., **45**, 357-385, (2005)
14. N. N: *Kinasen gezielt angreifen,* Pharm. Ztg., **25**, 2094, (2004)
15. Ullrich, A.; Schlessinger, J.: *Signal Transduction by Receptors with Tyrosine Kinase-Activity*, Cell, **61**, 203-212, (1990)
16. Oda, K.; Matsuoka, Y.; Funahashi, A.; Kitano, H.: *A comprehensive pathway map of epidermal growth factor receptor signaling,* Mol. Syst. Biol., E1-E17, (2005)

17. Deb, T. B., Su, L., Wong, L., Bonvini, E., Wells, A., David, M., Johnson, G. R.: *Epidermal growth factor (EGF) receptor kinase-independent signaling by EGF,* J. Biol. Chem., **276**, 15554-15560, (2001)
18. Yarden, Y.; *The EGFR family and its ligands in human cancer: signalling mechanisms and therapeutic opportunities*, Eur. J. Cancer, **37**, 3-8, (2001)
19. Wells, A.: *The epidermal growth factor receptor (EGFR) - a new target in cancer therapy.* Signal, **1**, 4-11, (2000)
20. Van der Geer, P.; Hunter, T.; Lindberg, R. A.: *Receptor Protein-Tyrosine Kinases and Their Signal-Transduction Pathways,* Annu. Rev. Cell Biol., **10**, 251-337, (1994)
21. Sorbera, L.A.; Bozzo, J.; Bayes, M.: *Matuzumab,* Drugs Fut., **30**, 240-247, (2005)
22. Alberts, B.; Brey, D.; Lewis, J.; Raff, M.; Roberts, K.; Watson, J.: *Molekularbiologie der Zelle*, VHC Verlagsgesellschaft mbH, Weinheim · New York · Basel · Cambridge · Tokyo, **3. Auflage**, 896-910, (1995)
23. Lenferink, A.E.G.; Pinkas-Kramarski, R.; Van de Poll, M. L. M.; Van Vugt, M. J. H.; Klapper, L. N.; Tzahar, E.; Watermann, H.; Sela, M.; Van Zoelen, E. J. J.; Yarden, Y.: *Differential endocytic routing of homo- and hetero-dimeric ErbB tyrosine kinases confers signaling superiority to receptor heterodimers,* EMBO J., **17**, 3385-3397, (1998)
24. Sedlacek, H.H.: *Kinase inhibitors in cancer therapy - A look ahead*, Drugs, **59**, 435-476, (2000)
25. Koolman, J.; Röhm, K.-H.: *Taschenatlas der Biochemie*, Georg Thieme Verlag Stuttgart · New York, **2. Auflage**, 366, (1998)
26. Koolman, J.; Röhm, K.-H.: *Taschenatlas der Biochemie*, Georg Thieme Verlag Stuttgart · New York, **2. Auflage**, 376, (1998)
27. Pederson, M.W.; Poulson, H. S.: *Epidermal Growth Factor Receptor in Cancer Therapy,* Science & Medicine, **8**, 206, (2000)
28. Mamot, C.; Rochlitz, C. F.: *Iressa ™, Tarceva ™ and Erbitux ™ - Medikamente einer neuen Generation,* Nova - Schweiz Med Forum, **5**, 475-479, (2005)
29. Wasielewski, S.: *Cetuximab,* Med. Monatsschr. Pharm., **27**, 292-294, (2004)
30. Perez-Soler, R., Chachoua, A., Hammond, L. A., Rowinsky, E. K., Huberman, M., Karp, D., Rigas, J., Clark, G. M., Santabarbara, P., Bonomi, P.: *Determinants of tumor response and survival with erlotinib in patients with non-small-cell lung cancer,* J. Clin. Oncol., **22**, 3238-3247, (2004)
31. N. N: *FDA "friert" Zulassung von Gefitinib ein,* Dtsch. Arztebl., **25**, (2005)
32. N. N.: *Erlotinib,* Dtsch. Apoth. Ztg., Beil.: Neue Arzneimittel, **12**, 135-140, (2005)
33. Burris, H.A.: *Dual kinase inhibition in the treatment of breast cancer: Initial experience with the EGFR/ErbB-2 inhibitor lapatinib,* Oncologist, **9**, 10-15, (2004)

