

Publication list: Martina Vermathen

ORCID: 0000-0002-0796-1643

ResearcherID: ABA-1385-2020

Original Work, peer-reviewed

- 1. Primasová H., Vermathen M., Furrer J.
Interactions of Cationic Diruthenium Trithiolato Complexes with Phospholipid Membranes studied by NMR Spectroscopy
Journal of Physical Chemistry **2020**, 124, 8822-8834, DOI: 10.1021/acs.jpccb.0c05133
- 2. Müller J., Vermathen M., Leitsch D., Vermathen P., Müller N.
Metabolomic Profiling of Wildtype and Transgenic *Giardia lamblia* Strains by ¹H HR-MAS NMR Spectroscopy
Metabolites **2020**, 10, 53, DOI: 10.3390/metabo10020053
- 3. Pfister S., Sauser L., Gjuroski I., Furrer J., Vermathen M.
Monitoring the encapsulation of chlorin e6 derivatives into polymer carriers by NMR spectroscopy
Journal of Porphyrins and Phthalocyanines **2019**, 23, 1576-1586,
DOI: 10.1142/S1088424619501815
- 4. Gjuroski I., Girousi E., Meyer C., Hertig D., Stojkov D., Fux M., Schnidrig N., Bucher J., Pfister S., Sauser L., Simon H.-U., Vermathen P., Furrer J., Vermathen M.
Evaluation of polyvinylpyrrolidone and block copolymer micelle encapsulation of serine chlorin e6 and chlorin e4 on their reactivity towards albumin and transferrin and their cell uptake
Journal of Controlled Release **2019**, 316, 150-167, DOI: 10.1016/j.jconrel.2019.10.010
- 5. Primasová H., Paul L.E.H., Diserens G., Primasová, E., Vermathen P., Vermathen M., Furrer J.
¹H HR-MAS NMR-Based Metabolomics of Cancer Cells in Response to Treatment with the Diruthenium Trithiolato Complex [(*p*-MeC₆H₄iPr)₂Ru₂(SC₆H₄-*p*-But)₃]⁺ (DiRu-1)
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- 6. Troxler L.J., Werren J.P., Schaffner T.O., Mostacci N., Vermathen P., Vermathen M., Wüthrich D., Simillion C., Brugger S.D., Bruggmann R., Hathaway L.J., Furrer J., Hilty M.
Carbon source regulates polysaccharide capsule biosynthesis in *Streptococcus pneumoniae*
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- 7. Precht C, Diserens G, Vermathen M., Oevermann A, Lauper J, Vermathen P
Metabolic profiling of listeria rhombencephalitis in small ruminants by ¹H high resolution-magic angle spinning NMR spectroscopy
NMR in Biomedicine, **2018**, e4023, DOI: 10.1002/nbm.4023
- 8. Diserens G, Vermathen M., Zurich M-G, Vermathen P
Longitudinal investigation of the metabolome of 3D aggregating brain cell cultures at different maturation stages by ¹H HR-MAS NMR
Analytical and Bioanalytical Chemistry, **2018**, 410 (26), 6733-6749, Paper in Forefront. DOI: 10.1007/s00216-018-1295-0

