



Westfälische  
Wilhelms-Universität  
Münster

## **Publikationen 2004**

**des**

**Instituts für Medizinische Physik und Biophysik**

**Universitätsklinikum Münster**

**Westfälische Wilhelms-Universität Münster**

Zeitschriftenartikel, Buchbeiträge und Bücher	Fachgebiet(e)*
<p>Almeida, R., L. Bindila, A. Zamfir, A. Sterling, M. Allen, J. Peter-Katalinić  Off-line Capillary Electrophoresis/Fully Automated Chip-nano Electrospray Quadrupole Time-of-Flight Mass Spectrometry for Glycoconjugate Analysis.  Proceedings of the 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, May 23 - 27, 2004 (CD Rom publication).</p>	ESI, BC
<p>Alvarez, H.M., R.A. Silva, A.C. Cesari, A.L. Zamit, S.R. Peressutti, R. Reichelt, U. Keller, U. Malkus, C. Rasch, T. Maskow, F. Mayer, A. Steinbüchel  Physiological and morphological responses of soil <i>Rhodococcus opacus</i> strain PD630 to dehydration.  FEMS Microbiology Ecology 50 (2004) 75 - 86.</p>	BT, EM, ZB
<p>Bindila, L., M. Froesch, N. Lion, J. S. Rossier, H. H. Girault, A. Zamfir, J. Peter-Katalinić  Thin polymer chip coupled to Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for glycopeptide screening.  Glycoconjugate J. 21 (2004) 400.</p>	FT-ICR, BC
<p>Bindila, L., M. Froesch, N. Lion, Ž. Vukelić, J. S. Rossier, H. H. Girault, J. Peter-Katalinić, A. Zamfir  A thin chip microsyringe system coupled to Fourier transform ion cyclotron resonance mass spectrometry for glycopeptide screening.  Rapid Commun. Mass Spectrom. 18 (2004) 2913 - 2920.</p>	FT-ICR, BC
<p>Bindila, L., R. Almeida, A. Sterling, M. Allen, J. Peter-Katalinić, A. Zamfir  Off-line capillary electrophoresis/fully automated nanoElectrospray chip quadrupole time-of-flight mass spectrometry and tandem mass spectrometry for glycoconjugate analysis.  J. Mass Spectrom. 39 (2004) 1190 - 1201.</p>	ESI, BC

---

\* Abkürzungsverzeichnis für Fachgebiete siehe letzte Seite

- Bornemann, A., J. Bohl, H.-M. Schneider, H.H. Goebel, P.F. Schmidt, R. Gherardi  
62 year old female with intracellular PAS-positive deposits in the deltoid muscle biopsy.  
Brain Pathol. 14(1) (2004) 109 - 115. KM
- Bulau, P., I. Meisen, T. Schmitz, R. Keller, J. Peter-Katalinić  
Identification of neuropeptides from the sinus gland of the crayfish *Orconectus limosus* using nanoscale on-line liquid chromatography tandem mass spectrometry.  
Mol. Cell. Proteomics 3 (2004) 558 - 564. BC, ESI
- Dreisewerd, K., A. Rolfing, B. Spottke, C. Urbanke, W. Henkel  
Characterization of whole fibril-forming collagen proteins of types I, III, and V from fetal calf skin by infrared matrix-assisted laser desorption ionization mass spectrometry.  
Anal. Chem. 76(13) (2004) 3482 - 3491. BC, LM
- Elbahloul, Y., M. Krehenbrink, R. Reichelt, A. Steinbüchel  
Physiological conditions for high cyanophycin content in biomass of *Acinetobacter calcoaceticus* strain ADP 1.  
Microbiology (2004), in press. BT, EM, ZB
- Froesch, M., L. Bindila, G. Baykut, M. Allen, J. Peter-Katalinić, A. Zamfir  
Coupling of fully automated ChipESI to FT-ICR Mass Spectrometry for High-Performance Glycoscreening and Sequencing.  
Glycoconjugate J. 21 (2004) 404. ESI, BC FT-ICR
- Froesch, M., L. Bindila, M. Allen, G. Baykut, J. Peter-Katalinić, A. Zamfir  
Coupling of fully automated chip electrospray to Fourier transform ion cyclotron resonance mass spectrometry for high-performance glycoscreening and sequencing.  
Rapid Commun. Mass. Spectrom. 18 (2004) 3084 - 3092. FT-ICR, ESI, BC
- Froesch, M., L. Bindila, Z. Vukelić, J. Peter-Katalinić, A. Zamfir  
Implementation of chip electrospray mass spectrometry in structural glycobiology.  
Glycoconjugate J. 21, (2004) 398. ESI, BC

- Froesch, M., L. Bindila, Ž. Vukelić, S. Kalanj-Bognar, A. Zamfir, J. Peter-Katalinić  
Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of Sialylated Glycosphingolipids from Human Brain Biopsies. Proceedings of the 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, May 23 - 27, 2004 (CD Rom publication). FT-ICR, BC, KM
- González, G., W. Stracke, Z. Lopez, U. Keller, A. Ricker, R. Reichelt  
Characterization of Defects and Surface Structures in Microporous Materials by HRTEM, HRSEM, and AFM. Microsc. Microanalysis 10(2) (2004) 224 - 235. EM, AFM, SSM
- Grote, M., I. Swoboda, R. Valenta, R. Reichelt  
Group 13 allergens as environmental and immunological markers for grass pollen allergy. Studies by immunogold field emission and transmission electron microscopy. International Archives of Allergy and Immunology (2004), in press. AL, EM, KM
- Grote, M., V. Krzyzanek, R. Valenta, I. Swoboda, R. Reichelt  
Detection of an allergen-containing crystal in dry pollen grains of *Phleum pratense* after anhydrous fixation. Proc 13<sup>th</sup> European Microscopy Congress. Eds. D. Schryvers, J.-P. Timmermans, G., J.-P. Verbelen, E. Wisse. Publ.: Belgian Society for Microscopy, Liège, vol. 3 (2004) 323 - 324. AL, EM
- Hemmler, R., G. Böse, R. Wagner, R. Peters  
Nanopore unitary permeability measured by electro-chemical and optical single transporter recording. Biophys. J., in press. ZB, LSM
- Höppener, C., J.P. Siebrasse, R. Peters, U. Kubitscheck, A. Naber  
High-resolution imaging of single functionally intact nuclear pore complexes using scanning near-field optical microscopy. Biophys. J., in press. ZB, LSM
- Khalaila, I., J. Peter-Katalinić, C. Tsang, C. M. Radcliffe, D. J. Harvey, R. D. Dwek, P. M. Rudd, A. Sagi  
Structural characterization of the *N*-glycan moiety and site of glycosylation in vitellogenin from the decapod crustacean *Cherax quadricarinatus*. Glycobiology 14 (2004) 767 - 775. BC

