

## 8. Literatur

Acquati F, Accarino, M, Nucci, C, Fumagalli, P, Jovine, L, Ottolenghi, S and Taramelli, R, (2000). The gene encoding DRAP (BACE2), a glycosylated transmembrane protein of the aspartic protease family, maps to the down critical region.

*FEBS Lett.* **468** (1), 59-64

Angeletti A, Waldron, KJ, Freeman, KB, Bawagan, H, Hussain, I, Miller, CC, Lau, KF, Tennant, ME, Dennison, C, Robinson, NJ and Dingwall, C, (2004). BACE1 cytoplasmic domain interacts with the copper chaperone for superoxide dismutase-1 and binds copper.

*unpubliziertes Manuskript.*

Annaert W and De Strooper, B, (2002). A cell biological perspective on Alzheimer's disease.

*Annu Rev Cell Dev Biol.* **18** 25-51

Barnham KJ, McKinstry, WJ, Multhaup, G, Galatis, D, Morton, CJ, Curtain, CC, Williamson, NA, White, AR, Hinds, MG, Norton, RS, Beyreuther, K, Masters, CL, Parker, MW and Cappai, R, (2003). Structure of the Alzheimer's disease amyloid precursor protein copper binding domain. A regulator of neuronal copper homeostasis.

*J Biol Chem.* **278** (19), 17401-17407

Bayer TA, Cappai, R, Masters, CL, Beyreuther, K and Multhaup, G, (1999). It all sticks together--the APP-related family of proteins and Alzheimer's disease.

*Mol Psychiatry.* **4** (6), 524-528

Bayer TA, Schafer, S, Simons, A, Kemmling, A, Kamer, T, Tepest, R, Eckert, A, Schussel, K, Eikenberg, O, Sturchler-Pierrat, C, Abramowski, D, Staufenbiel, M and Multhaup, G, (2003). Dietary Cu stabilizes brain superoxide dismutase 1 activity and reduces amyloid Abeta production in APP23 transgenic mice.

*Proc Natl Acad Sci U S A.* **100** (24), 14187-14192

Benjannet S, Elagoz, A, Wickham, L, Mamarbachi, M, Munzer, JS, Basak, A, Lazure, C, Cromlish, JA, Sisodia, S, Checler, F, Chretien, M and Seidah, NG, (2001). Post-translational processing of beta-secretase (beta-amyloid-converting enzyme) and its ectodomain shedding. The pro- and transmembrane/cytosolic domains affect its cellular activity and amyloid-beta production.

*J Biol Chem.* **276** (14), 10879-10887

Bennett BD, Denis, P, Haniu, M, Teplow, DB, Kahn, S, Louis, JC, Citron, M and Vassar, R, (2000). A furin-like convertase mediates propeptide cleavage of BACE, the Alzheimer's beta -secretase.

*J Biol Chem.* **275** (48), 37712-37717

Borchardt T, Camakaris, J, Cappai, R, Masters, CL, Beyreuther, K and Multhaup, G, (1999). Copper inhibits beta-amyloid production and stimulates the non-amyloidogenic pathway of amyloid-precursor-protein secretion.