- 9. Baz L, Mori N, Guo X, Jamil M, Kountche B A, Mi J, Jia K-P, Vermathen M, Akiyama K, Al-Babili S
3-Hydroxycarlactone, a Novel Product of the Strigolactone Biosynthesis Core Pathway
Molecular Plant, **2018**, 11, 1312-1314, DOI: 10.1016/j.molp.2018.06.008
- 10. Vermathen M, Müller J, Furrer J, Müller N, Vermathen, P
¹H NMR spectroscopy to study the metabolome of the protozoan parasite *Giardia lamblia*
Talanta, **2018**, 188, 429–441, DOI: 10.1016/j.talanta.2018.06.006
- 11. Gjuroski I; Furrer J; Vermathen M
How Does the Encapsulation of Porphyrinic Photosensitizers into Polymer Matrices Affect Their Self-Association and Dynamic Properties?
ChemPhysChem, **2018**, 19, 1089 – 1102, DOI: 10.1002/cphc.201701318
- 12. Vermathen M, Marzorati M, Diserens G, Baumgartner D, Good C, Gasser F, Vermathen P
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- 13. Vermathen M, Diserens G; Vermathen P; Furrer J
Metabolic Profiling of Cells in Response to Drug Treatment using ¹H High-Resolution Magic Angle Spinning (HR-MAS) NMR Spectroscopy.
CHIMIA, **2017**, 71 (3), 124-129
- 14. Bruno M, Vermathen M, Alder A, Wüst F, Schaub P, van der Steen R, Beyer P, Ghishla S, Al-Babili S
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- 15. Diserens G, Hertig D, Vermathen M, Legeza B, Flück C, Nuoffer JM, Vermathen P
Metabolic stability of cells for extended metabolical measurements using NMR. A comparison between lysed and additionally heat inactivated cells
Analyt, **2017**, 142, 465-471. DOI: 10.1039/C6AN02195F
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Biochimica et Biophysica Acta BBA - Molecular and Cell Biology of Lipids, **2015**, 1851, 1539 - 1544. DOI: 10.1016/j.bbalip.2015.09.003
- 19. Hädener M, Gjuroski I, Furrer J, Vermathen M
Interactions of Polyvinylpyrrolidone with Chlorin e6 - Based Photosensitizers Studied by

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- O 20. Vermathen M, Paul LEH, Diserens G, Vermathen P, Furrer J
¹H HR-MAS NMR based Metabolic Profiling of Cells in Response to Treatment with a Hexacationic Ruthenium Metallaprism as Potential Anticancer Drug
PLoS ONE, **2015**, 10 (5): e0128478. DOI:10.1371/journal.pone.0128478
- O 21. Diserens G, Vermathen M, Precht C, Broskey NT, Boesch C, Amati F, Dufour J-F, Vermathen P
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Analyst, **2015**, 140 (1), 272-9, DOI: 10.1039/c4an01663g
- O 22. Bruno M, Hofmann M, Vermathen M, Alder A, Beyer P, Al-Babili S
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- O 27. Alder A, Jamil M, Marzorati M, Bruno M, Vermathen M, Bigler P, Ghisla S, Bouwmeester H, Beyer P, Al-Babili S
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Journal of Agriculture and Food Chemistry, **2011**, 59, 12784-12793
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Langmuir, **2000**, 16: 210-221
- O 34. Tanabe JL, Vermathen M, Miller RG, Gelinis D, Weiner MW, Rooney WD
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Magnetic Resonance Imaging, **1998**, 16:1163-1169
- O 35. Goodkin DE, Rooney WD, Sloan R, Bacchetti P, Gee L, Vermathen M, Waubant E, Abundo M, Majumdar S, Nelson S, Weiner MW
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Neurology, **1998**, 51:1689-1697
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Alcohol and Alcoholism, **1997**, 32: 671-681

Lectures and Workshops

- L 1. Vermathen M
Anwendungen der NMR Spektroskopie
Workshop für Auszubildende am Department für Chemie und Biochemie der Universität Bern, 8. Juli **2020**
- L 2. Vermathen M
Die Welt der magnetischen Resonanz
Vortrag im Rahmen des „Tag der offenen Tür“ des Departments für Chemie und Biochemie der Universität Bern, 4. November **2016**
- L 3. Vermathen M
"Die Kernfrage" - Welchen Einblick bietet uns die Kernresonanz-Spektroskopie in unsere Lebensmittel?
Workshop: „Science – Cuisine“ Kongress zur Weiterbildung von Mittelschullehrpersonen
Sion, 23. – 26.10. **2013**