- Kirchhoff, H., I. Temmel, W. Haase, U. Kubitscheck  
Supramolecular photosystem II organization in grana thylakoid membranes: Evidence for a structured arrangement.  
Biochem. 43(28) (2004) 9204 - 9213. BP, ZB
- Kisters K., F. Wessels, F. Tokmak, E.R. Krefting, B. Gremmler, M. Kosch, M. Hausberg  
Early-onset increased calcium and decreased magnesium concentrations and an increased calcium/magnesium ratio in SHR versus WKY.  
Magnesium Research 17 (2004) 264 - 269. EM, MA, KM
- Kisters K., F. Wessels, H. Küper, F. Tokmak, E.-R. Krefting, B. Gremmler, M. Kosch, M. Barenbrock, M. Hausberg  
Increased Calcium and Decreased Magnesium Concentrations and an Increased Calcium/Magnesium Ratio in Spontaneously Hypertensive Rats Versus Wistar-Kyoto Rats: Relation to Arteriosclerosis.  
Am. J. Hypertension 17 (2004) 59 - 62. EM, MA, KM
- Koop, A., H. Kohl, A. Thesing, I. Voß, Y. Elbahloul, A. Steinbüchel, R. Reichelt  
Imaging of cyanophycin in bacterial cells using energy filtering transmission electron microscopy.  
Proc 13<sup>th</sup> European Microscopy Congress. Eds. D. Schryvers, J.-P. Timmermans, G., J.-P. Verbelen, E. Wisse. Publ.: Belgian Society for Microscopy, Liège, vol. 3 (2004) 319 - 320. NBT, EM, ZB
- Krzyzanek, V., H. Nüsse, R. Reichelt  
Quantitative microscopy with a high-resolution FESEM in the transmission mode.  
Proc. 13<sup>th</sup> European Microscopy Congress. Eds. D. Schryvers, J.-P. Timmermans, Dirk van Dyck, P. van Oostveldt. Publ.: Belgian Society for Microscopy, Liège, vol. 1 (2004) 391 - 392. EM, BP
- Kubitscheck, U.  
Fluorescence Microscopy: Single Particle Tracking.  
Encyclopedic Reference of Genomics and Proteomics in Molecular Medicine. Submitted (2004), invited contribution. BP, ZB
- Kubitscheck, U., D. Grünwald, A. Hoekstra, D. Rohleder, T. Kues, J.P. Siebrasse, R. Peters  
Binding site distribution and dwell time of single transport factors and import complexes in the nuclear pore.  
J. Cell Biol., in press. ZB

- Kukreja, L.M., A. Rohlfiing, P. Misra, F. Hillenkamp, K. Dreisewerd LM  
Cluster formation in UV laser ablation plumes of ZnSe and ZnO  
studied by time-of-flight mass spectrometry.  
Appl. Phys. A 78(5) (2004) 641 - 644.
- Kunneken, K., G. Pohlentz, A. Schmidt-Hederich, U. Odenthal, BC, PHC,  
N. Smyth, J. Peter-Katalinić, P. Bruckner, J. Eble: Recombinant ESI  
human laminin-5 domains: effects of heterotrimerization, proteolytic  
processing and N-glycosylation on alpha3beta1 integrin binding.  
J. Biol. Chem. 279 (2004) 5184 - 5193.
- Leisner, A., A. Rohlfiing, S. Berkenkamp, F. Hillenkamp, LM, BC,  
K. Dreisewerd PC  
Infrared laser post-ionization of large biomolecules from an  
IR-MALD(I) plume.  
J. Am. Soc. Mass Spectrom. 15(6) (2004) 934 - 941.
- Marušić, A., A. Markotić, N. Kovačić, J. Müthing BC, KM,  
Expression of glycosphingolipids in lymph nodes of mice lacking ZB  
TNF receptor 1: biochemical and flow cytometry analysis.  
Carbohydr. Res. 339 (2004) 77 - 86.
- Matis, M., M. Žakelj-Mavrič, J. Peter-Katalinić BC, ESI  
Mass spectrometry and database search in the analysis of proteins from  
the fungus *Pleurotus ostreatus*.  
Proteomics (2004), published online December 15.
- Meisen, I., B. Kniep, J. Haier, N. Senninger, U. Neumann, M. Langer, BC, KM  
K. Witthohn, J. Milosević, J. Peter-Katalinić, J. Müthing  
Tumor-associated CD75s-gangliosides and CD75s-bearing  
glycoproteins with Neu5Ac $\alpha$ 2-6Gal $\beta$ 1-4GlcNAc-residues are  
receptors for the anticancer drug rViscumin.  
Glycoconjugate J. 21 (2004) 409 - 410.
- Meisen, I., J. Peter-Katalinić, J. Müthing BT, ESI  
Direct analysis of silica gel extracts from immunostained  
glycosphingolipids by nanoelectrospray ionization quadrupole time-  
of- flight mass spectrometry.  
Anal. Chem. 76 (2004) 2248 - 2255.

- Mormann, M., B. Maček, A. Gonzalez de Peredo, J. Hofsteenge, J. Peter-Katalinić  
Structural studies on protein O-fucosylation by electron capture dissociation.  
Int. J. Mass Spectrom. 234 (2004) 11 - 21. FT-ICR, BC
- Mormann, M., G. Pohlentz, M.G. Peter, J. Peter-Katalinić  
ECD of glycoconjugate ions.  
Glycoconjugate J. 21 (2004) 411. BC
- Müthing, J., I. Meisen, B. Kniep, J. Haier, N. Senninger, U. Neumann, M. Langer, K. Witthohn, J. Milošević, J. Peter-Katalinić  
Tumor-associated CD75s-gangliosides and CD75s-bearing glycoproteins with Neu5Ac $\alpha$ 2-6Gal $\beta$ 1-4GlcNAc-residues are receptors for the anticancer drug rViscumin.  
FASEB J. (2004), published online November 1. BT, BC, KM
- Müthing, J., I. Meisen, P. Bulau, M. Langer, K. Witthohn, H. Lentzen, U. Neumann, J. Peter-Katalinić  
Mistletoe lectin I is a sialic acid-specific lectin with strict preference to gangliosides and glycoproteins with terminal NeuAca2-6Gal $\beta$ 1-4GlcNAc residues.  
Biochemistry 43 (2004) 2996 - 3007. BT, BC, ESI
- Peter-Katalinić, J., J. Müthing  
Leucocyte Glycosphingolipid Epitopes.  
Proceedings of the 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, May 23 - 27, 2004 (CD Rom publication). BT, BC
- Peter-Katalinić, J.  
CE-MS Editorial.  
Electrophoresis 25 (2004). BC, ESI
- Peter-Katalinić, J.  
Identification of protein structure and its modifications by electrospray mass spectrometry in proteomics.  
In: Supramolecular Structure and Function VIII (G. Pifat, ed.) Kluwer Publishers, 2004, 179 - 198. BC, ESI