*Biochem J.* **344 Pt 2** 461-467

- Braak H and Braak, E, (1991). Neuropathological stageing of Alzheimer-related changes.  
*Acta Neuropathol (Berl)*. **82** (4), 239-259
- Bruinzeel W, Yon, J, Giovannelli, S and Masure, S, (2002). Recombinant insect cell expression and purification of human beta-secretase (BACE-1) for X-ray crystallography.  
*Protein Expr Purif.* **26** (1), 139-148
- Bush AI, Multhaup, G, Moir, RD, Williamson, TG, Small, DH, Rumble, B, Pollwein, P, Beyreuther, K and Masters, CL, (1993). A novel zinc(II) binding site modulates the function of the beta A4 amyloid protein precursor of Alzheimer's disease.  
*J Biol Chem.* **268** (22), 16109-16112
- Bush AI, (2003). The metallobiology of Alzheimer's disease.  
*Trends Neurosci.* **26** (4), 207-214
- Cai H, Wang, Y, McCarthy, D, Wen, H, Borchelt, DR, Price, DL and Wong, PC, (2001). BACE1 is the major beta-secretase for generation of Abeta peptides by neurons.  
*Nat Neurosci.* **4** (3), 233-234
- Cai XD, Golde, TE and Younkin, SG, (1993). Release of excess amyloid beta protein from a mutant amyloid beta protein precursor.  
*Science.* **259** (5094), 514-516
- Cao X and Sudhof, TC, (2001). A transcriptionally [correction of transcriptively] active complex of APP with Fe65 and histone acetyltransferase Tip60.  
*Science.* **293** (5527), 115-120
- Capell A, Steiner, H, Willem, M, Kaiser, H, Meyer, C, Walter, J, Lammich, S, Multhaup, G and Haass, C, (2000). Maturation and pro-peptide cleavage of beta-secretase.  
*J Biol Chem.* **275** (40), 30849-30854
- Coulson EJ, Paliga, K, Beyreuther, K and Masters, CL, (2000). What the evolution of the amyloid protein precursor supergene family tells us about its function.  
*Neurochem Int.* **36** (3), 175-184
- Creemers JW, Ines Dominguez, D, Plets, E, Serneels, L, Taylor, NA, Multhaup, G, Craessaerts, K, Annaert, W and De Strooper, B, (2001). Processing of beta-secretase by furin and other members of the proprotein convertase family.  
*J Biol Chem.* **276** (6), 4211-4217
- Cruts M, Dermaut, B, Rademakers, R, Roks, G, Van den Broeck, M, Munteanu, G, van Duijn, CM and Van Broeckhoven, C, (2001). Amyloid beta secretase gene (BACE) is neither mutated in nor associated with early-onset Alzheimer's disease.  
*Neurosci Lett.* **313** (1-2), 105-107
- De Strooper B and Konig, G, (2001). An inflammatory drug prospect.  
*Nature.* **414** (6860), 159-160

Dickson DW, Crystal, HA, Bevona, C, Honer, W, Vincent, I and Davies, P, (1995). Correlations of synaptic and pathological markers with cognition of the elderly. *Neurobiol Aging.* **16** (3), 285-298; discussion 298-304

Dunn BM, (2002). Structure and mechanism of the pepsin-like family of aspartic peptidases. *Chem Rev.* **102** (12), 4431-4458

Farzan M, Schnitzler, CE, Vasilieva, N, Leung, D and Choe, H, (2000). BACE2, a beta -secretase homolog, cleaves at the beta site and within the amyloid-beta region of the amyloid-beta precursor protein.

*Proc Natl Acad Sci U S A.* **97** (17), 9712-9717

Fischer F, Molinari, M, Bodendorf, U and Paganetti, P, (2002). The disulphide bonds in the catalytic domain of BACE are critical but not essential for amyloid precursor protein processing activity.

*J Neurochem.* **80** (6), 1079-1088

Fluhrer R, Multhaup, G, Schlicksupp, A, Okochi, M, Takeda, M, Lammich, S, Willem, M, Westmeyer, G, Bode, W, Walter, J and Haass, C, (2003). Identification of a beta-secretase activity, which truncates amyloid beta-peptide after its presenilin-dependent generation.

*J Biol Chem.* **278** (8), 5531-5538

Fukumoto H, Rosene, DL, Moss, MB, Raju, S, Hyman, BT and Irizarry, MC, (2004). Beta-secretase activity increases with aging in human, monkey, and mouse brain. *Am J Pathol.* **164** (2), 719-725

Furnham N, Ruffle, S and Southan, C, (2004). Splice variants: a homology modeling approach.

