

Appendix: SPOTs-Bibliography

- 1 Frank R (1992), Spot-Synthesis: an easy technique for the positionally addressable, parallel chemical synthesis on a membrane support, *Tetrahedron* 48: 9217-9232
- 2 Kramer A, Volkmer-Engert R, Malin R, Reineke U, Schneider-Mergener J (1993), Simultaneous Synthesis of Peptide Libraries on Single Resin and Continuous Cellulose Membrane Supports: Examples for the Identification of Protein, Metal and DNA Binding Peptide Mixtures, *Peptides Res* 6: 314-319
- 3 Jellis CL, Cradick TJ, Rennert P, Salinas P, Boyd J, Amirault T, Gray GS (1993), Defining critical residues in the epitope for a HIV-neutralizing monoclonal antibody using phage display and peptide array technologies, *Gene* 137: 63-68
- 4 Rini JM, Stanfield RL, Stura EA, Salinas P, Profy AT, Wilson IA (1993), Crystal structure of a human immunodeficiency virus type 1 neutralizing antibody, 50.1, in complex with its V3 loop peptide antigen, *Proc Natl Acad Sci USA* 90: 6325-6329
- 5 Commandeur U, Koenig R, Manteuffel R, Torrance L, Lüddecke P, Frank R (1994), Location, size and complexity of epitopes on the coat protein of beet necrotic yellow vein virus studied by means of synthetic overlapping peptides, *Virology* 198: 282-287
- 6 Bubert A, Schubert P, Köhler S, Frank R, Goebel W (1994), Synthetic peptides derived from the p60 protein of *Listeria monocytogenes* as antigens for the generation of polyclonal antibodies specific for secreted cell-free *L. monocytogenes* p60 proteins, *Appl Environ Microbiol* 60: 120-3127
- 7 Adler S, Frank R, Lanzavecchia A, Weiss S (1994), T cell epitope analysis with peptides simultaneously synthesized on cellulose membranes: fine mapping of two DQ dependent epitopes, *FEBS Letters* 352: 167-170
- 8 Reusch P, Arnold S, Heusser C, Wagner K, Weston B, Sebald W (1994), Neutralizing monoclonal antibodies define two different functional sites in human interleukin-4, *Eur J Biochem* 222: 491-499
- 9 Kramer A, Schuster A, Reineke U, Malin R, Volkmer-Engert R, Landgraf C, Schneider-Mergener J (1994) Combinatorial cellulose-bound peptide libraries: Screening tools for the identification of peptides that bind ligands with predefined specificity, *Methods (A Companion to Methods in Enzymology)* 6:388-395
- 10 Martens W, Greiser-Wilke I, Harder T, Dittmar K, Frank R, Örvell C, Moennig V, Liess B (1995), Spot synthesis of overlapping peptides on paper membrane supports enable the identification of linear monoclonal antibody binding determinants on morbillivirus phosphoproteins, *Vet Mic* 44: 289-298
- 11 Tegge W, Frank R, Hofmann F, Dostmann RG (1995), Determination of cyclic nucleotide-dependent protein kinase substrate specificity with peptide libraries on cellulose paper, *Biochemistry* 34: 10569-10577
- 12 Stigler R-D, Rüker F, Katinger D, Elliott G, Höhne W, Henklein P, X.Ho J, Keeling K, Carter DC, Nugel E, Kramer A, Porstmann T, Schneider-Mergener J (1995), Interaction between a Fab fragment against gp41 of human immunodeficiency virus 1 and its peptide epitope: characterization using a peptide epitope library and molecular modeling, *Protein Engineering* 8: 471-479
- 13 Volkmer-Engert R, Ehrhard B, Hellwig J, Kramer A, Höhne W, Schneider-Mergener J (1995), Preparation, analysis and antibody binding studies of simultaneously synthesized soluble and cellulose-bound HIV-1 p24 peptide epitope libraries, *Letters in Peptide Science* 1: 243-254
- 14 Reinecke U, Sabat R, Kramer A, Stigler R-D, Seifert M, Michel T, Volk, H-D, Schneider-Mergener J (1995), Mapping protein-protein contact sites using cellulose-bound peptide scans, *Molecular Diversity* 1: 141-148
- 15 Kramer A, Vakalopoulou E, Schleuning W-D, Schneider-Mergener J (1995), A general route to fingerprint analyses of peptide-antibody interactions using a clustered amino acid peptide library:

comparison with a phage display library, *Mol Immunol* 32: 459-465

16 Szallasi Z, Denning MF, Chang E-Y, Rivera J, Yuspa SH, Lehel C, Ohla Z, Anderson WB, Blumberg PM (1995) Development of a rapid approach to identification of tyrosine phosphorylation sites: Application to PKC δ phosphorylated upon activation of the high affinity receptor for IgE in rat basophilic leukemia cells, *Biochem Biophys Res Commun* 214: 888-894

17 Tam JP, Rao C, Liu C-F, Shao J (1995), Specificity and formation of unusual amino acids of an amide ligation strategy for unprotected peptides, *Int J Peptide Protein Res* 45: 209-216

18 Malin R, Steinbrecher A, Semmler W, Noll B, Johannsen B, Frömmel C, Höhne W, Schneider-Mergener J (1995) Identification of technetium-99 binding peptides using cellulose-bound combinatorial peptide libraries, *J Am Chem Soc* 117:11821-11822

19 Halimi H, Dumortier H, Briand JP, Muller S (1996), Comparison of two different methods using overlapping synthetic peptides for localizing linear B cell epitopes in the U1 snRNP- C autoantigen, *J. Immunol. Methods* 199: 77-85.

20 Seemann J, Weber K, Gerke V (1996), Structural requirements for annexin I-S100C complex-formation, *Biochem. J.* 319: 123-129.

21 vonOlleschikElbheim L, elBaya A, Schmidt MA (1996), Quantification of immunological membrane reactions employing a digital desk top scanner and standard graphics software, *J. Immunol. Methods* 197: 181-186.