- Peters, R. ZB  
Introduction to nucleo-cytoplasmic transport: Molecules and mechanisms.  
In: Xenopus Protocols, Liu, J., ed., Humana Press, in press.
- Peters, R. ZB  
The nanopore connexion to cell membrane unitary permeability.  
Traffic, in press.
- Peters, R. ZB  
Use of Xenopus oocyte nuclei and nuclear envelopes in nucleo-cytoplasmic transport studies.  
In: Xenopus Protocols, Liu, J., ed., Humana Press, in press.
- Pohlentz, G., S. Kölbl, J. Peter-Katalinić PHC, ESI  
In-Capillary Proteolytic digest of native Proteins and simultaneous Analysis of the Resulting Peptides by nanoESIMS and MS/MS. Proceedings of the 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, May 23 - 27, 2004 (CD Rom publication).
- Reichelt, R., T. Schmidt, D. Kuckling, K.-F. Arndt BP, EM  
Structural characterization of temperature-sensitive hydrogels by field emission scanning electron microscopy (FESEM).  
Macromolecular Symposia 210 (2004) 501 - 511.
- Rukosujew, A., R. Reichelt, A.M. Fabricius, G. Drees, T.T.D. Tjan, M. Rothenburger, A. Hoffmeier, H.H. Scheld, C. Schmid KM, EM, ZB  
Skeletonization versus pedicle preparation of the radial artery with and without the ultrasonic scalpel.  
The Annals of Thoracic Surgery 77 (2004) 120 - 125.
- Sharna, M.C, A. Prentice, P.F. Schmidt, N. Sharna, H.H. Goebel KM  
Macrophagic myofasciitis in a 3-month-old child.  
J. Pediatr. Neurol. 2(4) (2004) 225 - 229.
- Spotke, B., J. Gross, H.J. Galla, F. Hillenkamp BC, LM  
Reverse Sanger sequencing of RNA by MALDI-TOF mass spectrometry after solid phase purification Source.  
Nucl. Ac. Res., 32(12) (2004) Art. No. e97.



- Stöveken, T., R. Kalscheuer, U. Malkus, R. Reichelt, A. Steinbüchel  
The Bifunctional Wax Ester Synthase/Acyl-CoA: Diacylglycerol  
Acyltransferase from *Acinetobacter calcoaceticus* ADP1:  
Characterization of an Unusual Novel Type of Acyltransferase.  
J. Bacteriology (2004), in press. BT, NBT,  
EM
- Stracke, W., G. González, U. Keller, A. Ricker, Z. Lopez, R. Reichelt  
Surface characterization of the zeolites MFI, MEL, and the  
intergrowth system MFI/MEL by HRSEM and SFM.  
Proc. 13<sup>th</sup> European Microscopy Congress. Eds. D. Schryvers, J.-P.  
Timmermans, G. van Tendeloo. Publ.: Belgian Society for  
Microscopy, Liège, vol. 2 (2004) 529 - 530. EM, AFM,  
SSM
- Swoboda, I., M. Grote, P. Verdino, W. Keller, M.B. Singh,  
N. De Weerd, W.R. Sperr, P. Valent, N. Balic, R. Reichelt, R. Suck,  
H. Fiebig, R. Valenta, S. Spitzauer  
Molecular characterization of polygalacturonases as grass pollen-  
specific marker allergens: Expulsion from pollen via submicronic  
respirable particles.  
J. Immunol. 172(10) ( 2004) 6490 - 6500. AL, EM
- Vakhrushev, S.Y., A. Zamfir, J. Peter-Katalinić  
<sup>0,2</sup>A cross-ring cleavage as a general diagnostic tool for glycan  
assignment in glycoconjugate mixtures.  
J. Amer. Soc. Mass Spectrom. 15 (2004) 1863 - 1868. BC, ESI
- Vakhrushev, S.Y., M. Mormann, J. Peter-Katalinić  
Identification of complex glycoconjugates related to congenital  
disorders of glycosylation by FT-ICR MS and MS/MS in combination  
with a computational algorithm.  
Proceedings of the 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and  
Allied Topics, Nashville, Tennessee, USA, May 23 - 27, 2004 (CD  
Rom publication). FT-ICR,  
BC
- Vogl, T., S. Ludwig, M. Goebeler, A. Strey, I.S. Thorey, R. Reichelt,  
D. Foell, V. Gerke, M.-P. Manitz, W. Nacken, C. Sorg, J. Roth  
MRP8 (S100A8) and MRP14 (S100A9) control microtubule  
reorganization during transendothelial migration of phagocytes.  
Blood (2004), in press. BC, EM,  
ZB

- Wältermann, M., A. Hinz, H. Robenek, D. Troyer, R. Reichelt, U. Malkus, H.-J. Galla, R. Kalscheuer, T. Stöveken, P. von Landenberg, A. Steinbüchel  
Mechanism of Lipid-body formation in prokaryotes: How Bacteria fatten up.  
Molecular Microbiology (2004), in press. BC, EM, NBT, ZB
- Zamfir, A., J. Peter-Katalinić  
CE/MS and tandem MS for glycoscreening in biomedical research. Electrophoresis 25 (2004) 1949 - 1963. BC, ESI, KM
- Zamfir, A., D. G. Seidler, E. Schönherr, H. Kresse, J. Peter-Katalinić  
On-line sheathless capillary electrophoresis/nanospray ionization mass spectrometry for the analysis of glycosaminoglycan oligosaccharides, Electrophoresis 25 (2004) 2010 - 2016. BC, ESI
- Zamfir, A., N. Lion, Ž. Vukelić, L. Bindila, J. S. Rossier, H. H. Girault, J. Peter-Katalinić  
Thin chip microsyringe system coupled to quadrupole time-of-flight mass spectrometer for glycoconjugate analysis. Lab Chip (2005), published online December 22. ESI, BC
- Zamfir, A., R. Almeida, A. Sterling, M. Allen, J. Henion, J. Peter-Katalinić  
Fully-Automated Chip-Based Electrospray Ionization Tandem Mass Spectrometry – a Novel concept in Glycomics. Proceedings of the 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Nashville, Tennessee, USA, May 23 - 27, 2004 (CD Rom publication). ESI, BC
- Zamfir, A., S. Vakhrushev, A. Sterling, H.-J. Niebel, M. Allen, J. Peter-Katalinić  
Fully automated chip-based mass spectrometry for complex carbohydrate system analysis. Anal. Chem. 76 (2004) 2046 - 2054. BC, ESI,
- Zamfir, A., Ž. Vukelić, L. Bindila, R. Almeida, A. Sterling, M. Allen, J. Peter-Katalinić  
Fully automated chip-based nanoelectrospray tandem mass spectrometry of gangliosides from human cerebellum. J. Am. Soc. Mass Spectrom. 15 (2004) 1649 - 1657. ESI, KM, BC