*Proteins.* **54** (3), 596-608

Glenner GG and Wong, CW, (1984). Alzheimer's disease: initial report of the purification and characterization of a novel cerebrovascular amyloid protein.

*Biochem Biophys Res Commun.* **120** (3), 885-890

Goedert M and Spillantini, MG, (2000). Tau mutations in frontotemporal dementia FTDP-17 and their relevance for Alzheimer's disease.

*Biochim Biophys Acta.* **1502** (1), 110-121

Gong Y, Chang, L, Viola, KL, Lacor, PN, Lambert, MP, Finch, CE, Krafft, GA and Klein, WL, (2003). Alzheimer's disease-affected brain: presence of oligomeric A beta ligands (ADDLs) suggests a molecular basis for reversible memory loss.

*Proc Natl Acad Sci U S A.* **100** (18), 10417-10422

Gruninger-Leitch F, Schlatter, D, Kung, E, Nelbock, P and Dobeli, H, (2002). Substrate and inhibitor profile of BACE (beta-secretase) and comparison with other mammalian aspartic proteases.

*J Biol Chem.* **277** (7), 4687-4693

- Haass C, (2004). Take five-BACE and the gamma-secretase quartet conduct Alzheimer's amyloid beta-peptide generation.  
*Embo J.* **23** (3), 483-488
- Haniu M, Denis, P, Young, Y, Mendiaz, EA, Fuller, J, Hui, JO, Bennett, BD, Kahn, S, Ross, S, Burgess, T, Katta, V, Rogers, G, Vassar, R and Citron, M, (2000). Characterization of Alzheimer's beta -secretase protein BACE. A pepsin family member with unusual properties.  
*J Biol Chem.* **275** (28), 21099-21106
- Hardy J, (2004). Toward Alzheimer therapies based on genetic knowledge.  
*Annu Rev Med.* **55** 15-25
- Heber S, Herms, J, Gajic, V, Hainfellner, J, Aguzzi, A, Rulicke, T, von Kretzschmar, H, von Koch, C, Sisodia, S, Tremml, P, Lipp, HP, Wolfer, DP and Muller, U, (2000). Mice with combined gene knock-outs reveal essential and partially redundant functions of amyloid precursor protein family members.  
*J Neurosci.* **20** (21), 7951-7963
- Hesse L, Beher, D, Masters, CL and Multhaup, G, (1994). The beta A4 amyloid precursor protein binding to copper.  
*FEBS Lett.* **349** (1), 109-116
- Holsinger RM, McLean, CA, Beyreuther, K, Masters, CL and Evin, G, (2002). Increased expression of the amyloid precursor beta-secretase in Alzheimer's disease.  
*Ann Neurol.* **51** (6), 783-786
- Hong L, Koelsch, G, Lin, X, Wu, S, Terzyan, S, Ghosh, AK, Zhang, XC and Tang, J, (2000). Structure of the protease domain of memapsin 2 (beta-secretase) complexed with inhibitor.  
*Science.* **290** (5489), 150-153
- Hong L, Turner, RT, 3rd, Koelsch, G, Shin, D, Ghosh, AK and Tang, J, (2002). Crystal structure of memapsin 2 (beta-secretase) in complex with an inhibitor OM00-3.  
*Biochemistry.* **41** (36), 10963-10967
- Huse JT, Pijak, DS, Leslie, GJ, Lee, VM and Doms, RW, (2000). Maturation and endosomal targeting of beta-site amyloid precursor protein-cleaving enzyme. The Alzheimer's disease beta-secretase.  
*J Biol Chem.* **275** (43), 33729-33737
- Hussain I, Powell, D, Howlett, DR, Tew, DG, Meek, TD, Chapman, C, Gloger, IS, Murphy, KE, Southan, CD, Ryan, DM, Smith, TS, Simmons, DL, Walsh, FS, Dingwall, C and Christie, G, (1999). Identification of a novel aspartic protease (Asp 2) as beta-secretase.  
*Mol Cell Neurosci.* **14** (6), 419-427