22 Gao B, Esnouf MP (1996), Elucidation of the core residues of an epitope using membrane- based combinatorial peptide libraries, *J. Biol. Chem.* 271: 24634-24638.

23 AdamKlages S, Adam D, Wiegmann K, Struve S, Kolanus W, SchneiderMergener J, Kronke M (1996), FAN, a novel WD-repeat protein, couples the p55 TNF-receptor to neutral sphingomyelinase, *Cell* 86: 937-947.

24 Kolbus N, Beuche W, Felgenhauer K, Mader M (1996), Definition of a discontinuous immunodominant epitope of intestinal alkaline phosphatase, an autoantigen in acute bacterial infections, *Clin. Immunol. Immunopathol.* 80: 298-306.

25 Thinakaran G, Borchelt DR, Lee MK, Slunt HH, Spitzer L, Kim G, Ratovitsky T, Davenport F, Nordstedt C, Seeger M, Hardy J, Levey AI, Gandy SE, Jenkins NA, Copeland NG, Price DL, Sisodia SS (1996), Endoproteolysis of presenilin 1 and accumulation of processed derivatives in vivo, *Neuron* 17: 181-190.

26 Jerlstrom PG, Talay SR, ValentinWeigand P, Timmis KN, Chhatwal GS (1996), Identification of an immunoglobulin A binding motif located in the beta-antigen of the c protein complex of group B streptococci, *Infect. Immun.* 64: 2787-2793.

27 Gao B, Esnouf MP (1996), Multiple interactive residues of recognition - Elucidation of discontinuous epitopes with linear peptides, *J. Immunol.* 157: 183-188.

28 Purtscher M, Trkola A, Grassauer A, Schulz PM, Klima A, Dopfer S, Gruber G, Buchacher A, Muster T, Kattinger H (1996), Restricted antigenic variability of the epitope recognized by the neutralizing gp41 antibody 2F5, *Aids* 10: 587-593.

29 Darji A, Niebuhr K, Hense M, Wehland J, Chakraborty T, Weiss S (1996), Neutralizing monoclonal antibodies against listeriolysin: Mapping of epitopes involved in pore formation, *Infect. Immun.* 64: 2356-2358.

30 Weinrich V, Sondermann P, Bewarder N, Wissel K, Frey J (1996), Epitope mapping of new monoclonal antibodies recognizing distinct human FcRII (CD32) isoforms, *Hybridoma* 15: 109-116.

- 31 Tjernberg LO, Naslund J, Lindqvist F, Johansson J, Karlstrom AR, Thyberg J, Terenius L, Nordstedt C (1996), Arrest of beta-amyloid fibril formation by a pentapeptide ligand, *J. Biol. Chem.* 271: 8545-8548.
- 32 Toomik R, Edlund M, Ek P, Obrink B, Engstrom L (1996), Simultaneously synthesized peptides on continuous cellulose membranes as substrates for protein kinases, *Peptide Res.* 9: 6-11.
- 33 McCarty JS, Rudiger S, Schonfeld HJ, SchneiderMergener J, Nakahigashi K, Yura T, Bukau B (1996), Regulatory region C of the E-coli heat shock transcription factor, sigma(32), constitutes a DnaK binding site and is conserved among eubacteria, *J. Mol. Biol.* 256: 829-837.
- 34 Weiergraber O, SchneiderMergener J, Grotzinger J, Wollmer A, Kuster A, Exner M, Heinrich PC (1996), Use of immobilized synthetic peptides for the identification of contact sites between human interleukin-6 and its receptor, *FEBS Lett.* 379: 122-126.
- 35 Schmidt TGM, Koepke J, Frank R, Skerra A (1996), Molecular interaction between the Strep-tag affinity peptide and its cognate target, streptavidin, *J. Mol. Biol.* 255: 753-766.
- 36 Edlund M, Blikstad I, Obrink B (1996), Calmodulin binds to specific sequences in the cytoplasmic domain of C-CAM and down-regulates C-CAM self-association, *J. Biol. Chem.* 271: 1393-1399.
- 37 Molina F, Pau B, Granier C (1997), The PGK epitope of human thyroglobulin: A molecular marker of alternatively spliced thyroglobulin molecules?, *Let. Pept. Sci.* 4: 201-205.
- 38 Laune D, Molina F, Ferrieres G, Mani JC, Cohen P, Simon D, Bernardi T, Piechaczyk M, Pau B, Granier C (1997), Systematic exploration of the antigen binding-activity of synthetic peptides isolated from the variable regions of immunoglobulins, *J. Biol. Chem.* 272: 30937-30944.
- 39 Kramer A, Keitel T, Winkler K, Stocklein W, Hohne W, SchneiderMergener J (1997), Molecular basis for the binding promiscuity of an anti-p24 (HIV-1) monoclonal antibody, *Cell* 91: 799-809.
- 40 Strutzberg K, Franz B, Gerlach GF (1997), Interference of peptides and specific antibodies with the function of the *Actinobacillus pleuropneumoniae* transferrin-binding protein, *Infect. Immun.* 65: 5346-5348.
- 41 Schreiber M, Wachsmuth C, Muller H, Odemuyiwa S, Schmitz H, Meyer S, Meyer B, SchneiderMergener J (1997), The V3-directed immune response in natural human immunodeficiency virus type 1 infection is predominantly directed against a variable, discontinuous epitope presented by the gp120 V3 domain, *J. Virol.* 71: 9198-9205.
- 42 Levy JB, Coulthart A, Pusey CD (1997), Mapping B cell epitopes in Goodpasture's disease, *J. Am. Soc. Nephrol.* 8: 1698-1705.
- 43 RenauldMongenie G, Poncet D, vonOlleschikElbheim L, Cournez T, Mignon M, Schmidt MA, QuentinMillet MJ (1997), Identification of human transferrin-binding sites within meningococcal transferrin-binding protein B, *J. Bacteriol.* 179: 6400-6407.
- 44 Jung F, Neuer G, Bautz FA (1997), Antibodies against a peptide sequence located in the linker region of the HMG-1/2 box domains in sera from patients with juvenile rheumatoid arthritis, *Arthritis Rheum.* 40: 1803-1809.
- 45 Vogel U, Weinberger A, Frank R, Muller A, Kohl J, Atkinson JP, Frosch M (1997), Complement factor C3 deposition and serum resistance in isogenic capsule and lipooligosaccharide sialic acid mutants of serogroup B *Neisseria meningitidis*, *Infect. Immun.* 65: 4022-4029.
- 46 Niebuhr K, Ebel F, Frank R, Reinhard M, Domann E, Carl UD, Walter U, Gertler FB, Wehland J, Chakraborty T (1997), Novel proline-rich motif present in ActA of *Listeria monocytogenes* and