- L 4. Vermathen M
 Von „A“ wie Apfel bis „Z“ wie Zelle – unsere Lebensmittel im Visier
 Vortrag im Rahmen der Veranstaltungsreihe „Biochemie am Samstag“ des Fachbereichs
 Chemie / Biochemie der Universität Bern, 20. November **2010**
 Universität Bern
- L 5. Vermathen M, Simonis U, Bigler P
 Wechselwirkungen von Porphyrinen mit Modellmembranen: NMR-spektroskopische
 Untersuchungen
 AMSM Lectures and Seminars: Grundlagen und aktuelle Entwicklungen in der
 medizinischen Magnetresonanz, 26. Oktober **2004**, Bern, Switzerland

Abstracts with peer-review

- A 1. Vermathen M., Meier M., Gjuroski I., Vermathen P., Furrer J.
 Exploring the Potential of Bicelles as Carriers for Porphyrinic Photosensitizers in Topical
 PDT
 11th International Conference on Porphyrins and Phthalocyanines (ICPP-11), **2020**, Buffalo,
 USA, accepted for oral presentation; Conference shifted to 2021
- A 2. Kämpfer T., Vermathen P.; Vermathen M.
¹H HR-MAS NMR Based Metabolic Profiling of Cells in Response to Treatment with the
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 SCS Fall Meeting **2020**, online conference
- A 3. Vermathen M, Hertig D, Müller N, Leitsch D, Vermathen P, Müller J
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- A 4. Meyer C, Sauser L, Gjuroski I, Furrer J, Vermathen M
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 Bicelles – Combining the Advantages of Micelles and Liposomes for Photosensitizer
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CHIMIA **2018**, 72 (7-8), MC-127
- A 6. Gjuroski I, Furrer J, Vermathen M
 Protective Role of Polymeric Carriers in Chlorin Delivery Against Protein Binding
CHIMIA **2018**, 72 (7-8), MC-117
- A 7. Primasová H, Diserens G, Paul LEH, Vermathen M, Vermathen P, Furrer J
¹H HR-MAS NMR based metabolomics of cancer cells responding to two different doses of
 the diruthenium trithiolato complex $[(p\text{-MeC}_6\text{H}_4\text{iPr})_2\text{Ru}_2(\text{SC}_6\text{H}_4\text{-}p\text{-Bu}^t)_3]^+$ (DiRu-1)
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 UK

