

## LIST OF PUBLICATIONS

\* indicates co-correspondence

166. X. Bessie Su, V. Fedeli, G. Liu, M. Amma, P. Boulasiki, J. Wang, M. Bizzarri, H. J. Jessen, D. Fiedler, A. Riccio, A. Saiardi  
"Basic features of cellular inositol metabolism as revealed by a newly developed LC-MS method."  
*Biochem. J.* **2025**, BCJ-2025-3028.
165. G. Kim, G. Liu, D. Qiu, N. Gopaldass, G. De Leo, J. Hermes, J. Timmer, A. Saiardi, A. Mayer\*, H. J. Jessen\*  
"Pools of independently cycling inositol phosphates revealed by pulse labeling with <sup>18</sup>O-water."  
*J. Am. Chem. Soc.* **2025**, <https://doi.org/10.1021/jacs.4c16206>, *Biorxiv* **2024**, doi.org/10.1101/2024.05.03.592351.
164. B. Huo, X. Zhao, T. Li, X. Zhang, A. Zhu, P. Moser, H. J. Jessen, L. Li  
"A Chemo-Enzymatic Approach for the Synthesis of C7 Substituted (p)ppGpp Derivatives"  
*Chin. J. Chem.* **2025**, accepted.
163. B. Schwer, I. Prucker, A. M. Sanchez, J. Babor, H. J. Jessen, S. Shuman  
"Tandem inactivation of inositol pyrophosphatases Asp1, Siw14, and Aps1 illuminates functional redundancies in inositol pyrophosphate catabolism in fission yeast"  
*mBio* **2025**, doi.org/10.1128/mbio.00389-25.
162. D. Desmarini, D. Truong, P. Sethiya, G. Liu, B. Bowring, H. J. Jessen, H. Dinh, A. K. Cain, P. E. Thompson, J. T. Djordjevic  
"Synthesis of a New Purine Analogue Class with Superior Potency Against Fungal IP3-4K, Demonstrating Novel Antifungal Activity"  
*ACS Infect. Dis.* **2025**, 11, 940.
161. Q. Zhu, M. F. Yaggi, N. Jork, H. J. Jessen, M. M. Diver  
"Transport and InsP<sub>8</sub> gating mechanisms of the human inorganic phosphate exporter XPR1"  
*Nat. Commun.* **2025**, 16, 2770.
160. M. Y. Ng, H. Wang, H. Zhang, I. Prucker, L. Perera, E. Goncharova, A. Wamiru, H. J. Jessen, R. E. Stanley, S. B. Shears, J. Luo, B. R. O'Keefe, B.A.P. Wilson  
"Biochemical and biophysical characterization of inositol-tetrakisphosphate 1-kinase inhibitors"  
*J. Biol. Chem.* **2025**, doi.org/10.1016/j.jbc.2025.108274.
159. M. Kuge, M. Keppler, F. Friedrich, R. Saleem-Batcha, J. Winter, I. Prucker, P. Germer, S. Gerhardt, O. Einsle, M. Jung, H. J. Jessen, J. N. Andexer  
"Structural Insights into Broad-Range Polyphosphate Kinase 2-II Enzymes Applicable for Pyrimidine Nucleoside Diphosphate Synthesis"  
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158. B. Lázaro, A. Sarrias, F. J. Tadeo, J. M. Martínez-Láinez, A. Fernández, E. Quandt, B. Depares, T. Dürr-Mayer, H. J. Jessen, J. Jiménez, J. Clotet, S. Bru  
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157. M. Bertolini, S. Cline, M. Chiurillo, B. Mantilla, A. Eidex, L. Crowe, D. Qiu, H. J. Jessen, A. Saiardi, R. Docampo  
" Generation of inositol polyphosphates is through a phospholipase C-independent pathway involving carbohydrate and sphingolipid metabolism in *Trypanosoma cruzi*"  
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156. S. K. Roy, S. Moser, T. Dürr-Mayer, R. Hinkelmann, H. J. Jessen  
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154. A. Ripp, M. Krämer, V. Barth, P. Moser, T. M. Haas, J. Singh, T. Huck, L. Gleue, K. Friedland, M. Helm, H. J. Jessen  
"The P(III)-amidite based synthesis of stable isotope labeled mRNA-cap-structures enables their sensitive quantitation from brain tissue"  
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153. F. Laurent, S. M. Bartsch, A. Shukla, F. E. R. Resendiz, D. Couto, C. Fuchs, J. Nicolet, S. Loubery, H. J. Jessen, D. Fiedler, M. Hothorn  
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*Micromachines* **2024**, 15, 1391
151. K. Chalak, R. Yadav, G. Liu, P. Rana, H. J. Jessen, D. Laha  
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*Biochemistry* **2024**, 63, 2723–2728.
150. D. Collins, V. Janardan, D. Barneda, K. E. Anderson, I. Niewczas, D. Taylor, D. Qiu, H. J. Jessen, A. F. Lopez-Clavijo, S. Walker, J. Clark, L. R. Stephens, P. T. Hawkins  
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149. T. Heitmann, G. Liao, G. Ernst, M. Poslusney, T. van Kralingen, Y. Li, M. Masi, M. DePasquale, I. Buchler, H. Wei, G. V. Carr, E. Shlevkov, M. Lu, H. J. Jessen, J. C. Barrow „Identification and Characterization of a Blood–Brain Barrier Penetrant Inositol Hexakisphosphate Kinase (IP6K) Inhibitor”  
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148. R. Schoeppe, M. Waldmann, H. J. Jessen, T. Renné „An Update on Polyphosphate In Vivo Activities“  
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147. N. J. Pullagurla, S. Shome, G. Liu, H. J. Jessen, D. Laha “Orchestration of phosphate homeostasis by the ITPK1-type inositol phosphate kinase in the liverwort *Marchantia polymorpha*.“  
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143. W. M. De Vos, M. N. Trung, M. Davids, G. Liu, M. R. Morales, H. Jessen, D. Fiedler, M. Nieuwdorp, T. P. N. Bui “Identification of Microbial Phytate Metabolism in the Human Gut and Its Relation with Host Health”  
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142. B. Haschimi, F. Willecke, S. Mundinger, W. Hüttel, H. J. Jessen, M. Müller, V. Auwärter “Enzymatic Defluorination of a Terminally Monofluorinated Pentyl Moiety: Oxidative or Hydrolytic Mechanism?”  
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139. J. Ma, J. Wehrle, D. Frank, L. Lorenzen, C. Popp, W. Driever, R. Grosse, H. J. Jessen  
"Intracellular Delivery and Deep Tissue Penetration of Nucleoside Triphosphates using Photocleavable Covalently Bound Dendritic Polycations"  
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138. H. Mohsenin, J. Pacheco, T. Baumann, H. J. Wagner, N. Höfflin, S. Kemmer, A. Ripp, N. Jork, T. Bergmann, J. Timmer, H. J. Jessen, M. Köhn, W. Weber  
"PenTag, a Versatile Platform for Covalent Bioconjugation, Purification, and Tagging of Proteins Towards the Development of Novel Biohybrid Material Systems."  
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137. M. Lallemand, C. O. Akintayo, C. Wenzel, W. Chen, L. Sielaff, A. Ripp, H. J. Jessen, B. Balzer, A. Walther, T. Hugel  
"Hierarchical Mechanical Transduction of Precision-Engineered DNA Hydrogels with Sacrificial Bonds"  
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"Systems chemistry of aminoacyl phosphates: Spontaneous and selective peptide oligomerisation in water driven by phase changes."  
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135. R. P. Bennett, Y. Yoluç, J. D Salter, A. Ripp, H. J. Jessen, S. M. Kaiser, H. Smith  
"Sangivamycin is Preferentially Incorporated into Viral RNA by the SARS-CoV-2 Polymerase"  
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133. K. Ritter, N. Jork, A-S. Unmüssig, M. Köhn, H. J. Jessen  
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132. A. M. Sanchez, B. Schwer, N. Jork, H. J. Jessen, S. Shuman  
"Activities, substrate specificity, and genetic interactions of fission yeast Siw14, a cysteinyl-phosphatase-type inositol pyrophosphatase"  
*mBio* **2023**, e02056-23.
131. V. B. Eisenbeis, D. Qiu, O. Gorka, L. Strotmann, G. Liu, I. Prucker, K. Ritter, C. Loenarz, O. Gross, A. Saiardi, H. J. Jessen

