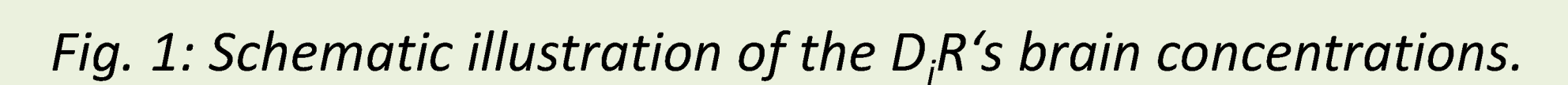


JÜLICH
Forschungszentrum

Forschungszentrum Jülich GmbH, Institute of Neuroscience and Medicine, INM-5, Nuclear Chemistry, Germany

- The dopamine D₄-receptor subtype plays an essential role in the development of neurodegenerative diseases, but specific PET-tracers for further examinations are still missing.
- The objective of this work was the design of a D₄-radioligand with high D₄R subtype selectivity and suitable Log *P* values for *in vitro*/*vivo* PET-studies.
- Due to the low concentration of the D₄R in the brain compared to the other D₁R subtypes (Fig.1), requirements for receptor subtype-selectivity are high.



[1] C. W. Lindsley C. R. Hopkins (2017) *J. Med. Chem.* **60**: 7233-7243.
 [2] J. O. Witt *et al.* (2016) *Bioorg. Med Chem. Lett.* **26**: 2481-2488.
 [3] S. J. Oh *et al.* (2004) *Bioorg. Med. Chem.* **12**: 5505-5513.
 [4] J. Zischler *et al.* (2017) *Chem. Eur. J.* **23**: 3251-3256.
 [5] F. Kügler *et al.* (2011) *J. Med. Chem.* **54**: 8343-8352.