cytoskeletal proteins is the ligand for the EVH1 domain, a protein module present in the Ena/VASP family, *Embo J.* 16: 5433-5444.

47 Weiler J, Gausepohl H, Hauser N, Jensen ON, Hoheisel JD (1997), Hybridisation based DNA screening on peptide nucleic acid (PNA) oligomer arrays, *Nucleic Acids Res.* 25: 2792-2799.

48 Mayboroda O, Schluter K, Jockusch BM (1997), Differential colocalization of profilin with microfilaments in PtK2 cells, *Cell Motil. Cytoskeleton* 37: 166-177.

49 vonOlleschikElbheim L, elBaya A, Schmidt MA (1997), Membrane anchored synthetic peptides as a tool for structure- function analysis of pertussis toxin and its target proteins, *Adv.Exp.Med.Biol.* 419: 87-91.

50 Rudiger S, Germeroth L, SchneiderMergener J, Bukau B (1997), Substrate specificity of the DnaK chaperone determined by screening cellulose-bound peptide libraries, *Embo J.* 16: 1501-1507.

51 Tjernberg LO, Lilliehook C, Callaway DJE, Naslund J, Hahne S, Thyberg J, Terenius L, Nordstedt C (1997), Controlling amyloid beta-peptide fibril formation with protease-stable ligands, *J. Biol. Chem.* 272: 12601-12605.

52 Rama D, Calzolari C, Granier C, Pau B (1997), Epitope localization of monoclonal antibodies used in human troponin I immunoenzymometric assay, *Hybridoma* 16: 153-157.

53 Doury JC, Goasdoue JL, Tolou H, Martelloni M, Bonnefoy S, MercereauPuijalon O (1997), Characterisation of the binding sites of monoclonal antibodies reacting with the Plasmodium falciparum rhoptry protein RhopH3, *Mol. Biochem. Parasitol.* 85: 149-159.

54 Kubota T, Watanabe T, Yokosawa N, Tsuzuki K, Indoh T, Moriishi K, Sanda K, Maki Y, Inoue K, Fujii N (1997), Epitope regions in the heavy chain of Clostridium botulinum type E neurotoxin recognized by monoclonal antibodies, *Appl. Environ. Microbiol.* 63: 1214-1218.

55 Toomik R, Ek P (1997), A potent and highly selective peptide substrate for protein kinase C assay, *Biochem. J.* 322: 455-460.

56 Keitel T, Kramer A, Wessner H, Scholz C, Schneider-Mergener J (1997), Crystallographic analysis of an anti-p24 (HIV-1) monoclonal antibody cross reactivity and polyspecificity, *Cell* 91: 811-820.

57 Korth C, Stierli B, Streit P, Moser M, Schaller O, Fischer R, Schulz-Schäffer W, Kretzschmar H, Raeber A, Braun U, Ehrensperger F, Hornemann S, Glockshuber R, Riek R, Billeter M, Wüthrich K, Oesch B (1997), Prion (PrP^{Sc})-specific epitope defined by a monoclonal antibody, *Nature* 390: 74-77.

58 Riemekasten G, Marell J, Trebeljahr G, Klein R, Hausdorf G, Haupl T, Schneider-Mergener J, Burmester GR, Hiepe F (1998), Novel epitope on the C-terminus of SmD1 is recognized by the majority of sera from patients with systemic lupus erythematosus, *J. Clin. Invest.* 102: 754-763.

59 Ducki A, Grundmann O, Konermann L, Mayer F, Hoppert M (1998), Glucoamylase from *Thermoanaerobacterium thermosaccharolyticum*: Sequence studies and analysis of the macromolecular architecture of the enzyme, *J. Gen. Appl. Microbiol.* 44: 327-335.

60 Kramer A, Stigler RD, Knaute T, Hoffmann B, Schneider-Mergener J (1998), Stepwise transformation of a cholera toxin and a p24 (HIV-1) epitope into D-peptide analogs, *Protein Eng.* 11: 941-948.

61 Prodingler WM, Schwendinger MG, Schoch J, Kochle M, Larcher C, Dierich MP (1998), Characterization of C3dg binding to a recess formed between short consensus repeats 1 and 2 of complement receptor type 2 (CR2; CD21), *J. Immunol.* 161: 4604-4610.

