

## Publikationen in Publikationsorganen mit wissenschaftlicher Qualitätssicherung

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### 2023

- (54) Archipowa, N.; Wittmann, L.; Kockenberger, J.; Ertl, F. J.; Gleixner, J.; Keller, M.\*; Heinrich, M. R.\*; Kutta, R. J.\* Characterization of fluorescent dyes frequently used for bioimaging: photophysics and photocatalytical reactions with proteins. *J. Phys. Chem. B* **2023**, *127*, 9532–9542.
- (55) Gleixner, J.; Gattor, A. O.; Humphrys, L. J.; Brunner, T.; Keller, M.\* [<sup>3</sup>H]UR-JG102 - a radiolabeled cyclic peptide with high affinity and excellent selectivity for the neuropeptide Y Y<sub>4</sub> receptor. *J. Med. Chem.* **2023**, *66*, 13788-13808.
- (52) Plut, E.; Calderón, J. C.; Stanojlović, V.; Gattor, A. O.; Höring, C.; Humphrys, L. J.; Konieczny, A.; Kerres, S.; Schubert, M.; Keller, M.\*; Cabrele, C.\*; Clark, T.\*; Reiser O.\* Stereochemistry-driven interactions of  $\alpha,\gamma$ -peptide ligands with the neuropeptide Y Y<sub>4</sub>-receptor. *J. Med. Chem.* **2023**, *66*, 9642-9657.
- (51) Wirth, U.; Erl, J.; Azzam, S.; Höring, C.; Skiba, M.; Singh, R.; Hochmuth, K.; Keller, M.\*; Wegener, J.\*; König, B.\* Monitoring the reversibility of GPCR signaling by combining photochromic ligands with label-free impedance analysis. *Angew. Chem., Int. Ed.* **2023**, *62*, e202215547.

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- (50) Köckenberger, J.; Fischer, O.; Konopa, A.; Bergwinkl, S.; Mühlich, S.; Gmeiner, P.; Kutta, R. J.; Hubner, H.; Keller, M.; Heinrich, M. R.\* Synthesis, characterization, and application of muscarinic M(3) receptor ligands linked to fluorescent dyes. *J. Med. Chem.* **2022**, *65*, 16494-16509.
- (49) Schindler, L.; Moosbauer, J.; Schmidt, D.; Spruss, T.; Gratz, L.; Lüdeke, S.; Hofheinz, F.; Meister, S.; Echtenacher, B.; Bernhardt, G.; Pietzsch, J.; Hellwig, D.; Keller, M.\* Development of a neurotensin-derived <sup>68</sup>Ga-labeled PET ligand with high in vivo stability for imaging of NTS<sub>1</sub> receptor-expressing tumors. *Cancers* **2022**, *14*, 4922.
- (48) Schindler, L.; Wohlfahrt, K.; Gluhacevic von Krüchten, L.; Prante, O.; Keller, M.\*; Maschauer, S.\* Neurotensin analogs by fluoroglycosylation at N<sup>ω</sup>-carbamoylated arginines for PET imaging of NTS<sub>1</sub>-positive tumors. *Sci. Rep.* **2022**, *12*, 15028.
- (47) Tang, T.; Tan, Q.; Han, S.; Diemar, A.; Lobner, K.; Wang, H.; Schuss, C.; Behr, V.; Morl, K.; Wang, M.; Chu, X.; Yi, C.; Keller, M.; Kofoed, J.; Reedtz-Runge, S.; Kaiser, A.\*; Beck-Sickinger, A. G.\*; Zhao, Q.\*; Wu, B.\* Receptor-specific recognition of NPY peptides revealed by structures of NPY receptors. *Sci. Adv.* **2022**, *8*, eabm1232.
- (46) Tahk, M. J.; Torp, J.; Ali, M. A. S.; Fishman, D.; Parts, L.; Gratz, L.; Müller, C.; Keller, M.; Veiksina, S.; Laasfeld, T.\*; Rinken, A.\* Live-cell microscopy or fluorescence anisotropy with budded baculoviruses-which way to go with measuring ligand binding to M<sub>4</sub> muscarinic receptors? *Open Biol.* **2022**, *12*, 220019.
- (45) Müller, C.; Gleixner, J.; Tahk, M. J.; Kopanchuk, S.; Laasfeld, T.; Weinhart, M.; Schollmeyer, D.; Betschart, M. U.; Lüdeke, S.; Koch, P.; Rinken, A.; Keller, M.\* Structure-based design of high-affinity fluorescent probes for the neuropeptide Y Y<sub>1</sub> receptor. *J. Med. Chem.* **2022**, *65*, 4832-4853.