## Dissertationen und Diplomarbeiten Diplom-, Doktor- und Habilitationsarbeiten

- Dreisewerd, K. BP, LM  
Mechanismen der Matrix-unterstützten Laserdesorption/Ionisation mit Lasern aus dem ultravioletten und infraroten Wellenlängenbereich und Anwendungen mit biologischer Fragestellung.  
Habilitationsschrift, Fachbereich Physik, WWU Münster.
- Leisner, A. LM  
Untersuchungen zur Plume-Expansionsdynamik bei der Matrix-unterstützten Laserdesorption-/Ionisation aus Glycerol mit Infrarot-Lasern.  
Dissertation (Fachbereich Physik, Experimentalphysik),  
WWU Münster,  
Betreuer: Prof. Dr. F. Hillenkamp und Prof. Dr. H. Fuchs.
- Spottke, B. BC, LM  
Untersuchungen zur Resequenzierung von in-vitro-RNA mit Matrix-unterstützter Laserdesorption-/Ionisationsmassenspektrometrie (MALDI-MS).  
Dissertation (Fachbereich Chemie, Biochemie) WWU Münster,  
Betreuer: Prof. Dr. F. Hillenkamp und Prof. Dr. H.-J. Galla.

## Vorträge (V) und Poster (P) mit Abstracts

- Almeida, R., L. Bindila, A. Zamfir, A. Sterling, M. Allen, J. Henion, J. Peter-Katalinić BC, ESI  
Off-line Capillary Electrophoresis/Fully Automated Chip-nano Electrospray Quadrupole-Time-of-Flight Mass spectrometry for Glycoconjugate Analysis.  
52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, May 23 - 28, 2004, Nashville, Tennessee, USA (P).
- Balen, B., M. Krsnik-Rasol, I. Zadro, S. Vakhrushev, J. Peter-Katalinić BC, ESI  
N-Glycoprotein Patterns Related to Morphogenesis in *Mammillaria gracillis* Tissue Culture.  
Kongres Hrvatskog Drustva za Biokemiju i Molekularnu Biologiju (Kongress der Kroatischen Biochemischen Gesellschaft), Bjelolasica September 30 - October 2, 2004, Croatia (P).
- Bindila, L., M. Froesch, A. Zamfir, S. Usuki, Ž. Vukelić, R.K. Yu, J. Peter-Katalinić FT-ICR, BC  
Negative Ion nanoElectrospray Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of Glycosphingolipids.  
37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (P).
- Bindila, L., M. Froesch, N. Lion, J. S. Rossier, H. H. Girault, A. Zamfir, J. Peter-Katalinić FT-ICR BC  
Thin polymer chip coupled to Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for glycopeptide screening.  
15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, November 29 - 30, 2004, Wageningen, Niederlande (P).
- Brunner, G., V. Schwipper, J. Peter-Katalinić, U. Schumacher KM  
GPI-specific phospholipase D: Regulator of tumor malignancy, prognostic marker, and therapeutic target?  
Schwerpunkt Deutsche Krebshilfe, Mildred Scheel Stiftung, Bonn, 8. - 9. November 2004 (V).

- Bulau, P., I. Meisen, T. Schmitz, R. Keller, J. Peter-Katalinić BC, ESI  
 Direct analysis of neuropeptides from the crayfish *Orconectus limosus* using nanoscale on-line liquid chromatography tandem mass spectrometry.  
 37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (P).
- Cullen, V.C., J. Muething, I. Meisen, H. Shimura, P. Xu, D. Selkoe, BT  
 J. Peter-Katalinić, M. Schlossmacher  
 Binding of  $\alpha$ -synuclein to human glycosphingolipids.  
 34<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, USA, October 23 - 27, 2004 (V).
- Dreisewerd, K., A. Leisner, A. Rohlfing, S. Berkenkamp, LM, PC  
 F. Hillenkamp  
 Infrarotlaser-Nachionisation großer Biomoleküle aus einem IR-MALD(I) Plume.  
 37. Jahrestagung der Deutschen Gesellschaft für Massenspektrometrie (DGMS), Leipzig, 07. - 10.03.2004 (V).
- Froesch, M., L. Bindila, G. Baykut, M. Allen, J. Peter-Katalinić, FT-ICR  
 A. Zamfir BC  
 Coupling of fully automated ChipESI to FT-ICR Mass Spectrometry for High-Performance Glycoscreening and Sequencing.  
 15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, November 29 - 30, 2004, Wageningen, Niederlande (V).
- Froesch, M., L. Bindila, Ž. Vukelić, A. Zamfir, J. Peter-Katalinić BC,  
 Ionization and Fragmentation of Highly Sialylated FT-ICR  
 Glycosphingolipids by FT-ICR.  
 7<sup>th</sup> European FTMS Conference (EFTMS 2004), Konstanz, March 28 - April 1, 2004 (P).
- Froesch, M., L. Bindila, Ž. Vukelić, J. Peter-Katalinić, A. Zamfir FT-ICR  
 Implementation of chip electrospray mass spectrometry in structural BC  
 glycobiology.  
 15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, November 29 - 30, 2004, Wageningen, Niederlande (P).

- Froesch, M., Ž. Vukelić, L. Bindila, A. Zamfir, J. Peter-Katalinić BC,  
 Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of FT-ICR  
 Sialylated Gangliosides from Human Brain Biopsies.  
 52<sup>nd</sup> ASMS conference on mass spectrometry and allied topics,  
 May 23 - 28, 2004, Nashville, Tennessee, USA (P).
- Grote, M., V. Krzyzanek, R. Valenta, I. Swoboda, R. Reichelt AL, EM  
 Detection of an allergen-containing crystal in dry pollen grains of  
 Phleum pratense after anhydrous fixation.  
 13<sup>th</sup> European Microscopy Congress EMC 2004. Antwerpen,  
 August 22 - 27, 2004 (P).
- Grünwald, D., A. Hoekstra, U. Kubitscheck BP, ZB  
 Real-time observation of single splicing factor molecules in the  
 living cell nuclei.  
 10<sup>th</sup> International Workshop on "Single Molecule Detection and  
 Ultrasensitive Analysis in Life Sciences".  
 Picoquant, Berlin, September 22 - 24, 2004 (V).
- Grünwald, D., A. Hoekstra, U. Kubitscheck BP, ZB  
 Single splicing factor molecules within the living cell nucleus.  
 International Symposium on the functional architecture of the cell  
 nucleus.  
 DKFZ Heidelberg, April 16 - 17, 2004 (V).
- Grünwald, D., H. Leonhardt, M.C. Cardoso, U. Kubitscheck BP, ZB  
 Analysis of Genome Replication at the Single-Molecule Level in  
 Living Cells.  
 4<sup>th</sup> International Symposium on Physics, Chemistry and Biology  
 with Single Molecules. Kloster Banz, Bad Staffelstein,  
 February 22 - 25, 2004 (P).
- Höppener, C., J.-P. Siebrasse, U. Kubitscheck, R. Peters, H. Fuchs, BP, ZB  
 A. Naber  
 High-resolution near-field fluorescence microscopy of single  
 nuclear pore complexes in an intact nuclear envelope.  
 Frühjahrstagung der Deutschen Physikalischen Gesellschaft,  
 Fachverband Chemische Physik, Regensburg, March 8 - 12,  
 2004 (P).