- Iwatsubo T, Odaka, A, Suzuki, N, Mizusawa, H, Nukina, N and Ihara, Y, (1994). Visualization of A beta 42(43) and A beta 40 in senile plaques with end-specific A beta monoclonals: evidence that an initially deposited species is A beta 42(43). *Neuron.* **13** (1), 45-53
- Johnston J, O'Neill, C, Lannfelt, L, Winblad, B and Cowburn, RF, (1994). The significance of the Swedish APP670/671 mutation for the development of Alzheimer's disease amyloidosis. *Neurochem Int.* **25** (1), 73-80
- Kang J, Lemaire, HG, Unterbeck, A, Salbaum, JM, Masters, CL, Grzeschik, KH, Multhaup, G, Beyreuther, K and Muller-Hill, B, (1987). The precursor of Alzheimer's disease amyloid A4 protein resembles a cell-surface receptor. *Nature.* **325** (6106), 733-736
- Kitazume S, Tachida, Y, Oka, R, Kotani, N, Ogawa, K, Suzuki, M, Dohmae, N, Takio, K, Saido, TC and Hashimoto, Y, (2003). Characterization of alpha 2,6-sialyltransferase cleavage by Alzheimer's beta -secretase (BACE1). *J Biol Chem.* **278** (17), 14865-14871
- Koch KA, Pena, MM and Thiele, DJ, (1997). Copper-binding motifs in catalysis, transport, detoxification and signaling. *Chem Biol.* **4** (8), 549-560
- Lammich S, Kojro, E, Postina, R, Gilbert, S, Pfeiffer, R, Jasionowski, M, Haass, C and Fahrenholz, F, (1999). Constitutive and regulated alpha-secretase cleavage of Alzheimer's amyloid precursor protein by a disintegrin metalloprotease. *Proc Natl Acad Sci U S A.* **96** (7), 3922-3927
- Lehti K, Valtanen, H, Wickstrom, SA, Lohi, J and Keski-Oja, J, (2000). Regulation of membrane-type-1 matrix metalloproteinase activity by its cytoplasmic domain. *J Biol Chem.* **275** (20), 15006-15013
- Leung D, Abbenante, G and Fairlie, DP, (2000). Protease inhibitors: current status and future prospects. *J Med Chem.* **43** (3), 305-341
- Levy E, Carman, MD, Fernandez-Madrid, IJ, Power, MD, Lieberburg, I, van Duinen, SG, Bots, GT, Luyendijk, W and Frangione, B, (1990). Mutation of the Alzheimer's disease amyloid gene in hereditary cerebral hemorrhage, Dutch type. *Science.* **248** (4959), 1124-1126
- Levy-Lahad E, Wasco, W, Poorkaj, P, Romano, DM, Oshima, J, Pettingell, WH, Yu, CE, Jondro, PD, Schmidt, SD, Wang, K and et al., (1995). Candidate gene for the chromosome 1 familial Alzheimer's disease locus. *Science.* **269** (5226), 973-977
- Li Q and Sudhof, TC, (2004). Cleavage of amyloid-beta precursor protein and amyloid-beta precursor-like protein by BACE 1. *J Biol Chem.* **279** (11), 10542-10550

Li R, Lindholm, K, Yang, LB, Yue, X, Citron, M, Yan, R, Beach, T, Sue, L, Sabbagh, M, Cai, H, Wong, P, Price, D and Shen, Y, (2004). Amyloid beta peptide load is correlated with increased beta-secretase activity in sporadic Alzheimer's disease patients.

*Proc Natl Acad Sci U S A.* **101** (10), 3632-3637

Lichtenthaler SF, Dominguez, DI, Westmeyer, GG, Reiss, K, Haass, C, Saftig, P, De Strooper, B and Seed, B, (2003). The cell adhesion protein P-selectin glycoprotein ligand-1 is a substrate for the aspartyl protease BACE1.