34. Wood, E. R., Truesdale, A. T., McDonald, O. B., Yuan, D., Hassell, A., Dickerson, S. H., Ellis, B., Pennisi, C., Horne, E., Lackey, K., Alligood, K. J., Rusnak, D. W., Gilmer, T. M., Shewchuk, L.: *A unique structure for epidermal growth factor receptor bound to GW572016 (Lapatinib): Relationships among protein conformation, inhibitor off-rate, and receptor activity in tumor cells,* Cancer Res., **64**, 6652-6659, (2004)

35. Witzel, S.: *Synthesen und Pharmakologie neuer Chromanol-, Isoflavon- und Indolderivate*, Dissertation, Freie Universität Berlin, (1999)

36. Traxler, P., et al.: *Use of a pharmacophore model for the design of EGFR tyrosine kinase inhibitors: Isoflavones and 3-phenyl-4(1H)-quinolones,* J. Med. Chem., **42**, 1018-1026, (1999)

37. Albuschat, R: *Neue EGFR-Tyrosinkinase-Inhibitoren mit Salicyloyl- oder Chinazolin-Teilstrukturen*, Dissertation, Freie Universität Berlin, (2003)

38. Hodge, C.N.; Pierce, J.: *A Diazine Heterocycle Replaces a 6-Membered Hydrogen-Bonded Array in the Active-Site of Scytalone Dehydratase,* Bioorgan. Med. Chem. Lett., **3**, 1605-1608, (1993)

39. Ward, W.H.J.: *Epidermal Growth-Factor Receptor Tyrosine Kinase - Investigation of Catalytic Mechanism, Structure-Based Searching and Discovery of a Potent Inhibitor,* Biochem. Pharmacol., **48**, 659-666, (1994)

40. Fry, D.W., et al.: *A Specific Inhibitor of the Epidermal Growth-Factor Receptor Tyrosine Kinase,* Science, **265**, 1093-1095, (1994)

41. Nicholson, R.I.; Gee, J. M. W.; Barrow, D.; McClelland, R. A.: *Endocrine resistance in breast cancer can involve a switch towards EGFR signaling pathway and a gain of sensitivity to an EGFR-selective tyrosine kinase inhibitor, ZD1839*, Clin. Cancer Res., **5**, 740, (1999)

42. Hou, T.J., et al.: *Mapping the binding site of a large set of quinazoline type EGF-R inhibitors using molecular field analyses and molecular docking studies,* J. Chem. Inf. Comp. Sci., 2003, **43**, 273-287, (2003)

43. Myers, M.R.; Spada, A. P.; Maguire, M. P.; Persons, P. E.: *Protein tyrosine kinase aryl and heteroaryl quinazoline compounds having selective inhibition of HER-2 autophosphorylation properties*, World patent application, WO 96/39145, (1996)

44. Bridges, A.J.: *Chemical Inhibitors of Protein Kinases,* Chem. Rev., **101**, 2541-2571, (2001)

45. March, J.; Smith, M. B.: *March´s Advanced Organic Chemistry*., John Wiley & Sons INC., New York · Chichester · Weinheim · Brisbane · Singapore · Toronto, **5. Auflage** 535-929, (2001)

46. Myers, M.R.; Spada, A. P.; Maguire, M. P.; Persons, P. E.; Zilberstein, A.; Hsu, C.-Y.; Johnson, S. E.: *Aryl and heteroaryl quinazoline compounds which inhibit CSF-1R receptor tyrosine kinase*, World patent application, WO 95/15758, (1995)

47. Spada, A.P.; Myers, M. R.; Maguire, M. P.; Persons, P. E.: *Bis mono- and bicyclic aryl and heteroaryl compounds which inhibit EGF and/or PDGF receptor tyrosine kinase*, United States Patent, Nr. 5,480,883, (1996)