- Kalanj, S., Ž. Vukelić, B. Radić, A. Zamfir, M. Froesch, L. Bindila, M. Trbojević-Čepe, J. Peter-Katalinić  
Quantity and Composition of Gangliosides in Gliosarcoma and Meningioma.  
Kongres Hrvatskog Društva za Biokemiju i Molekularnu Biologiju (Kongress der Kroatischen Biochemischen Gesellschaft)  
Bjelolasica, Croatia, September 9 - October 2, 2004 (P). BC, KM
- Kölbl, S., C. Kunz, M. Flügger, J. Peter-Katalinić, G. Pohlentz  
Identification and Sequencing of Complex Oligosaccharides from Milk of Asian Elephants (*Elephas maximus*).  
37. Diskussionstagung der Deutschen Gesellschaft für Massenspektrometrie (DGMS), Leipzig, March 7 - 10, 2004 (P). PHC, ESI
- Kölbl, S., M. Flügger, C. Kunz, J. Peter-Katalinić, G. Pohlentz  
Analysis of major components in Asian elephant (*Elephas maximus*) milk during different stages of lactation.  
5<sup>th</sup> Scientific Meeting of European Association of Zoo and Wildlife Veterinarians (EAZWV), May 19 - 23, 2004, Ebeltoft, Dänemark (P). PHC, ESI
- Koop, A., H. Kohl, A. Thesing, I. Voß, Y. Elbahloul, A. Steinbüchel, R. Reichelt  
Imaging of cyanophycin in bacterial cells using energy filtering transmission electron microscopy.  
13<sup>th</sup> European Microscopy Congress EMC 2004. Antwerpen, August 22 - 27, 2004 (P). NBT, EM, ZB
- Krzyzanek, V., H. Nüsse, R. Reichelt  
Quantitative microscopy with a high-resolution FESEM in the transmission mode.  
13<sup>th</sup> European Microscopy Congress EMC 2004. Antwerpen, August 22 - 27, 2004 (V). EM, BP
- Kubitscheck, U., A. Hoekstra, D. Rohleder, T. Kues, D. Grünwald, R. Peters  
Nuclear transport of single molecules.  
4<sup>th</sup> International Symposium on Physics, Chemistry and Biology with Single Molecules. Kloster Banz, Bad Staffelstein, February 22 - 25, 2004 (V). BP, ZB

- Kubitscheck, U., A. Hoekstra, D., Grünwald, J.-P. Siebrasse, R. Peters  
Nucleo-cytoplasmic transport of single molecules.  
Frühjahrstagung der Deutschen Physikalischen Gesellschaft, Fachverband Chemische Physik, Regensburg, March 8 - 12, 2004 (V). BP, ZB
- Leisner, A., A. Rohlfig, S. Berkenkamp, F. Hillenkamp, K. Dreisewerd  
Infrared Laser Post-Ionization of Large Biomolecules from an IR-MALD(I) plume.  
10<sup>th</sup> International Conference Desorption 2004, August 29 - September 2, Saint-Petersburg, Russia (V). LM, BC
- Lion, N., L. Bindila, M. Froesch, Ž. Vukelić, J. S. Rossier, H. H. Girault, J. Peter-Katalinić, A. Zamfir  
Thin chip polymer microsyringes for glycoconjugate analysis of Schindler disease patients.  
Jahrestagung der Schweizerischen Proteomgesellschaft, SPS'04 Inselspital Bern, Switzerland, December 6 - 8, 2004 (P). KM, BC, FT-ICR
- Matzelle, T.R., H. Gnaegi, R. Reichelt  
Characterization of the cutting edge of glass and diamond knives for ultramicrotomy by scanning force and field emission scanning electron microscopy.  
Elektronenmikroskopie 25 (2004) 27 (V). EM, SSM, AFM
- Meisen, I., B. Kniep, J. Haier, N. Senninger, U. Neumann, M. Langer, K. Witthohn, J. Milosević, J. Peter-Katalinić, J. Müthing  
Tumor-associated CD75s-gangliosides and CD75s-bearing glycoproteins with Neu5Ac $\alpha$ 2-6Gal $\beta$ 1-4GlcNAc-residues are receptors for the anticancer drug rViscumin.  
15<sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, November 29 - 30, 2004, Wageningen, Niederlande (P). BT, KM
- Meisen, I., J. Peter-Katalinić, J. Müthing  
Diagnostic fragmentation of terminally  $\alpha$ 2-6-linked N-acetylneuraminic acid in neolacto-series gangliosides obtained by low-energy CID.  
37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (P). BC, BT



Milošević, J., P. Rehulka, L. Bindila, A. Zamfir, J. Peter-Katalinić Microheterogeneity of N-glycoforms in bovine serum transferrin. 37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (P).	BC, ESI
Mormann, M., J. Peter-Katalinić Analysis of glycoconjugate ions by interaction with electrons North Berwick, East Lothian, Scotland, August 25 - 28, 2004 (V).	BC, FT-ICR
Mormann, M., G. Pohlentz, M.G. Peter, J. Peter-Katalinić ECD of glycoconjugate ions. 15 <sup>th</sup> Joint Meeting of the „Studiengruppe Glykobiologie der Gesellschaft für Biochemie und Molekularbiologie“, the „Nederlandse Vereininging voor Glycobiologie“ and the „Groupe Lillois de Glycobiologie“, November 29 - 30, 2004, Wageningen, Niederlande (P).	FT-ICR BC
Mormann, M., J. Peter-Katalinić Alkylated cysteine residues loose the side chain under electron capture dissociation conditions. 37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (P).	BC, FT-ICR
Mormann, M., L. Bindila, M. Froesch, A. Zamfir, J. Peter-Katalinić FT-ICR MS of Complex Carbohydrates. 7 <sup>th</sup> European FTMS Conference (EFTMS 2004), Konstanz, March 28 - April 1, 2004 (V).	FT-ICR, BC
Petrovič, U., M. Mattiazzi, K. Repovž, J. Šribar, M. Matis, J. Peter-Katalinić, J.L. DeRisi, G. Anderluh, I. Križaj, F. Gubenšek Yeast as a model to assess the molecular mechanism of action of a neurotoxic secretory phospholipase A2. 15 <sup>th</sup> European Symposium on Animal, Plant and Microbial Toxins. Jožef Štefan Institute, Ljubljana, Slovenia, June 19 - 23, 2004 (P).	BC
Pohlentz, G., S. Kölbl, J. Peter-Katalinić In-capillary tryptic digest of native proteins and simultaneous analysis of the resulting peptides by nanoESI MS and MS/MS. 37. Diskussionstagung der Deutschen Gesellschaft für Massenspektrometrie (DGMS), Leipzig, March 7 - 10, 2004 (V).	BC, ESI