*J Biol Chem.* **278** (49), 48713-48719

Luo Y, Bolon, B, Kahn, S, Bennett, BD, Babu-Khan, S, Denis, P, Fan, W, Kha, H, Zhang, J, Gong, Y, Martin, L, Louis, JC, Yan, Q, Richards, WG, Citron, M and Vassar, R, (2001). Mice deficient in BACE1, the Alzheimer's beta-secretase, have normal phenotype and abolished beta-amyloid generation.

*Nat Neurosci.* **4** (3), 231-232

Marlow L, Cain, M, Pappolla, MA and Sambamurti, K, (2003). Beta-secretase processing of the Alzheimer's amyloid protein precursor (APP).

*J Mol Neurosci.* **20** (3), 233-239

Maruyama K, Tomita, T, Shinozaki, K, Kume, H, Asada, H, Saido, TC, Ishiura, S, Iwatsubo, T and Obata, K, (1996). Familial Alzheimer's disease-linked mutations at Val717 of amyloid precursor protein are specific for the increased secretion of A beta 42(43).

*Biochem Biophys Res Commun.* **227** (3), 730-735

Masters CL, Simms, G, Weinman, NA, Multhaup, G, McDonald, BL and Beyreuther, K, (1985). Amyloid plaque core protein in Alzheimer disease and Down syndrome.

*Proc Natl Acad Sci U S A.* **82** (12), 4245-4249

McGuffin LJ, Bryson, K and Jones, DT, (2000). The PSIPRED protein structure prediction server.

*Bioinformatics.* **16** (4), 404-405

Multhaup G, Bush, AI, Pollwein, P and Masters, CL, (1994). Interaction between the zinc (II) and the heparin binding site of the Alzheimer's disease beta A4 amyloid precursor protein (APP).

*FEBS Lett.* **355** (2), 151-154

Multhaup G, Schlicksupp, A, Hesse, L, Beher, D, Ruppert, T, Masters, CL and Beyreuther, K, (1996). The amyloid precursor protein of Alzheimer's disease in the reduction of copper(II) to copper(I).

*Science.* **271** (5254), 1406-1409

Murphy T, Yip, A, Brayne, C, Easton, D, Evans, JG, Xuereb, J, Cairns, N, Esiri, MM and Rubinsztein, DC, (2001). The BACE gene: genomic structure and candidate gene study in late-onset Alzheimer's disease.

*Neuroreport.* **12** (3), 631-634

Naslund J, Haroutunian, V, Mohs, R, Davis, KL, Davies, P, Greengard, P and Buxbaum, JD, (2000). Correlation between elevated levels of amyloid beta-peptide in the brain and cognitive decline.

*Jama.* **283** (12), 1571-1577

Northrop DB, (2001). Follow the protons: a low-barrier hydrogen bond unifies the mechanisms of the aspartic proteases.

*Acc Chem Res.* **34** (10), 790-797

Pastorino L, Ikin, AF, Lamprianou, S, Vacaresse, N, Revelli, JP, Platt, K, Paganetti, P, Mathews, PM, Harroch, S and Buxbaum, JD, (2004). BACE (beta-secretase) modulates the processing of APLP2 in vivo.

*Mol Cell Neurosci.* **25** (4), 642-649

Roberds SL, Anderson, J, Basi, G, Bienkowski, MJ, Branstetter, DG, Chen, KS, Freedman, SB, Frigon, NL, Games, D, Hu, K, Johnson-Wood, K, Kappaneman, KE, Kawabe, TT, Kola, I, Kuehn, R, Lee, M, Liu, W, Motter, R, Nichols, NF, Power, M, Robertson, DW, Schenk, D, Schoor, M, Shopp, GM, Shuck, ME, Sinha, S, Svensson, KA, Tatsuno, G, Tintrup, H, Wijsman, J, Wright, S and McConlogue, L, (2001). BACE knockout mice are healthy despite lacking the primary beta-secretase activity in brain: implications for Alzheimer's disease therapeutics.

