 Targets in dementia
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Imaging targets for positron emission tomography of potential relevance for drug development can be identified from observations in post-mortem human tissue, experimental animals, clinical symptoms and genetic risk factors in humans. The most important targets and associated tracers may qualify as biomarkers and serve as entry or outcome criteria in clinical drug trials. Currently, most interest is focusing on tracers for pathological amyloid deposits in Alzheimer’s disease. Prognostic relevance is already evident, and they are also potential outcome parameters. Other potential targets of interest are vascular changes, deposits of tau and alpha-synuclein, inflammatory and apoptotic pathways. The closest relation to clinical symptoms has been demonstrated for FDG. Cholinergic, noradrenergic, serotonergic, dopaminergic, glutamatergic and gabaergic transmitters and receptors are altered in dementia and present obvious targets. Research is ongoing to investigate their clinical and pathophysiological relevance and to improve tracers. Potential new targets emerging from basic research include mitochondrial proteins, electrolyte channels, insulin and cannobinoid receptors.

References
not submitted