- Pohlentz, G., S. Kölbl, J. Peter-Katalinić BC, ESI  
 In-capillary tryptic digest of native proteins and simultaneous analysis of the resulting peptides by nanoESI MS and MS/MS.  
 52<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, May 23 - 27, 2004, Nashville, USA (P).
- Reichelt, R. AFM  
 Course on „ATOMIC FORCE MICROSCOPY. Theory and applications“.  
 Instituto de Estudios Avanzados (IDEA). Caracas / Venezuela, October 10, 2004 (V).
- Rohlfing, A., C. Menzel, F. Hillenkamp, K. Dreisewerd LM  
 Sounds and In-Sights: How Photoacoustic Reveal Details of the MALDI Process.  
 10<sup>th</sup> International Conference Desorption 2004, August 29 - September 2, Saint-Petersburg, Russia (V).
- Schlüter, H., J. Thiemann, J. Rykl, J. Jankowski, S. Kurzawski, P. Bulau, J. Peter-Katalinić BC, ESI  
 Mass spectrometric-assisted-enzyme-screening (MES) - a new method for the determination of enzyme activities.  
 37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (V).
- Stracke, W. AFM  
 Course on „ATOMIC FORCE MICROSCOPY. Practice and handling“.  
 Instituto de Estudios Avanzados (IDEA). Caracas / Venezuela, October 10, 2004 (V).
- Stracke, W. EM, AFM, SSM  
 Surface characterization of the zeolitas MFI, MEL, and the intergrowth system MFI/MEL by HRSEM and SFM.  
 XI Congreso Venezolano de Microscopia. Caracas, 10. -13.10.2004 (V).
- Stracke, W., G. González, U. Keller, A. Ricker, Z. Lopez, R. Reichelt EM, AFM, SSM  
 Surface characterization of the zeolites MFI, MEL, and the intergrowth system MFI/MEL by HRSEM and SFM.  
 13<sup>th</sup> European Microscopy Congress EMC 2004. Antwerpen, August 22 - 27, 2004 (V).

- Vakhrushev, S., J. Peter-Katalinić BC, KM  
 Computational algorithm as a tool for high-throughput glycoscreening of complex glycoconjugate mixtures from CDG patients by tandem mass spectrometry.  
 37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (P).
- Vakhrushev, S., M. Mormann, J. Peter-Katalinić BC,  
FT-ICR  
 Identification of complex glycoconjugates related to congenital disorders of glycosylation by FT-ICR MS and MS/MS in combination with computational algorithm.  
 52<sup>nd</sup> ASMS conference on mass spectrometry and allied topics, May 23 - 28, 2004, Nashville, Tennessee, USA (P).
- Zamfir, A., A. Sterling, R. Almeida, M. Allen, J. Peter-Katalinić BC, ESI  
 Implementation of fully-automated chip-based nanoelectrospray mass spectrometry in glycomics.  
 37. Diskussionstagung der DGMS, Leipzig, March 7 - 10, 2004 (V).
- Zamfir, A., L. Bindila, R. Almeida, A. Sterling, Ž. Vukelić, M. Allen, J. Peter-Katalinić BC, ESI  
 Fully-Automated chip-Based Nanoelectrospray Tandem Mass Spectrometry of Gangliosides from Human Cerebellum.  
 21<sup>th</sup> LC/MS Montreux Symposium, Montreux, Switzerland, November 10 - 12, 2004 (V).
- Zamfir, A., R. Almeida, A. Sterling, M. Allen, J. Henion, J. Peter-Katalinić BC, ESI  
 Fully-automated chip-based nanoelectrospray tandem mass spectrometry: a novel concept in glycomics.  
 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, May 23 - 28, 2004, Nashville, Tennessee, USA (V).
- Zeglin, S., D. Grünwald, R. Peters, U. Kubitscheck BP, ZB  
 Fast single-molecule detection by an electron-multiplying CCD.  
 4<sup>th</sup> International Symposium on Physics, Chemistry and Biology with Single Molecules. Kloster Banz, Bad Staffelstein, February 22 - 25, 2004 (P).

## Eingeladene Vorträge

- Dreisewerd, K. LM  
Was weiß man heute über den MALDI-Prozeß?  
Bruker Daltronik GmbH, 11.02.2004.
- Dreisewerd, K. LM  
Prozesse und Potentiale der MALDI-MS mit gepulsten Infrarot-  
Lasern.  
Oberseminar, Institut für Technische Biochemie/Biotechnologie,  
Universität des Saarlandes, 24.06.2004.
- Hillenkamp, F. BP  
Als der Laser Laufen lernte und Biophotonen noch nicht geboren  
waren.  
Festkolloquium, Forschungszentrum für Umwelt und Gesundheit,  
Neuherberg bei München, 29. Januar 2004.
- Hillenkamp, F., A. Leisner, A. Rohlfing, K. Dreisewerd LM, PC  
Investigations of the Desorption and Plume Expansion Process  
in MALDI-MS.  
227<sup>th</sup> National Meeting of the Am. Chem. Soc., Anaheim, CA,  
Field and Franklin Award Symposium, March 28 - April 1,  
2004.
- Hillenkamp, F., A. Leisner, A. Rohlfing, L. M. Kukreja, LM  
K. Dreisewerd  
Investigations of the Laser Ablation Processes in Matrix  
Assisted Laser Desorption/Ionisation Mass Spectrometry.  
India Center for Advanced Technology (CAT), Indore, India,  
April 15, 2004.
- Hillenkamp, F., A. Leisner, A. Rohlfing, K. Dreisewerd LM, PC  
Photoacoustic measurement and high speed photography of the  
sample ablation in matrix assisted laser desorption/ionization  
mass spectrometry.  
Institute de Physique Nucleaire, Université de Paris Sud, Orsay,  
September 13, 2004.

- Hillenkamp, F., A. Leisner, A. Rohlfing, K. Dreisewerd LM, PC  
 Investigations of the Sample Ablation and Plume Expansion in  
 MALDI MS.  
 21es Journées Francaise de Spectrométrie de Masse, Strasbourg,  
 September 14, 2004.
- Hillenkamp, F. LM, PC  
 MALDI Mass Spectrometry of Nucleic Acids.  
 Herbsttagung der Gesellschaft für Biochemie und  
 Molekularbiologie, Münster,  
 20. September, 2004.
- Hillenkamp, F. LM, KM  
 MALDI Mass Spectrometry: A New Tool for Microbiology?  
 56. Jahrestagung der Deutschen Gesellschaft für Hygiene und  
 Mikrobiologie,  
 Münster, 28. September, 2004.
- Hillenkamp, F. LM, KM  
 The present and future role of Macromolecular Mass  
 Spectrometry in Medicine and Matrix Assisted Laser  
 Desorption/Ionization Mass Spectrometry (MALDI-MS).  
 Symposium Macromolecular Mass Spectrometry in Medicine:  
 Genomics, Proteomics and beyond, Wellman Center of  
 Photomedicine, Harvard Medical School,  
 Boston, October 22, 2004.
- Kubitscheck, U. BP, ZB  
 Intracellular Transport at the Single-Molecule Level.  
 International Workshop on Biophysics of Cellular  
 Communication, Gomadingen, March 22 - 24, 2004.
- Kubitscheck, U. BP, ZB  
 Intrazellulärer Transport einzelner Moleküle.  
 Fachbereich Biologie der WWU, Münster, 12.5.2004.
- Kubitscheck, U. BP, ZB  
 Fluorescence Microscopic Observation of single Protein  
 Molecules in Biological Systems.  
 Kolloquium des Graduiertenkolleg 723 "Raumzeitliche  
 Signalprozesse in Neuronen zelluläre Biophysik", Göttingen,  
 July 5, 2004.