*Hum Mol Genet.* **10** (12), 1317-1324

Rogaev EI, Sherrington, R, Rogaeva, EA, Levesque, G, Ikeda, M, Liang, Y, Chi, H, Lin, C, Holman, K, Tsuda, T and et al., (1995). Familial Alzheimer's disease in kindreds with missense mutations in a gene on chromosome 1 related to the Alzheimer's disease type 3 gene.

*Nature.* **376** (6543), 775-778

Rogers GW, Jr., Edelman, GM and Mauro, VP, (2004). Differential utilization of upstream AUGs in the beta-secretase mRNA suggests that a shunting mechanism regulates translation.

*Proc Natl Acad Sci U S A.* **101** (9), 2794-2799

Rubinsztein DC, (1997). The genetics of Alzheimer's disease.

*Prog Neurobiol.* **52** (6), 447-454

Saunders AM, Strittmatter, WJ, Schmechel, D, George-Hyslop, PH, Pericak-Vance, MA, Joo, SH, Rosi, BL, Gusella, JF, Crapper-MacLachlan, DR, Alberts, MJ and et al., (1993). Association of apolipoprotein E allele epsilon 4 with late-onset familial and sporadic Alzheimer's disease.

*Neurology.* **43** (8), 1467-1472

Scheuermann S, Hambsch, B, Hesse, L, Stumm, J, Schmidt, C, Beher, D, Bayer, TA, Beyreuther, K and Multhaup, G, (2001). Homodimerization of amyloid precursor protein and its implication in the amyloidogenic pathway of Alzheimer's disease.

*J Biol Chem.* **276** (36), 33923-33929

Schmechel A, Strauss, M, Schlicksupp, A, Pipkorn, R, Haass, C, Bayer, TA and Multhaup, G, (2004). BACE forms dimers and colocalizes with APP.

*J Biol Chem.*

Schweizer A, Kornfeld, S and Rohrer, J, (1996). Cysteine34 of the cytoplasmic tail of the cation-dependent mannose 6-phosphate receptor is reversibly palmitoylated and required for normal trafficking and lysosomal enzyme sorting.

*J Cell Biol.* **132** (4), 577-584

Selkoe DJ, (2001). Alzheimer's disease: genes, proteins, and therapy.

*Physiol Rev.* **81** (2), 741-766

Selkoe DJ, (2004). Alzheimer disease: mechanistic understanding predicts novel therapies.

*Ann Intern Med.* **140** (8), 627-638

Sherrington R, Rogaev, EI, Liang, Y, Rogaeva, EA, Levesque, G, Ikeda, M, Chi, H, Lin, C, Li, G, Holman, K and et al., (1995). Cloning of a gene bearing missense mutations in early-onset familial Alzheimer's disease.

*Nature.* **375** (6534), 754-760

Shi XP, Chen, E, Yin, KC, Na, S, Garsky, VM, Lai, MT, Li, YM, Platcek, M, Register, RB, Sardana, MK, Tang, MJ, Thiebeau, J, Wood, T, Shafer, JA and Gardell, SJ, (2001). The pro domain of beta-secretase does not confer strict zymogen-like properties but does assist proper folding of the protease domain.

*J Biol Chem.* **276** (13), 10366-10373

Sidera C, Liu, C and Austen, BM, (2002). Pro-domain removal in APP-2 and the cleavage of the amyloid precursor are influenced by pH.

*BMC Biochem.* **3** (1), 25

Sinha S, Anderson, JP, Barbour, R, Basi, GS, Caccavello, R, Davis, D, Doan, M, Dovey, HF, Frigon, N, Hong, J, Jacobson-Croak, K, Jewett, N, Keim, P, Knops, J, Lieberburg, I, Power, M, Tan, H, Tatsuno, G, Tung, J, Schenk, D, Seubert, P, Suomensaari, SM, Wang, S, Walker, D, John, V and et al., (1999). Purification and cloning of amyloid precursor protein beta-secretase from human brain.