48. Bailey, T.R.: *Unsymmetrical Heterobiaryl Synthesis - a Highly Efficient Palladium-Catalyzed Cross-Coupling Reaction of Heteroaryl Trialkylstannanes with Aryl Halides,* Tetrahedron Lett., **27**, 4407-4410, (1986)

49. Saa, J.M.;Martorell, G.: *Palladium-Catalyzed Cross-Coupling Synthesis of Hindered Biaryls and Terphenyls - Cocatalysis by Copper(I) Salts,* J. Org. Chem., **58**,1963-1966, (1993)

50. Yamamoto, Y.; Yanagi, A.: *Studies on Organo-Metallic Compounds .2. Facile and Convenient Method for the Synthesis of Iodoazines through Iododestannation of Trimethylstannylazines,* Chem. Pharm. Bull., **30**, 1731-1737, (1982)

51. Houlihan, W.J.: *The chemistry of heterocyclic compounds - Indoles Part Two*, John Wiley & Sons INC., New York · London · Sydney · Toronto, **1. Auflage**, 143-153, (1972)

52. March, J.; Smith, M. B.: *March´s Advanced Organic Chemistry*., John Wiley & Sons, INC., New York · Chichester · Weinheim · Brisbane · Singapore · Toronto, **5. Auflage**, 234-237, (2001)

53. Buddrus, J., *Grundlagen der Organischen Chemie*, Walter de Gruyter GmbH & Co KG, Berlin · New York, **3. Auflage**, 415-421, (2003)

54. Coffey, S.; Livingstone, R.: *Rodd´s chemistry of carbon compounds*, Elsevier Scientific Publishing Company, Amsterdam · London · New York, **2. Auflage**, 397-420, (1973)

55. Millar, I.T.; Springall, H. D.: *Sidwick´s organic chemistry of nitrogen*, Clarendon Press., Oxford, **3. Auflage**, 642-650, (1966)

56. Kikelj, D.; Ramzaeva, N.; Rosemeyer, H.; Seela, F.; Urleb, U.: *Methods of Organic Chemistry*, Georg Thieme Verlag, Stuttgart · New York, **4. Auflage**, E9b/2,120, (1998)

57. Elschenbroich, C.: *Organometallchemie*, B. G. Teubner Verlag, Wiesbaden, **4. Auflage**, 61-69, (2003)

58. Barker, A.J.: *Qiunazoline Derivatives*, Europäisches Patentamt, Pat.-Nr.: EP 0566226, (1993)

59. Nicholson, R. I., McClelland, R. A., Robertson, J. F. R., Gee, J. M. W..: *Involvement of steroid hormone and growth factor cross-talk in endocrine response in breast cancer,* Endocr. Rel. Cancer, **6**, 373-387, (1999)

60. Nicholson, R. I., Hutcheson, I. R., Harper, M. E., Knowlden, J. M., Barrow, D., McClelland, R. A., Jones, H. E., Wakeling, A. E., Gee, J. M. W.: *Modulation of epidermal growth factor receptor in endocrine-resistant, oestrogen receptor-positive breast cancer,* Endocr. Rel. Cancer, **8**, 175-182, (2001)

61. Mueller, H., Loop, P., Liu, R., Wosikowski, K., Kueng, W., Eppenberger, U.: Differential Signal-Transduction of Epidermal-Growth-Factor Receptors in Hormone-Dependent and Hormone-Independent Human Breast-Cancer Cells, Eur. J. Biochem., **221**, 631-637, (1994)

62. Nicholson, R. I., Gee, J. M. W., Knowlden, J., McClelland, R., Madden, T. A., Barrow, D., Hutcheson, I.: *The biology of antihormone failure in breast cancer,* Breast Cancer Res. Treat., **80**, 29-34, (2003)