<p>Kubitscheck, U.  Intracellular Transport of Single Molecules.  Kolloquium des Sonderforschungsbereiches 406, Göttingen,  July 6, 2004.</p>	BP, ZB
<p>Kubitscheck, U.  Leben én detail: Intrazellulärer Transport einzelner  Biomoleküle. Kolloquium der Bioengineering  Kompetenzplattform der FH Aachen, 19.10.2004.</p>	BP, ZB
<p>Kubitscheck, U.  Leben én detail: Intrazellulärer Transport einzelner  Biomoleküle. Kolloquium der Abteilung für Biochemie und  Molekularbiologie der Universität Hamburg, 29.11.2004.</p>	BP, ZB
<p>Mormann, M., M. Froesch, L. Bindila, Ž. Vukelić, A. Zamfir,  J. Peter-Katalinić  FT-ICR of Glycoconjugates.  7<sup>th</sup> European FTMS Conference (EFTMS 2004), Konstanz,  March 28 - April 1, 2004.</p>	FT-ICR, BC
<p>Mormann, M.  Hochauflösende Massenspektrometrie in der biomedizinischen  Analytik.  Institute for Analytical Sciences, ISAS, Dortmund, 05.04.2004.</p>	FT-ICR, KM
<p>Mormann, M.  Analysis of glycoconjugate ions by interaction with electrons.  2<sup>nd</sup> International Uppsala Symposium on electron capture.  dissociation of biomolecules and related phenomena, August  25 - 28, 2004, North Berwick, East Lothian, Scotland.</p>	FT-ICR, BC
<p>Müthing, J.  Glykobiotechnologische Aspekte der Zellkulturtechnik.  Universität Stuttgart, 10. Dezember, 2004.</p>	BT
<p>Peter-Katalinić, J.  Requirements for glycomics of hereditary diseases:  microfluidics, accurate mass determination and software.  5<sup>th</sup> Proteome Information Exchange Meeting/Amersham  Biosciences, Münster, May 5 - 9, 2004.</p>	BC, KM

- Peter-Katalinić, J., J. Müthing BT, BC  
 Leukocyte Glycosphingolipid Epitopes.  
 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied  
 Topics, May 23 - 28, 2004, Nashville, Tennessee, USA.
- Peter-Katalinić, J. BC, KM  
 Requirements on mass spectrometry for N- and O-glycomics of  
 hereditary diseases: microfluidics, accurate mass determination  
 and software.  
 Human Glycoproteome Initiative Workshop: Functional  
 Glycomics in Disease, August 22 - 24, 2004, Osaka, Japan.
- Peter-Katalinić, J. BC, BP  
 MS and Tandem MS for GlycoTag Discovery.  
 6<sup>th</sup> Siena Meeting, From Genome to Proteome: Biomarker  
 Discovery & Proteome Imaging, August 28-September 2, 2004,  
 Siena, Italy.
- Peter-Katalinić, J. PHC, BP  
 Potentials of Modern Mass Spectrometry in Structure  
 Elucidation of Natural Compounds.  
 ICNPAS-2004, 2<sup>nd</sup> International Conference on Natural Products  
 and Physiologically Active substances, September 12 -17, 2004,  
 Novosibirsk, Russland.
- Peter-Katalinić, J., L. Bindila, M. Froesch, M. Mormann,  
 D. Šagi, S. Vakhrushev, A. Zamfir BC,  
FT-ICR  
 Novel Trends in N- and O-Glycoproteomics.  
 3<sup>rd</sup> Swedish Proteomics Society Symposium, Lund, Sweden and  
 Copenhagen, Denmark, October 2 - 5, 2004.
- Peter-Katalinić, J. BC, KM  
 Glycomics Research in Molecular Medicine.  
 Bio-MS-Club, DKFZ Heidelberg, November 24, 2004.
- Peter-Katalinić, J. BC, BP  
 Hochdurchsatz Massenspektrometrie in Glykomik: Neue  
 Technologien in der Molekularen Medizin.  
 Innovationsforum Berlin, 1.-3. Dezember 2004.

- Peter-Katalinić, J. BC, KM  
 Requirements on Glycomics Research in Molecular Medicine.  
 Jahrestagung der Schweizerischen Proteomgesellschaft, SPS'04  
 Inselspital Bern, Switzerland, December 6 - 8, 2004.
- Peters, R. BP, ZB  
 4<sup>th</sup> International Symposium on Physics, Chemistry and Biology  
 with Single Molecules.  
 Kloster Banz, Bad Staffelstein, February 22-25, 2004.
- Peters, R. BP, ZB  
 International Symposium Functional Architecture of the Cell  
 Nucleus.  
 Heidelberg, April 16-17, 2004.
- Peters, R. NBT, ZB  
 International Symposium Perspectives of Nanotechnology.  
 Münster, June 4 - 5, 2004.
- R. Reichelt EM, BP,  
 Rasterelektronen- und Atomkraftmikroskopie an dünnen AFM, SSM  
 organischen Schichten: Methodische Möglichkeiten und  
 Anwendungen.  
 Lehrstuhlseminar RU Bochum. Bochum, 13.02.2004.
- R. Reichelt EM, BP,  
 SCANNING FORCE MICROSCOPY versus FIELD AFM, SSM  
 EMISSION SCANNING ELECTRON MICROSCOPY:  
 Complementary or competitive methods?  
 XI Congreso Venezolano de Microscopia. Caracas,  
 10. - 13.10.2004 (Plenary lecture + Abstract).



## Andere Aktivitäten

Kubitscheck, U.

Ruf auf eine Professur (C3) für "Experimentelle Biophysik" an die Universität Bielefeld (Juni 2004).

Kubitscheck, U.

Ruf auf eine Professur (C4) für "Physikalische Chemie" (Schwerpunkt Biophysikalische Chemie) an der Rheinischen Friedrich-Wilhelms-Universität Bonn.

Müthing, J.

-Croatian Medical Journal, Scientific Board.

Müthing, J.

-Neurologia Croatica, Scientific Board.