*Nature.* **402** (6761), 537-540

Sisodia SS, Koo, EH, Beyreuther, K, Unterbeck, A and Price, DL, (1990). Evidence that beta-amyloid protein in Alzheimer's disease is not derived by normal processing.

*Science.* **248** (4954), 492-495

Sisodia SS, (1999). Alzheimer's disease: perspectives for the new millennium.

*J Clin Invest.* **104** (9), 1169-1170

Small DH, Mok, SS and Bornstein, JC, (2001). Alzheimer's disease and Abeta toxicity: from top to bottom.

*Nat Rev Neurosci.* **2** (8), 595-598

Sprecher CA, Grant, FJ, Grimm, G, O'Hara, PJ, Norris, F, Norris, K and Foster, DC, (1993). Molecular cloning of the cDNA for a human amyloid precursor protein homolog: evidence for a multigene family.

*Biochemistry.* **32** (17), 4481-4486

Strittmatter WJ, Saunders, AM, Schmechel, D, Pericak-Vance, M, Enghild, J, Salvesen, GS and Roses, AD, (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** (5), 1977-1981

Sturchler-Pierrat C, Abramowski, D, Duke, M, Wiederhold, KH, Mistl, C, Rothacher, S, Ledermann, B, Burki, K, Frey, P, Paganetti, PA, Waridel, C, Calhoun, ME, Jucker, M, Probst, A, Staufenbiel, M and Sommer, B, (1997). Two amyloid precursor protein transgenic mouse models with Alzheimer disease-like pathology.

*Proc Natl Acad Sci U S A.* **94** (24), 13287-13292

Tagliavini F, Giaccone, G, Frangione, B and Bugiani, O, (1988). Preamyloid deposits in the cerebral cortex of patients with Alzheimer's disease and nondemented individuals.

*Neurosci Lett.* **93** (2-3), 191-196

Tainer JA, Getzoff, ED, Richardson, JS and Richardson, DC, (1983). Structure and mechanism of copper, zinc superoxide dismutase.

*Nature.* **306** (5940), 284-287

Tanahashi H and Tabira, T, (2001). Three novel alternatively spliced isoforms of the human beta-site amyloid precursor protein cleaving enzyme (BACE) and their effect on amyloid beta-peptide production.

*Neurosci Lett.* **307** (1), 9-12

Terry RD, Peck, A, DeTeresa, R, Schechter, R and Horoupian, DS, (1981). Some morphometric aspects of the brain in senile dementia of the Alzheimer type.

*Ann Neurol.* **10** (2), 184-192

Vassar R, Bennett, BD, Babu-Khan, S, Kahn, S, Mendiaz, EA, Denis, P, Teplow, DB, Ross, S, Amarante, P, Loeloff, R, Luo, Y, Fisher, S, Fuller, J, Edenson, S, Lile, J, Jarosinski, MA, Biere, AL, Curran, E, Burgess, T, Louis, JC, Collins, F, Treanor, J, Rogers, G and Citron, M, (1999). Beta-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE.

*Science.* **286** (5440), 735-741

Vassar R and Citron, M, (2000). Abeta-generating enzymes: recent advances in beta- and gamma-secretase research.

*Neuron.* **27** (3), 419-422

Walsh DM, Klyubin, I, Fadeeva, JV, Rowan, MJ and Selkoe, DJ, (2002). Amyloid-beta oligomers: their production, toxicity and therapeutic inhibition.

*Biochem Soc Trans.* **30** (4), 552-557

Walter J, Fluhrer, R, Hartung, B, Willem, M, Kaether, C, Capell, A, Lammich, S, Multhaup, G and Haass, C, (2001). Phosphorylation regulates intracellular trafficking of beta-secretase.