- 62 Schaper F, Kirchhoff S, Posern G, Koster M, Oumard A, Sharf R, Levi BZ, Hauser H (1998), Functional domains of interferon regulatory factor 1 (IRF-1), *Biochem. J.* 335: 147-157.
- 63 Schultz J, Hoffmüller U, Krause G, Ashurst J, Macias MJ, Schmieder P, Schneider-Mergener J, Oschkinat H (1998), Specific interactions between the syntrophin PDZ domain and the voltage-gated sodium channels, *Nature Structural Biology* 5:19-24
- 64 Filatov VL, Katrukha AG, Bereznikova AV, Esakova TV, Bulargina TV, Kolosova OV, Severin ES, Gusev NB (1998), Epitope mapping of anti-troponin I monoclonal antibodies, *Biochem. Mol. Biol. Int.* 45: 1179-1187.
- 65 Pullen SS, Miller HG, Everdeen DS, Dang TTA, Crute JJ, Kehry MR (1998), CD40-Tumor necrosis factor receptor-associated factor (TRAF) interactions: Regulation of CD40 signaling through multiple TRAF binding sites and TRAF hetero-oligomerization, *Biochemistry* 37: 11836-11845.
- 66 Foedinger D, Elbe-Burger A, Sterniczky B, Lackner M, Horvat R, Wolff K, Rappersberger K (1998), Erythema multiforme associated human autoantibodies against desmoplakin I and II: Biochemical characterization and passive transfer studies into newborn mice, *J. Invest. Dermatol.* 111: 503-510.
- 67 Ptushkina M, von der Haar T, Vasilescu S, Frank R, Birkenhager R, McCarthy JEG (1998), Cooperative modulation by eIF4G of eIF4E-binding to the mRNA 5' cap in yeast involves a site partially shared by p20, *Embo J.* 17: 4798-4808.
- 68 Osman AA, Uhlig H, Thamm B, Schneider-Mergener J, Mothes T (1998), Use of the phage display technique for detection of epitopes recognized by polyclonal rabbit gliadin antibodies, *FEBS Lett.* 433: 103-107.
- 69 Larue C, Ferrieres G, Laprade M, Calzolari C, Granier C (1998), Antigenic definition of cardiac troponin I, *Clin. Chem. Lab. Med.* 36: 361-365.
- 70 Laune D, Pau B, Granier C (1998), Peptide models of immunological recognition: Paratope dissection by multiple peptide synthesis, *Clin. Chem. Lab. Med.* 36: 367-371.
- 71 Baensch M, Frank R, Kohl J (1998), Conservation of the amino-terminal epitope of elongation factor Tu in eubacteria and archaea, *Microbiology-(UK)* 144: 2241-2246.
- 72 Rharbaoui F, Granier C, Kellou M, Mani JC, van Endert P, Madec AM, Boitard C, Pau B, Bouanani M (1998), Peptide specificity of high-titer anti-glutamic acid decarboxylase (GAD)65 autoantibodies, *Immunol. Lett.* 62: 123-130.
- 73 Geginat G, Lalic M, Kretschmar M, Goebel W, Hof H, Palm D, Bubert A (1998), Th1 cells specific for a secreted protein of *Listeria monocytogenes* are protective in vivo, *J. Immunol.* 160: 6046-6055.
- 74 Hutter B, Singh M (1998), Host vector system for high-level expression and purification of recombinant, enzymatically active alanine dehydrogenase of *Mycobacterium tuberculosis*, *Gene* 212: 21-29.
- 75 Lebesgue D, Wallukat G, Mijares A, Granier C, Argibay J, Hoebeke J (1998), An agonist-like monoclonal antibody against the human beta(2)- adrenoceptor, *Eur. J. Pharmacol.* 348: 123-133.
- 76 Mukhija S, Germeroth L, Schneider-Mergener J, Erni B (1998), Identification of peptides inhibiting enzyme I of the bacterial phosphotransferase system using combinatorial cellulose-bound peptide libraries, *Eur. J. Biochem.* 254: 433-438.
- 77 Liljeqvist JA, Trybala E, Svennerholm B, Jeansson S, Sjogren-Jansson E, Bergstrom T (1998), Localization of type-specific epitopes of herpes simplex virus type 2 glycoprotein G recognized by human and mouse antibodies, *J. Gen. Virol.* 79: 1215-1224.

- 78 Reineke U, Sabat R, Volk HD, Schneider-Mergener J (1998), Mapping of the interleukin-10/interleukin-10 receptor combining site, *Protein Sci.* 7: 951-960.
- 79 Heveker N, Montes M, Germeroth L, Amara A, Trautmann A, Alizon M, Schneider-Mergener J (1998), Dissociation of the signalling and antiviral properties of SDF-1-derived small peptides, *Curr. Biol.* 8: 369-376.
- 80 Edlund M, Wikstrom K, Toomik R, Ek P, Obrink B (1998), Characterization of protein kinase C-mediated phosphorylation of the short cytoplasmic domain isoform of C-CAM, *FEBS Lett.* 425: 166-170.
- 81 Bao LM, Varden CE, Zimmer WE, Balczon R (1998), Localization of autoepitopes on the PCM-1 autoantigen using scleroderma sera with autoantibodies against the centrosome, *Mol. Biol. Rep.* 25: 111-119.
- 82 Hawlisch H, Frank R, Hennecke M, Baensch M, Sohns B, Arseniev L, Bautsch W, Kola A, Klos A, Kohl J (1998), Site-directed C3a receptor antibodies from phage display libraries, *J. Immunol.* 160: 2947-2958.
- 83 Ferrieres G, Calzolari C, Mani JC, Laune D, Trinquier S, Laprade M, Larue C, Pau B, Granier C (1998), Human cardiac troponin I: precise identification of antigenic epitopes and prediction of secondary structure, *Clin. Chem.* 44: 487-493.
- 84 Elies R, Fu LXM, Eftekhari P, Wallukat G, Schulze W, Granier C, Hjalmarson A, Hoebeke J (1998), Immunochemical and functional characterization of an agonist-like monoclonal antibody against the M2 acetylcholine receptor, *Eur. J. Biochem.* 251: 659-666.
- 85 Drees BE, Andrews KM, Beckerle MC (1999), Molecular dissection of zyxin function reveals its involvement in cell motility, *J. Cell Biol.* 147: 1549-1559.
- 86 Llanos R, Chevrier V, Ronjat M, Meurer-Grob P, Martinez P, Frank R, Bornens M, Wade RH, Wehland J, Job D (1999), Tubulin binding sites on gamma-tubulin: Identification and molecular characterization, *Biochemistry* 38: 15712-15720.
- 87 Kaikkonen L, Lankinen H, Harjunpaa I, Hokynar K, Soderlund-Venermo M, Oker-Blom C, Hedman L, Hedman K (1999), Acute-phase-specific heptapeptide epitope for diagnosis of parvovirus B19 infection, *J. Clin. Microbiol.* 37: 3952-3956.
- 88 Knoblauch NTM, Rudiger S, Schonfeld HJ, Driessen AJM, Schneider-Mergener J, Bukau B (1999), Substrate specificity of the SecB chaperone, *J. Biol. Chem.* 274: 34219-34225.
- 89 Cestra G, Castagnoli L, Dente L, Minenkova O, Petrelli A, Migone N, Hoffmuller U, Schneider-Mergener J, Cesareni G (1999), The SH3 domains of endophilin and amphiphysin bind to the proline-rich region of synaptojanin 1 at distinct sites that display an unconventional binding specificity, *J. Biol. Chem.* 274: 32001-32007.
- 90 Rekabdar E, Tunback P, Liljeqvist JA, Bergstrom T (1999), Variability of the glycoprotein G gene in clinical isolates of herpes simplex virus type 1, *Clin. Diagn. Lab. Immunol.* 6: 826-831.
- 91 Ho MF, Wilson BA, Peterson JW (1999), Bacterially expressed Raf-1 catalytic domain is highly associated with GroEL, *J. Chin. Chem. Soc.* 46: 735-742.
- 92 Jacobs T, Cima-Cabal MD, Darji A, Mendez FJ, Vazquez F, Jacobs AAC, Shimada Y, Ohno-Iwashita Y, Weiss S, de los Toyos JR (1999), The conserved undecapeptide shared by thiol-activated cytolysins is involved in membrane binding, *FEBS Lett.* 459: 463-466.
- 93 Munch G, Schicktanz D, Behme A, Gerlach M, Riederer P, Palm D, Schinzel R (1999), Amino