63. Faull, A.W.; Kettle, J.: *Anti-inflammatory indole derivatives*, Europäisches Patentamt, Pat.-Nr.: 6569888, (2003)

64. Boes, M.: *Indole derivatives*, Europäisches Patentamt, Pat.-Nr.: 5494928, (1996)

65. Kondo, K., Morohoshi, S., Mitsuhashi, M., Murakami, Y.: Synthetic utility of tert-butyl azidoacetate on the Hemetsberger-Knittel reaction (synthetic studies of indoles and related compounds part 47), Chem. Pharm. Bull., **47**, 1227-1231, (1999)

66. Soderberg, B.C.G.: *Synthesis of heterocycles via intramolecular annulation of nitrene intermediates,* Curr. Org. Chem., **4**, 727-764, (2000)

67. Buddrus, J.: *Grundlagen der Organischen Chemie*, Walter de Gruyter GmbH & Co KG., Berlin · New York, **3. Auflage**, 561-569, (2003)

68. Knittel, D.: *Verbesserte Synthese von a-Azidozimtsäureestern und 2H-Azirinen,* Synthesis,**186**, (1985)

69. Isomura, K.; Kobayash, S.; Taniguch, H.: *Indole Formation by Pyrolysis of Beta-Styrylazides,* Tetrahedron Lett., **31**, 3499-3502, (1968)

70. www.olympusfluoview.com, *Fluorescence Excitation and Emission Fundamentals*, (2005)

71. Rücker, G.; Neugebauer, M.; Willems, G.G.: *Instrumentelle pharmazeutische Analytik*, Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, **2. Auflage**, 102-108, (1992)

72. Traxler, P.: *Tyrosine kinase inhibitors in cancer treatment (part II),* Exp. Op. Ther. Pat., **8**, 1599-1625, (1998)

73. Kitchen, D.B.; Reich, M. F.; Wissner, A.; Tsou, H.-R.; Floyd, M. B.; Johnson, B. D.: *Substituted 3-Cyano Quinazolines*, World patent application, WO 9843960, (1998)

74. Brückner, R.: *Reaktionsmechanismen*, Elsevier GmbH, Spektrum Akademischer Verlag, München, **3. Auflage**, 203-205, (2004)

75. Irie, H.; Fujii, N.; Ogawa, H.; Yajima, H.; Fujino, M.; Shinagawa, S.: *Role of Methionine in the Facilitated Cleavage of Aromatic Ethers by Methanesulphonic Acid,* J. Chem. Soc., Chem. Commun., 922-923, (1976)

76. Fujii, N.; Irie H.; Yajima, H.: *Regioselective Cleavage of Aromatic Methyl Ethers by Methanesulphonic Acid in Presence of Methionine,* J. Chem. Soc., Perkin Trans. 1, **20**, 2288-2289, (1977)

77. Greene, T.W.; Wuts, P. G. M.: *Protective Groups in Organic Synthesis*, John Wiley & Sons, Inc., New York · Chichester · Brisbane · Toronto · Singapore, **2. Auflage**, 88, (1991)

78. Buddrus, J.: *Grundlagen der Organischen Chemie*, Walter de Gruyter GmbH & Co KG., Berlin · New York, **3. Auflage**, 749, (2003)

79. Greene, T.W.; Wuts, P. G. M.: *Protective Groups in Organic Synthesis*, John Wiley & Sons., New York · Chichester · Brisbane · Toronto · Singapore, **2. Auflage**, 326, (1991)

80. Brückner, R.: *Reaktionsmechanismen*, Elsevier GmbH, Spektrum Akademischer Verlag, München, **3. Auflage**, 288-308, (2004)

81. Buddrus, J.: *Grundlagen der Organischen Chemie*, Walter de Gruyter GmbH & Co KG., Berlin · New York, **3. Auflage**, 556-561, (2003)

82. March, J.; Smith, M. B.: *March´s Advanced Organic Chemistry*, John Wiley & Sons INC., New York · Chichester · Weinheim · Brisbane · Singapore · Toronto, **5. Auflage**, 471, (2001)