## 2021

- (44) Konieczny, A.; Conrad, M.; Ertl, F. J.; Gleixner, J.; Gattor, A. O.; Grätz, L.; Schmidt, M. F.; Neu, E.; Horn, A. H. C.; Wifling, D.; Gmeiner, P.; Clark, T.; Sticht, H.; Keller, M.\* N-Terminus to arginine side-chain cyclization of linear peptidic neuropeptide Y Y<sub>4</sub> receptor ligands results in picomolar binding constants. *J. Med. Chem.* **2021**, *64*, 16746-16769.
- (43) Weinhart, C. G.; Wifling, D.; Schmidt, M. F.; Neu, E.; Höring, C.; Clark, T.; Gmeiner, P.; Keller, M.\* Dibenzodiazepinone-type muscarinic receptor antagonists conjugated to basic peptides: impact of the linker moiety and unnatural amino acids on M<sub>2</sub>R selectivity. *Eur. J. Med. Chem.* **2021**, *213*, 113159.
- (42) Grätz, L.; Laasfeld, T.; Allikalt, A.; Gruber, C. G.; Pegoli, A.; Tahk, M. J.; Tsernant, M. L.; Keller, M.; Rinken, A. BRET- and fluorescence anisotropy-based assays for real-time monitoring of ligand binding to M<sub>2</sub> muscarinic acetylcholine receptors. *Biochim. Biophys. Acta Mol. Cell Res.* **2021**, *1868*, 118930.

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- (39) Gruber, C. G.; Pegoli, A.; Müller, C.; Grätz, L.; She, X.; Keller, M.\* Differently fluorescence-labelled dibenzodiazepinone-type muscarinic acetylcholine receptor ligands with high M<sub>2</sub>R affinity. *RSC Med. Chem.* **2020**, *11*, 823-832.
- (38) She, X.; Pegoli, A.; Gruber, C. G.; Wifling, D.; Carpenter, J.; Hübner, H.; Chen, M.; Wan, J.; Bernhardt, G.; Gmeiner, P.; Holliday, N. D.\*; Keller, M.\* Red-emitting dibenzodiazepinone derivatives as fluorescent dualsteric probes for the muscarinic acetylcholine M<sub>2</sub> receptor. *J. Med. Chem.* **2020**, *63*, 4133-4154.
- (37) Buschmann, J.; Seiler, T.; Bernhardt, G.; Keller, M.; Wifling, D. Argininamide-type neuropeptide Y Y<sub>1</sub> receptor antagonists: the nature of N<sup>ω</sup>-carbamoyl substituents determines Y<sub>1</sub>R binding mode and affinity. *RSC Med. Chem.* **2020**, *11*, 274-282.
- (36) Keller, M.\*; Mahuroof, S. A.; Hong Yee, V.; Carpenter, J.; Schindler, L.; Littmann, T.; Pegoli, A.; Hübner, H.; Bernhardt, G.; Gmeiner, P.; Holliday, N. D.\* Fluorescence labeling of neurotensin(8-13) via arginine residues gives molecular tools with high receptor affinity. *ACS Med. Chem. Lett.* **2020**, *11*, 16-22.
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- (33) Lachmann, D.; Konieczny, A.; Keller, M.\*; König, B.\* Photochromic peptidic NPY Y<sub>4</sub> receptor ligands. *Org. Biomol. Chem.* **2019**, *17*, 2467-2478.

- (32) Pegoli, A.; Wifling, D.; Gruber, C. G.; She, X.; Hübner, H.; Bernhardt, G.; Gmeiner, P.; Keller, M.\* Conjugation of short peptides to dibenzodiazepinone-type muscarinic acetylcholine receptor ligands determines M<sub>2</sub>R selectivity. *J. Med. Chem.* **2019**, *62*, 5358-5369.
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