acid specificity of glycation and protein-AGE crosslinking reactivities determined with a dipeptide SPOT library, *Nat. Biotechnol.* 17: 1006-1010.

94 Maier B, Molinger M, Cope AP, Fugger L, Schneider-Mergener J, Sonderstrup G, Kramer A, Kamradt T (1999), Multiple cross-reactive self-ligands for *Borrelia burgdorferi* outer surface protein A (OspA)-specific HLA-DR4-restricted T cells, *Zent.bl. Bakteriол.-Int. J. Med. Microbiol. Virol. Parasitol. Infect. Dis.* 289: 673-673.

95 Grogan JL, Kramer A, Nogai A, Dong LY, Ohde M, Schneider-Mergener J, Kamradt T (1999), Cross-reactivity of myelin basic protein-specific T cells with multiple microbial peptides: Experimental autoimmune encephalomyelitis induction in TCR transgenic mice, *J. Immunol.* 163: 3764-3770.

96 Esposito M, Venkatesh V, Otvos L, Weng ZP, Vajda S, Banki K, Peri A (1999), Human transaldolase and cross-reactive viral epitopes identified by autoantibodies of multiple sclerosis patients, *J. Immunol.* 163: 4027-4032.

97 Kuttner G, Kramer A, Schmidtke G, Giessmann E, Dong L, Roggenbuck D, Scholz C, Seifert M, Stigler RD, Schneider-Mergener J, Porstmann T, Hohne W (1999), Characterization of neutralizing anti-pre-S1 and anti-pre-S2 (HBV) monoclonal antibodies and their fragments, *Mol. Immunol.* 36: 669-683.

98 Reineke U, Schneider-Mergener J, Glaser RW, Stigler RD, Seifert M, Volk HD, Sabat R (1999), Evidence for conformationally different states of interleukin- 10: binding of a neutralizing antibody enhances accessibility of a hidden epitope, *J. Mol. Recognit.* 12: 242-+.

99 Schultz A, Hoffacker V, Wilisch A, Nix W, Gold R, Schalke B, Tzartos S, Muller-Hermelink HK, Marx A (1999), Neurofilament is an autoantigenic determinant in myasthenia gravis, *Ann. Neurol.* 46: 167-175.

100 Matysiak S, Hauser NC, Wurtz S, Hoheisel JD (1999), Improved solid supports and spacer/linker systems for the synthesis of spatially addressable PNA-libraries, *Nucleosides Nucleotides* 18: 1289-1291.

101 Hoffmuller U, Russwurm M, Kleinjung F, Ashurst J, Oschkinat H, Volkmer-Engert R, Koesling D, Schneider-Mergener J (1999), Interaction of a PDZ protein domain with a synthetic library of all human protein C termini, *Angew. Chem.-Int. Edit.* 38: 2000-2004.

102 Howell BW, Lanier LM, Frank R, Gertler FB, Cooper JA (1999), The disabled 1 phosphotyrosine-binding domain binds to the internalization signals of transmembrane glycoproteins and to phospholipids, *Mol. Cell. Biol.* 19: 5179-5188.

103 Dostmann WRG, Nickl C, Thiel S, Tsigelny I, Frank R, Tegge WJ (1999), Delineation of selective cyclic GMP-dependent protein kinase I alpha substrate and inhibitor peptides based on combinatorial peptide libraries on paper, *Pharmacol. Ther.* 82: 373-387.

104 Brix J, Rudiger S, Bukau B, Schneider-Mergener J, Pfanner N (1999), Distribution of binding sequences for the mitochondrial import receptors Tom20, Tom22, and Tom70 in a presequence-carrying preprotein and a non-cleavable preprotein, *J. Biol. Chem.* 274: 16522-16530.

105 Torrens I, Reyes O, Ojalvo AG, Seralena A, Chinea G, Cruz LJ, de la Fuente J (1999), Mapping of the antigenic regions of streptokinase in humans after streptokinase therapy, *Biochem. Biophys. Res. Commun.* 259: 162-168.