*J Biol Chem.* **276** (18), 14634-14641

Wasco W, Bupp, K, Magendantz, M, Gusella, JF, Tanzi, RE and Solomon, F, (1992). Identification of a mouse brain cDNA that encodes a protein related to the Alzheimer disease-associated amyloid beta protein precursor.

*Proc Natl Acad Sci U S A.* **89** (22), 10758-10762

Wasco W, Gurubhagavatula, S, Paradis, MD, Romano, DM, Sisodia, SS, Hyman, BT, Neve, RL and Tanzi, RE, (1993). Isolation and characterization of APLP2 encoding a homologue of the Alzheimer's associated amyloid beta protein precursor.

*Nat Genet.* **5** (1), 95-100

Weber IT, Miller, M, Jaskolski, M, Leis, J, Skalka, AM and Wlodawer, A, (1989).

Molecular modeling of the HIV-1 protease and its substrate binding site.

*Science.* **243** (4893), 928-931

Westmeyer GG, Willem, M, Lichtenthaler, SF, Lurman, G, Assfalg-Machleidt, I, Reiss, K, Saftig, P and Haass, C, (2004). Dimerization of BACE.

*J Biol Chem.*

Wirths O, Multhaup, G, Czech, C, Feldmann, N, Blanchard, V, Tremp, G, Beyreuther, K, Pradier, L and Bayer, TA, (2002). Intraneuronal APP/A beta trafficking and plaque formation in beta-amyloid precursor protein and presenilin-1 transgenic mice.

*Brain Pathol.* **12** (3), 275-286

Wlodawer A and Gustchina, A, (2000). Structural and biochemical studies of retroviral proteases.

*Biochim Biophys Acta.* **1477** (1-2), 16-34

Wolfe MS, (2002). APP, Notch, and presenilin: molecular pieces in the puzzle of Alzheimer's disease.

*Int Immunopharmacol.* **2** (13-14), 1919-1929

Yamaguchi H, Hirai, S, Morimatsu, M, Shoji, M and Horigaya, Y, (1988). Diffuse type of senile plaques in the brains of Alzheimer-type dementia.

*Acta Neuropathol (Berl).* **77** (2), 113-119

Yan R, Bienkowski, MJ, Shuck, ME, Miao, H, Tory, MC, Pauley, AM, Brashier, JR, Stratman, NC, Mathews, WR, Buhl, AE, Carter, DB, Tomasselli, AG, Parodi, LA, Heinrikson, RL and Gurney, ME, (1999). Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity.

*Nature.* **402** (6761), 533-537

Yan R, Han, P, Miao, H, Greengard, P and Xu, H, (2001). The transmembrane domain of the Alzheimer's beta-secretase (BACE1) determines its late Golgi localization and access to beta -amyloid precursor protein (APP) substrate.

*J Biol Chem.* **276** (39), 36788-36796

Yan R, Munzner, JB, Shuck, ME and Bienkowski, MJ, (2001). BACE2 functions as an alternative alpha-secretase in cells.

*J Biol Chem.* **276** (36), 34019-34027

Yang LB, Lindholm, K, Yan, R, Citron, M, Xia, W, Yang, XL, Beach, T, Sue, L, Wong, P, Price, D, Li, R and Shen, Y, (2003). Elevated beta-secretase expression and enzymatic activity detected in sporadic Alzheimer disease.

*Nat Med.* **9** (1), 3-4

Zheng H, Jiang, M, Trumbauer, ME, Sirinathsinghji, DJ, Hopkins, R, Smith, DW, Heavens, RP, Dawson, GR, Boyce, S, Conner, MW and et al., (1995). beta-Amyloid precursor protein-deficient mice show reactive gliosis and decreased locomotor activity.

*Cell.* **81** (4), 525-531

Ausserdem wurde das „Laboratory Manual, 3rd edition“ von Sambrook and Russel, erschienen 2001 im CSHL Verlag als unverzichtbares Nachschlagewerk in vielen Fragestellungen zu Rate gezogen.