Quesiti

1- Descrizione di tecniche di valutazione neurocomportamentale in modelli pre-clinici di invecchiamento cerebrale
2- Descrizione di tecniche di arricchimento cognitivo in modelli pre-clinici di malattia di Alzheimer

Prova inglese

Current therapies for Alzheimer's disease seek to correct for defective cholinergic transmission by preventing the breakdown of acetylcholine through inhibition of acetylcholinesterase, these however have limited clinical efficacy. An alternative approach is to directly activate cholinergic receptors responsible for learning and memory. The M1-muscarinic acetylcholine (M1) receptor is the target of choice but has been hampered by adverse effects. Here we aimed to design the drug properties needed for a well-tolerated M1-agonist with the potential to alleviate cognitive loss by taking a stepwise translational approach from atomic structure, cell/tissue-based assays, evaluation in preclinical species, clinical safety testing, and finally establishing activity in memory centers in humans. Through this approach, we rationally designed the optimal properties, including selectivity and partial agonism, into HTL9936-a potential candidate for the treatment of memory loss in Alzheimer's disease. More broadly, this demonstrates a strategy for targeting difficult GPCR targets from structure to clinic.
Da: Brown et al, Cell. 2021 Nov 24;184(24):5886-5901.e22. doi: 10.1016/j.cell.2021.11.001.

Prova informatica

Copiare un breve testo da internet su un file word e modificare lo stile e la grandezza dei caratteri nonché la spaziatura del paragrafo.

SORTEGGIATA

Traccia n. 3

Quesiti

1- Descrizione di modelli pre-clinici amiloido-indipendenti di malattia di Alzheimer
2- Descrizione di tecniche di valutazione neurocomportamentale in modelli pre-clinici di deficit cognitivo legato all'età

Prova inglese

Overall, our data suggest that when removed from their in vivo home environment, microglia suffer a severe case of "culture shock", drastically modulating their transcriptional regulatory network state from homeostatic to activated through upregulation of modules of culture-specific genes. Consequently, cultured microglia behave as a disparate cell type that does not recapitulate the homeostatic signatures of microglia in vivo. Finally, our predictive network model discovered potential key drivers that may convert activated microglia back to their homeostatic state, allowing for more accurate representation of in vivo states in culture. Knockdown of key driver C1qc partially attenuated microglial activation in vitro, despite C1qc being only weakly upregulated in culture. This suggests that even genes that are not strongly differentially expressed across treatments or preparations may drive downstream transcriptional changes in culture.
Da: Cadiz et al, Mol Neurodegener. 2022 Mar 28;17(1):26. doi: 10.1186/s13024-022-00531-1.

Prova informatica

Inserire una serie di numeri da 1 a 20 (1, 2, 3, 4, ecc) in una colonna di Excel e calcolare per ogni numero il multiplo di 3.

NON SORTEGGIATA

Traccia n. 2

Quesiti

1- Descrizione di modelli pre-clinici amiloido-dipendenti di malattia di Alzheimer
2- Descrizione di tecniche di arricchimento cognitivo in modelli pre-clinici di invecchiamento cerebrale

Prova inglese

The basic mechanism driving Alzheimer's disease (AD), as well as Parkinson disease and motor neuron disease, may be the deleterious activation in the maturity of a signaling system that had been beneficial in development.[1,2,3,4] Toxic effects may occur if this system is activated in the mature brain in response to a blow to the head,[5] ischemia,[6] or a decline in scavenging mechanisms.[7] Such a phenomenon would exemplify antagonistic pleiotropy, as proposed in George Williams' evolutionary explanation of senescence.[8,9] His theory concerns tradeoffs between early life benefits and late-life detriments and is consistent with a decline in the potency of natural selection with age.
Da: Greenfield et al, Alzheimers Dement (N Y). 2022; 8(1): e12274.

Prova informatica

Effettuare una media aritmetica di valori numerici presenti in più celle contigue in Excel.

NON SORTEGGIATA

Traccia n. 1