106 Welschof M, Reineke U, Kleist C, Kipriyanov S, Little M, Volkmer-Engert R, Schneider-Mergener J, Opelz G, Terness P (1999), The antigen binding domain of non-idiotypic human anti-F(ab')₂ autoantibodies: Study of their interaction with IgG hinge region epitopes, *Hum. Immunol.* 60: 282-290.

- 107 Pullen SS, Dang TTA, Crute JJ, Kehry MR (1999), CD40 signaling through tumor necrosis factor receptor- associated factors (TRAFs) - Binding site specificity and activation of downstream pathways by distinct TRAFs, *J. Biol. Chem.* 274: 14246-14254.
- 108 Reinhard M, Zumbunn J, Jaquemar D, Kuhn M, Walter U, Trueb B (1999), An alpha-actinin binding site of zyxin is essential for subcellular zyxin localization and alpha-actinin recruitment, *J. Biol. Chem.* 274: 13410-13418.
- 109 Haan S, Hemmann U, Hassiepen U, Schaper F, Schneider-Mergener J, Wollmer A, Heinrich PC, Grotzinger J (1999), Characterization and binding specificity of the monomeric STAT3-SH2 domain, *J. Biol. Chem.* 274: 1342-1348.
- 110 Liu ZH, Song DY, Kramer A, Martin ACR, Dandekar T, Schneider-Mergener J, Bautz EKF, Dubel S (1999), Fine mapping of the antigen-antibody interaction of scFv215, a recombinant antibody inhibiting RNA polymerase II from *Drosophila melanogaster*, *J. Mol. Recognit.* 12: 103-111.
- 111 Hilpert K, Behlke J, Scholz C, Misselwitz R, Schneider-Mergener J, Hohne W (1999), Interaction of the capsid protein p24 (HIV-1) with sequence- derived peptides: Influence on p24 dimerization, *Virology* 254: 6-10.
- 112 Reuter M, Schneider-Mergener D, Kupper D, Meisel A, Mackeldanz P, Kruger DH, Schroeder C (1999), Regions of endonuclease EcoRII involved in DNA target recognition identified by membrane-bound peptide repertoires, *J. Biol. Chem.* 274: 5213-5221.
- 113 Valle M, Kremer L, Martínez C, Roncal F, Valpuesta JM, Albar JP, Carrascosa JL (1999) Domain architecture of the bacteriophage Φ 29 connector protein, *J Mol Biol* 288:899-909
- 114 Retzer MD, Yu RH, Schryvers AB (1999), Identification of sequences in human transferrin that bind to the bacterial receptor protein, transferrin-binding protein B, *Mol. Microbiol.* 32: 111-121.
- 115 Valle M, Munoz M, Kremer L, Valpuesta JM, Martinez-A C, Carrascosa JL, Albar JP (1999), Selection of antibody probes to correlate protein sequence domains with their structural distribution, *Protein Sci.* 8: 883-889.
- 116 Gonsior SM, Platz S, Buchmeier S, Scheer U, Jockusch BM, Hinssen H (1999), Conformational difference between nuclear and cytoplasmic actin as detected by a monoclonal antibody, *J. Cell Sci.* 112: 797-809.
- 117 Reineke U, Sabat R, Misselwitz R, Welfle H, Volk HD, Schneider-Mergener J (1999), A synthetic mimic of a discontinuous binding site on interleukin-10, *Nat. Biotechnol.* 17: 271-275.
- 118 Winkler K, Scharnagl H, Tisljar U, Hoschutzky H, Friedrich I, Hoffmann MM, Huttinger M, Wieland H, Marz W (1999), Competition of A beta amyloid peptide and apolipoprotein E for receptor-mediated endocytosis, *J. Lipid Res.* 40: 447-455.
- 119 Piossek C, Schneider-Mergener J, Schirner M, Vakalopoulou E, Germeroth L, Thierauch KH (1999), Vascular endothelial growth factor (VEGF) receptor II-derived peptides inhibit VEGF, *J. Biol. Chem.* 274: 5612-5619.
- 120 Bluthner M, Schafer C, Schneider C, Bautz FA (1999), Identification of major linear epitopes on the sp100 nuclear PBC autoantigen by the gene-fragment phage-display technology, *Autoimmunity* 29: 33-42.
- 121 Monnet C, Laune D, Laroche-Traineau J, Biard-Piechaczyk M, Briant L, Bes C, Pugnieri M, Mani JC, Pau B, Cerutti R, Devauchelle G, Devaux C, Granier C, Chardes T (1999), Synthetic peptides derived from the variable regions of an anti-CD4 monoclonal antibody bind to CD4 and inhibit HIV-1 promoter activation in virus-infected cells, *J. Biol. Chem.* 274: 3789-3796.