- A 8. Vermathen M, Gjuroski I, Pfister S, Girousi E, Schnidrig N, Diserens G, Vermathen P, Furrer J
Impact of Polymer encapsulation on the Properties of Chlorin e6-based Photosensitizers and their Cell Uptake
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- A 9. Gjuroski I, Studer V, Heitz M, Reymond J-L, Furrer J, Vermathen M
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- A 10. Vermathen M, Müller J, Furrer J, Müller N, Vermathen P
Determination of the metabolome of *Giardia lamblia* by ¹H Magic Angle Spinning NMR ISMRM **2018**, Paris, France
- A 11. Primasová H, Vermathen M, Furrer J
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CHIMIA **2017**, 71 (7-8), IC-023, IC-155
- A 12. Primasová H, Paul LEH, Vermathen M, Diserens G, Vermathen P, Furrer J
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- A 13. Sauser L, Gjuroski I, Furrer J, Vermathen M
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CHIMIA **2017**, 71 (7-8), MC-144
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Probing Cellular Uptake of Different Delivery Approaches for Porphyrinic Photosensitizers on HeLa cells
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- A 15. Gjuroski I, Schnidrig N, Girousi E, Furrer J, Vermathen M
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- A 16. Gjuroski I, Sauser L, Furrer J, Vermathen M
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- A 17. Müller J, Vermathen M, Vermathen P, Müller N
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- A 18. Primasová H, Vermathen M, Furrer J
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ISMRRM **2017**, Honolulu, USA.
- A 20. Pfister S, Gjuroski I, Nydegger D, Hädener M, Diserens G, Vermathen P, Furrer J, Vermathen M
Probing the cellular uptake and response of porphyrinic photosensitizers in polymeric nanoparticles by fluorescence measurements and ¹H HR-MAS NMR based metabolic profiling of HeLa cells
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- A 21. Gjuroski I, Pfister S, Furrer J, Vermathen M
Polymer Delivery Systems of Porphyrin Photosensitizers Monitored by NMR Spectroscopy
CHIMIA **2016**, 70 (S7-8), MC-148
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Efficacy of Block Copolymers to Disaggregate and Encapsulate Porphyrins monitored by NMR Spectroscopy
CHIMIA **2016**, 70 (S7-8), MC-149
- A 23. Vermathen M, Sauser L, Gjuroski I, Furrer J
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- A 25. Gjuroski I, Hädener M, Diserens G, Vermathen P, Furrer J, Vermathen M
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- A 27. Diserens G, Vermathen M, Broskey NT, Boesch C, Amati F, Vermathen P
Investigation of Glucose-phosphates in Skeletal Muscle Biopsies by ¹H HR-MAS NMR: Comparison between Active and Sedentary Subjects
ISMRRM **2016**, Singapore
- A 28. Gjuroski I, Furrer J, Vermathen M
Preventing aggregation of porphyrinic photosensitizers using a biodegradable triblock copolymer
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- A 29. Eggimann S, Diserens G, Hertig D, Vermathen M, Furrer J, Vermathen P, Nuoffer JM
Metabolic investigations of intact fibroblasts by ^1H HR-MAS NMR Spectroscopy
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Lyon, France
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Boesch C, Amati F, Vermathen P.
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- A 35. Diserens G, Vermathen M, Stahl C, Broskey NT, Boesch C, Amati F, Vermathen P
Separation of Small Metabolites and Lipids in Spectra from Biopsies by Diffusion-weighted
CPMG HR-MAS.
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Effect of a hexacationic Ruthenium complex as potential anticancer drug on the cell
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J Biol Inorg Chem **2014**, 19, S749
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Diffusion-weighted HR-MAS of biopsies to obtain separated fat-free metabolite and lipid
spectra. A feasibility study.
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- A 39. Stahl C, Diserens G, Vermathen M, Oevermann A, Seuberlich T, Lauper J, Boesch C, Amati
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The effect of spinning rate variation on lipid resonances in HR-MAS spectra of brain and

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HR-MAS NMR as direct tool for the analysis of viscous materials
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Effect of a hexanuclear ruthenium complex on the metabolic profile of cancer cells studied by ¹H HR-MAS NMR spectroscopy
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- A 42. Hädener M, Vermathen M
NMR spectroscopic investigations of porphyrinic photosensitizers with nanoparticles as carrier systems.
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- A 43. Diserens G, Vermathen M, Broskey NT, Boesch C, Amati F, Vermathen P
Is the metabolite profile of a single muscle biopsy representative for the tissue under investigation? A reproducibility study using HR-MAS.
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¹H HR-MAS NMR Spectroscopy to monitor the impact of different production systems on the metabolic profile of Golden Delicious apples.
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- A 45. Vermathen M, Marzorati M, Baumgartner D, Good C, Vermathen P
Application of ¹H HR-MAS NMR Spectroscopy for metabolomic studies on apples obtained from different growing systems.
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- A 48. Marzorati M, Bigler P, Furrer, J, Vermathen M
Direct detection of chitosan in toothpaste with HR-MAS NMR
CHIMIA **2011**, 65 (7-8), AC 25
- A 49. Marzorati M, Vermathen M, Bigler P
NMR Studies on the Interactions between Model Membranes and selected Photosensitizers.
EUROMAR 2010 and 17th ISMAR Conference, **2010**, Florence, Italy
- A 50. Vermathen M, Marzorati M, Bigler P
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- A 52. Vermathen M, Bigler P
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Factors Modulating the Incorporation Characteristics of Porphyrins in Micelles and Vesicles.
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