Peter-Katalinić, J.

Vorstandsmitglied der Deutschen Gesellschaft für Massenspektrometrie (DGMS).

Peter-Katalinić, J.

Organisationskomitee-Mitglied: "Mass Spectrometry in the Health and Life Sciences", (biannual) San Francisco, USA.

Peter-Katalinić, J.

Organisationskomitee-Mitglied: 7<sup>th</sup> European Conference on Fourier Transform Ion Cyclotron Resonance Mass Spectrometry, Konstanz, April 2004.

Peter-Katalinić, J.

Gutachtertätigkeit:

Deutsche Forschungsgemeinschaft (DFG),  
Österreichischer Jubiläumsfonds (FWF),  
Natural Sciences and Engineering Research Council of Canada (NSERC),  
German-Israeli Foundation for Scientific Research and Development (GIF) u. v. a.,  
National Fonds (Schweiz).

Peter-Katalinić, J.

Gastherausgeberin: „Electrophoresis“ Juni 2004:CE /MS.

Peter-Katalinić, J.

Auswärtige Prüfertätigkeit 2004:

Universität Ljubljana, Slovenien

Universität York, England.

Reichelt, R.

Gutachtertätigkeit: Deutsche Forschungsgemeinschaft (DFG).

Reichelt, R.

Mitglied des Programmkomitee der Dreiländertagung für Mikroskopie 2005 in Davos / CH.

## Drittmittelprojekte, Personalstellen und Sachmittel 2004:

Kubitscheck, U.

DFG Ku975/3-3 (bis 31.03.2004, eine BAT IIa/2),  
DFG 1507/1-1 (eine BAT IIa/2),  
VW I/78 852 (eine BAT IIa/2).

Müthing, J.

„Characterization of  $\alpha$ -2,3- and  $\alpha$ -2,6-sialyltransferase expression in carcinomas by molecular and immunohistochemical methods“.

DAAD-Stipendiatin:

Irena Drmić, PhD, Assistant Professor

Split University Hospital and Split University School of Medicine (Croatia)

Dezember 2004 bis Februar 2005.

Müthing, J.

"Glycobiologie", BD 133503 (3027 €)

Peter-Katalinić, J.

IZKF Universität Münster:

„Genexpressions- und Funktionsanalysen zu Pathogenesewegen des invasiven Mammakarzinoms und seiner potentiellen Vorläuferläsionen“ mit B. Brandt, W. Böcker und H. Bürger, (H1, 2001-2004, 406.500.-DM).

Peter-Katalinić, J.

SFB 492: Extrazelluläre Matrix: Biogenese, Assemblierung und Zelluläre Wechselwirkungen (2000-2005).

„Quadrupol Flugzeit und Fourier-Transform Ion Zyklotron Resonanz Massenspektrometrie von Glykosaminoglykanen und anderen Glykokonjugaten“, Projekt Z2: 2003-2005 (325.100.-€).

Peter-Katalinić, J.

„Biomedizinische Analytik mit 9,4 T Fourier Transform Ion Zyklotron Resonanz Massenspektrometrie (9,4 T FT-ICR-MS)“ (Grossgeräteinitiative: biologische Massenspektrometrie, DFG 1999, Projekt PE 415/14-1, 1 900 000.-DM).

Peter-Katalinić, J.

„GPI-spezifische Phospholipase D: Regulator der Tumor-malignität, Prognosefaktor und therapeutisches Target?“ mit Dr. G. Brunner, Fachklinik Hornheide an der WWU Münster.

(Schwerpunkt: Zelladhäsion, Migration und Invasion: Molekulare Grundlagen und klinische Bedeutung bei Tumorprogression und Metastasierung, Deutsche Krebshilfe (Mildred Scheel Stiftung) I0-2041-Br I, 2003-2005, 104.000.-€).

Peter-Katalinić, J.

EU-RP6

"Nano2Life" Network of Excellence für Bioanalytik, lokal koordiniert von Dr. K.-M. Weltring, Bioanalytik Münster (ca. 5500.-€).

Peter-Katalinić, J.

Gastforscher im Arbeitskreis "Biomedizinische Analytik":

Pavel Rehulka, BRNO (Tschechische Republik), DAAD-Projekt, 01.01. - 31.01.2004.

Dr. Željka Vukelić, Zagreb, Kroatien, Cackovic-Stiftung, 17.07 - 18.10.2004.

Biljana Balen, Zagreb, Kroatien, FEBS Fellowship, 01.02. - 30.04.2004 und 01.07 - 15.07. 2004.

Henning Cederquist, Oslo, Norwegen, EU-Projekt, 01.06. - 30.06.2004 und 01.11 - 31.12.2004.

Kerstin Steiner, Wien, Österreich, Universität Wien, 01.01. - 31.07.2004.

Dr. Irena Drmic, Universität Split, Kroatien, DAAD-Projekt, 01.12.04 - 12.02.2005.

Peters, R.

„Virtual gating machines“.

National Institute of Health USA, 13.9.2004.

Peters, R.

„In-vitro-Analyse des nukleären mRNA-Exports“.

Deutsche Forschungsgemeinschaft, 17.11.2004.

Peters, R.

„Exploring the cellular nanomachinery by 4Pi microscopy“.

Deutsche Forschungsgemeinschaft, 7.12.2004.

Reichelt, R.

DFG-Projekt NE 123/34-3 (E. Nembach, Inst. für Materialphysik, WWU und R. Reichelt): "Anwendungen des Rasterkraftmikroskops in der Materialphysik".

Reichelt, R.

DFG-Projekt RE 782/7-1 "XI Venezuelan Microscopy Congress, Caracas".

Reichelt, R.

DAAD-Projekt: “Nanostrukturierung von Spitzen durch Ionenbeschuß”  
(1 Doktorand, Antonio Monsalve, Venezuela, 01.04. - 31.12.04).

Reichelt, R.

DAAD-Projekt: “Characterization of heat-induced damages on different spores by scanning and transmission electron microscopy” (1 Doktorandin, Nazik Mustafa, Sudan, 15.06. - 15.12.04).

Reichelt, R.

Diverse Projekte mit kleinen und mittleren Firmen / Industrie.

## Abkürzungsverzeichnis

AFM	Atomkraftmikroskopie
AL	Elektronenmikroskopische Untersuchungen zur Allergologie
BC	Biochemie
BP	Biophysik
BT	Biotechnologie
EM	Elektronenmikroskopie
ESI	Elektrospray Massenspektrometrie
FT-ICR	Fourier Transform Ion Cyclotron Resonance
KM	Klinisch-medizinische Fragestellung
LM	Laser-Massenspektrometrie
LSM	Laser-Scanning-Mikroskopie
MA	Elektronenstrahl-Mikrosondenanalytik
NBT	Nanobiotechnologie
PC	Physikalische Chemie
PHC	Physiologische Chemie
SSM	Scanning-Sensormikroskopie
ZB	Zellbiologie