- 122 Partidos CD, Salani FB, Ripley J, Steward MW (1999), Deconstructing the antigenic profile of a protective epitope from measles-virus fusion protein using overlapping peptides, *Vaccine* 18: 321-324.
- 123 Bittorf T, Sasse T, Wright M, Jaster R, Otte L, Schneider-Mergener J, Brock J (2000), cDNA cloning and functional analysis of a truncated STAT5a protein from autonomously growing FDCP-1 cells, *Cell Signal* 12: 721-730
- 124 Hilpert K, Hansen G, Wessner H, Schneider-Mergener J, Hohne W (2000), Characterizing and optimizing protease/peptide inhibitor interactions, a new application for spot synthesis, *J. Biochem. (Tokyo)* 128: 1051-1057
- 125 Winkler K, Kramer A, Kuttner G, Seifert M, Scholz C, Wessner H, Schneider-Mergener J, Hohne W (2000), Changing the antigen binding specificity by single point mutations of an anti-p24 (HIV-1) antibody, *J. Immunol.* 165: 4505-4514.
- 126 Siray H, Frommel C, Voronkova T, Hahn S, Arnold W, Schneider-Mergener J, Scherneck S, Ulrich R (2000), An immunodominant, cross-reactive B-cell epitope region is located at the C-terminal part of the hamster polyomavirus major capsid protein VP1, *Viral Immunol.* 13: 533-545.
- 127 Dostmann WRG, Taylor MS, Nickl CK, Brayden JE, Frank R, Tegge WJ (2000), Highly specific, membrane-permeant peptide blockers of cGMP- dependent protein kinase I alpha inhibit NO-induced cerebral dilation, *Proc. Natl. Acad. Sci. U. S. A.* 97: 14772-14777.
- 128 Rudiger S, Mayer MP, Schneider-Mergener J, Bukau B (2000), Modulation of substrate specificity of the DnaK chaperone by alteration of a hydrophobic arch, *J. Mol. Biol.* 304: 245-251.
- 129 Mahler M, Mierau R, Bluthner M (2000), Fine-specificity of the anti-CENP-A B-cell autoimmune response, *J. Mol. Med.* 78: 460-467.
- 130 Pistor S, Grobe L, Sechi AS, Domann E, Gerstel B, Machesky LM, Chakraborty T, Wehland J (2000), Mutations of arginine residues within the 146-KKRRK-150 motif of the ActA protein of *Listeria monocytogenes* abolish intracellular motility by interfering with the recruitment of the Arp2/3 complex, *J. Cell Sci.* 113: 3277-3287.
- 131 Hoffmuller U, Knaute T, Hahn M, Hohne W, Schneider-Mergener J, Kramer A (2000), Evolutionary transition pathways for changing peptide ligand specificity and structure, *Embo J.* 19: 4866-4874.
- 132 Takahashi M, Ueno A, Mihara H (2000), Peptide design based on an antibody complementarity-determining region (CDR): Construction of porphyrin-binding peptides and their affinity maturation by a combinatorial method, *Chem.-Eur. J.* 6: 3196-3203.
- 133 Ferrieres G, Pugniere M, Mani JC, Villard S, Laprade M, Doutre P, Pau B, Granier C (2000), Systematic mapping of regions of human cardiac troponin I involved in binding to cardiac troponin C: N- and C-terminal low affinity contributing regions, *FEBS Lett.* 479: 99-105.
- 134 Torreilles F, Roquet F, Granier C, Pau B, Mourton-Gilles C (2000), Binding specificity of monoclonal antibody AD2: influence of the phosphorylation state of tau, *Mol. Brain Res.* 78: 181-185.
- 135 Drees B, Friederich E, Fradelizi J, Louvard D, Beckerle MC, Grolsteyn RM (2000), Characterization of the interaction between zyxin and members of the ena/vasodilator-stimulated phosphoprotein family of proteins, *J. Biol. Chem.* 275: 22503-22511.
- 136 Jensen M, Hartmann T, Engvall B, Wang R, Uljon SN, Sennvik K, Naslund J, Muehlhauser F, Nordstedt C, Beyreuther K, Lannfelt L (2000), Quantification of Alzheimer amyloid beta peptides ending at residues 40 and 42 by novel ELISA systems, *Mol. Med.* 6: 291-302.
- 137 Osman AA, Gunnel T, Dietl A, Uhlig HH, Amin M, Fleckenstein B, Richter T, Mothes T (2000), B

cell epitopes of gliadin, *Clin. Exp. Immunol.* 121: 248-254.

138 Joki-Korpela P, Roivainen M, Lankinen H, Poyry T, Hyypia T (2000), Antigenic properties of human parechovirus 1, *J. Gen. Virol.* 81: 1709-1718.

139 Böldicke T, Struck F, Schaper F, Tegge W, Sobek H, Villbrandt B, Lankenau P, Bocher M (2000), A new peptide-affinity tag for the detection and affinity purification of recombinant proteins with a monoclonal antibody, *J. Immunol. Methods* 240: 165-183.

140 Hammerschmidt S, Tillig MP, Wolff S, Vaerman JP, Chhatwal GS (2000), Species-specific binding of human secretory component to SpsA protein of *Streptococcus pneumoniae* via a hexapeptide motif, *Mol. Microbiol.* 36: 726-736.

141 Laune D, Molina F, Mani JC, Del Rio M, Bouanani M, Pau B, Granier C (2000), Dissection of an antibody paratope into peptides discloses the idiotope recognized by the cognate anti-idiotypic antibody, *J. Immunol. Methods* 239: 63-73.

142 Carbonnet F, Blanchard D, Hattab C, Cochet S, Petit-Leroux Y, Loirat MJ, Cartron JP, Bertrand O (2000), A murine monoclonal antibody against Kx protein which reacts also with beta-spectrin, *Transfus. Med.* 10: 145-154.

143 Fu J, Hato M, Ohmae H, Matsuoka H, Kawabata M, Tanabe K, Miyamoto Y, Leafasia JL, Chinzei Y, Ohta N (2000), Epitope-specific impairment of production of antibody against merozoite surface glycoprotein 1 of *Plasmodium falciparum* in symptomatic patients with malaria, *Parasitol. Res.* 86: 345-351.

144 Basmaciogullari S, Autiero M, Culerrier R, Mani JC, Gaubin M, Mishal Z, Guardiola J, Granier C, Piatier-Tonneau D (2000), Mapping the CD4 binding domain of gp17, a glycoprotein secreted from seminal vesicles and breast carcinomas, *Biochemistry* 39: 5332-5340.

145 Ball LJ, Kühne R, Hoffmann B, Häfner A, Schmieder P, Volkmer-Engert R, Hof M, Wahl M, Schneider-Mergener J, Walter U, Oschkinat H, Jarchau T (2000) Dual epitope recognition by the VASP EVH1 domain modulates a polyproline ligand specificity and binding affinity, *EMBO J* 19: 4903-4914

146 Gouin-Charnet A, Laune D, Granier C, Mani JC, Pau B, Mourad G, Argiles A (2000), alpha(2)-Macroglobulin, the main serum antiprotease, binds beta(2)-microglobulin, the light chain of the class I major histocompatibility complex, which is involved in human disease, *Clin. Sci.* 98: 427-433.