83. Rücker, G.; Neugebauer, M.; Willems, G.G.: *Instrumentelle pharmazeutische Analytik*, Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, **2. Auflage**, 200-238, (1992)

84. Röllgen, F.W.: *"Fast Atom Bombardment" - Massenspektrometrie,* Nachr. Chem. Tech. Lab., **31**, 1-4, (1983)

85. Falbe, J.; Regitz, M.; *CD Römpp Chemie Lexikon*, Georg Thieme Verlag, Stuttgart · New York, **9. Auflage**, (1995)

86. Wood, E. R., Truesdale, A. T., McDonald, O. B., Yuan, D., Hassell, A., Dickerson, S. H., Ellis, B., Pennisi, C., Horne, E., Lackey, K., Alligood, K. J., Rusnak, D. W., Gilmer, T. M.: *A unique structure for epidermal growth factor receptor bound to GW572016 (Lapatinib): Relationships among protein conformation, inhibitor off-rate, and receptor activity in tumor cells,* Cancer Res., **64**, 6652-6659, (2004)

87. Wissner, A., Berger, D. M., Boschelli, D. H., Floyd, M. B., Greenberger, L. M., Gruber, B. C., Johnson, B. D., Mamuya, N., Nilakantan, R., Reich, M. F., Shen, R.,

Tsou, H. R., Upeslacis, E., Wang, Y. F., Wu, B. Q., Ye, F., Zhang, N.: *4-Anilino-6,7-dialkoxyquinolime-3-carbonitrile inhibitors of epidermal growth factor receptor kinase and their bioisosteric relationship to the 4-anilino-6,7-dialkoxyquinazoline inhibitors,* J. Med. Chem., **43**, 3244-3256, (2000)

88. Hou, T. J., Zhu, L. L., Chen, L. R., Xu, X. J.: Mapping the binding site of a large set of quinazoline type EGF-R inhibitors using molecular field analyses and molecular docking studies, J. Chem. Inf. Comput. Sci., **43**, 273-287, (2003)
89. Landau, M.; S.J. Fleishman; Ben-Tal, N.: *A putative mechanism for downregulation of the catalytic activity of the EGF receptor via direct contact between its kinase and C-terminal domains,* Structure, **12**, 2265-2275, (2004)
90. Stamos, J.; Sliwkowski, M.X.; Eigenbrot C.: *Structure of the epidermal growth factor receptor kinase domain alone and in complex with a 4-anilinoquinazoline inhibitor,* J. Biol. Chem., **277**, 46265-46272, (2002)
91. Müller, G.; Klebl, B.: *Mainzer Forum Medizinische Chemie (Veranst.), Small molecule kinase inhibitors: a chemogenomics opportunity,* Kurzfassungen der Vorträge im Rahmen des Mainzer Forums Medizinische Chemie, 6-9, (2003)
92. Günther, G.: *NMR-Spektroskopie*, Georg Thieme Verlag, Stuttgart, 192-198, (1992)
93. Geissler, J.F., et al.: *Thiazolidine-Diones - Biochemical and Biological-Activity of a Novel Class of Tyrosine Protein-Kinase Inhibitors,* J. Biol. Chem., **265**, 22255-22261, (1990)
94. Wedegaertner, P.B., Gill, G.N.: *Activation of the Purified Protein Tyrosine Kinase Domain of the Epidermal Growth-Factor Receptor,* J. Biol. Chem., **264**, 11346-11353 (1989)
95. Yaish, P.: *Blocking of EGF-Dependent Cell-Proliferation by EGF-Receptor Kinase Inhibitors,* Science, **242**, 933-935, (1988)
96. Chi-Lien, C.M.P.S., Taiwan R.O.C., Mitteilung
97. Bergemann, S.: persönliche Mitteilung
98. Schmidt, K.: *Struktur-Wirkungs-Studien an estrogen wirksamen 1,2-Diarylethan-derivaten sowie an antitumoraktiven Acetylenhexacarbonyl-dikobaltkomplexen*, Dissertation, Freie Universität Berlin, (2000)