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128. D. Qiu, E. Riemer, T. M. Haas, I. Prucker, S. Masuda, Y. L. Wang, G. Felix, G. Schaaf, H. J. Jessen  
"Bacterial Pathogen Infection Triggers Magic Spot Nucleotide Signaling in Arabidopsis thaliana Chloroplasts Through Specific RelA/SpoT Homologs"  
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" $H_2O_2$  selectively damages the binuclear iron-sulfur cluster N1b of respiratory complex I"  
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124. P. Bencic, M. Keppler, D. Qiu, M. Häner, L. Schütte, K. Strack, H. J. Jessen, J. N. Andexer, C. Loenarz  
„Non-Canonical Nucleosides: Biomimetic Triphosphorylation, Incorporation into mRNA and Effects on Translation and Structure“  
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„Biomimetic S-adenosylmethionine regeneration for nucleophilic and radical alkylation reactions and aminopropyltransfer“

122. J. Pipercevic, B. Kohl, R. Gerasimaite, V. Comte, S. Hostachy, T. Müntener, E. Agustoni, H. J. Jessen, D. Fiedler, A. Mayer, S. Hiller  
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119. M. Ito, N. Fujii, S. Kohara, S. Hori, M. Tanaka, C. Wittwer, K. Kikuchi, T. Iijima, Y. Kakimoto, K. Hirabayashi, D. Kurotaki, H. J. Jessen, A. Saiardi, E. Nagata  
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118. D. Qiu, C. Gu, G. Liu, K. Ritter, V. B. Eisenbeis, T. Bittner, L. Seidel, B. Bengsch, A. Gruzdev, S. B. Shears, H. J. Jessen  
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117. M. N. Trung, S. Kieninger, Z. Fandi, D. Qiu, G. Liu, A. Saiardi, H. J. Jessen, B. Keller, D. Fiedler  
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*mBio* **2022**, *13*, e0308722.
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“Make or break: the thermodynamic equilibrium of polyphosphate kinase-catalysed reactions”  
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114. E. Riemer, N. J. Pullagurla, R. Yadav, R. Priyanshi, H. J. Jessen, M. Kamleitner, G. Schaaf, D. Laha

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