147 Fu J, Hato M, Igarashi K, Suzuki T, Matsuoka H, Ishii A, Leafasia JL, Chinzei Y, Ohta N (2000), A simple screening method for detecting bindings between oligopeptides and HLA-DR molecules on filter papers: Possible application for mapping of putative helper T-cell epitopes on MSP1 of *Plasmodium falciparum*, *Microbiol. Immunol.* 44: 249-257.

148 Tunback P, Liljeqvist JA, Lowhagen GB, Bergstrom T (2000), Glycoprotein G of herpes simplex virus type 1: identification of type-specific epitopes by human antibodies, *J. Gen. Virol.* 81: 1033-1040.

149 Krause M, Sechi AS, Konradt M, Monner D, Gertler FB, Wehland J (2000), Fyn-binding protein (Fyb)/SLP-76-associated protein (SLAP), Ena/vasodilator-stimulated phosphoprotein (VASP) proteins and the Arp2/3 complex link T cell receptor (TCR) signaling to the actin cytoskeleton, *J. Cell Biol.* 149: 181-194.

150 Ferrieres G, Villard S, Pugniere M, Mani JC, Navarro-Teulon I, Rharbaoui F, Laune D, Loret E, Pau B, Granier C (2000), Affinity for the cognate monoclonal antibody of synthetic peptides derived from selection by phage display - Role of sequences flanking the binding motif, *Eur. J. Biochem.* 267: 1819-1829.

151 Bluthner M, Mahler M, Muller DB, Dunzl H, Bautz FA (2000), Identification of an alpha-helical

epitope region on the PM/ScI-100 autoantigen with structural homology to a region on the heterochromatin p25 beta autoantigen using immobilized overlapping synthetic peptides, *J. Mol. Med.* 78: 47-54.

152 Otvos L, Pease AM, Bokonyi K, Giles-Davis W, Rogers ME, Hintz PA, Hoffmann R, Ertl HCJ (2000), In situ stimulation of a T helper cell hybridoma with a cellulose-bound peptide antigen, *J. Immunol. Methods* 233: 95-105.

153 Amatschek K, Necina R, Hahn R, Schallaun E, Schwinn H, Josic D, Jungbauer A (2000), Affinity chromatography of human blood coagulation factor VIII on monoliths with peptides from a combinatorial library, *HRC-J. High Resolut. Chromatogr.* 23: 47-58.

154 Loog M, Toomik R, Sak K, Muszynska G, Jarv J, Ek P (2000), Peptide phosphorylation by calcium-dependent protein kinase from maize seedlings, *Eur. J. Biochem.* 267: 337-343.

155 Erck C, Frank R, Wehland J (2000), Tubulin-tyrosine ligase, a long-lasting enigma, *Neurochem. Res.* 25: 5-10.

156 Himpel S, Tegge W, Frank R, Leder S, Joost HG, Becker W (2000), Specificity determinants of substrate recognition by the protein kinase DYRK1A, *J. Biol. Chem.* 275: 2431-2438.

157 Sachse K, Helbig JH, Lysnyansky I, Grajetzki C, Muller W, Jacobs E, Yogev D (2000), Epitope mapping of immunogenic and adhesive structures in repetitive domains of *Mycoplasma bovis* variable surface lipoproteins, *Infect. Immun.* 68: 680-687.

158 Rau HK, DeJonge N, Haehnel W (2000), Combinatorial synthesis of four-helix bundle hemoproteins for tuning of cofactor properties, *Angew. Chem.-Int. Edit.* 39: 250-+.

159 Portefaix J-M, Thebault S, Bourgain-Guglielmetti F, Del Rio M, Granier C, Mani J-C, Navarro-Teulon I, Nicolas M, Soussi T, Pau B (2000) Critical residues of epitopes recognized by several anti-p53 monoclonal antibodies correspond to key residues of p53 involved in interaction with the mdm2 protein, *J Immunol Methods* 244:17-28

160 Maier B, Molinger M, Cope AP, Fugger L, Schneider-Mergener J, Sonderstrup G, Kamradt T, Kramer A (2000), Multiple cross-reactive self-ligands for *Borrelia burgdorferi*- specific HLA-DR4-restricted T cells, *Eur. J. Immunol.* 30: 448-457.

161 Licha K, Bhargava S, Rheinländer C, Becker A, Schneider-Mergener J, Volkmer-Engert R (2000), Highly parallel nano-synthesis of cleavable peptide-dye conjugates on cellulose membranes, *Tett Lett* 41: 1711-1715

162 Dekker N, Cox RC, Kramer RA, Egmond MR (2001), Substrate specificity of the integral membrane protease OmpT determined by spatially addressed peptide libraries, *Biochemistry* 40: 1694-1701.

163 Geginat G, Schenk S, Skoberne M, Goebel W, Hof H (2001), A novel approach of direct ex vivo epitope mapping identifies dominant and subdominant CD4 and CD8 T cell epitopes from *Listeria monocytogenes*, *J. Immunol.* 166: 1877-1884.

164 Rüdiger S, Schneider-Mergener J, Bukau B (2001), Its substrate specificity characterizes the DnaJ co-chaperone as a scanning factor for the DnaK chaperone, *Embo J.* 20: 1042-1050.

165 Töpert F, Pires R, Landgraf C, Oschkinat H, Schneider-Mergener J (2001), Synthesis of an array comprising 837 variants of the hYAP WW protein domain, *Angew. Chem.-Int. Edit. Engl.* 40: 897-900.

166 Schnepf R, Hörth P, Bill E, Wiegardt K, Hildebrandt P, Haehnel W (2001), *De novo* design and characterization of copper centers in synthetic four-helix-bundle proteins, *J Am Chem Soc*

123:2186-2195

167 Coulier L, Laune D, Orfanoudakis G, Wlad H, Janson JC, Granier C, Altschuh D (2001), Delineation of a linear epitope by multiple peptide synthesis and phage display, *J Immunol Meth* 249:253-264