Discussion – drugs and known factors:

1. Estradiol-related: Taylor (MPhil student) to provide background and refs
2. PPARG-agonists
3. Adrenergic agonists, beta are very well known. Alpha with role less defined.
4. PDGFRA: olaratumab
5. SYK: fostamatinib disodium. There is a paper related to genetic perturbation

<https://www.nature.com/articles/s41467-017-02162-3>

1. Corticosteroids (i.e dexamethasone and similars): beclomethasone dipropionate, used in differentiation protocols. Also present prednisone, etc
2. Halothano:

<https://nyaspubs.onlinelibrary.wiley.com/doi/pdfdirect/10.1111/j.1749-6632.1997.tb51773.x>

<https://www.sciencedirect.com/science/article/pii/S0006295204002072#FIG6>

Unkown:

1. Amyloid beta plaques:

|  |
| --- |
| aducanumab |
| florbetaben f-18 |
| nicergoline |
| lecanemab |

1. Other GABA calcium channels
2. Growth hormone

**DRUGS SELECTED and IC50 (data from ChatGPT):**

**Dextromethorphan: step 1 & midgraph**

**Acyclovir: step 1, 2, 3 & midgraph**

**Minocycline: step 1, 3 & midgraph**

**Clevidipine: step 2,3 & midgraph**

**Sacubitril: step 1, 2, 3**

**Fostamatinib: common**

**Phenserine: midgraph/similar in step 1**

**Somatotropin (rGH): GH to be added, step 2**

|  |  |  |
| --- | --- | --- |
| Compound | Target / Assay | IC₅₀ (or EC₅₀) |
| Dextromethorphan HBr | NMDA receptor (cortical neurons) | 0.55 µM ([pubmed.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov/7691620/?utm_source=chatgpt.com)) |
|  | Voltage‑gated Na⁺ & Ca²⁺ channels | ~80 µM |
|  | NGICC (patch‑clamp) | ~11 µM |
| Acyclovir | HSV‑1/HSV‑2, plaque‑reduction (Vero cells) | ~0.85 µM |
| Minocycline HCl | Neuroprotection (microglia assays) | ~10 nM |
|  | OVCAR‑3, SKOV‑3, A2780 cancer cells | 56–62 µM |
| Clevidipine Butyrate | L‑type Ca²⁺ channels (patch‑clamp) | 7.1 nM |
| Sacubitril | Neprilysin (enzyme assay) | 5 nM |
| Fostamatinib | Syk kinase (cell‑free / patch assay) | 41 nM |
|  | R406 in B cells (CD69 up‑regulation) | EC₅₀ ≈ 48 nM |
| Phenserine | AChE inhibition (CHO APP751SW cells) | ~24 nM |
|  | Non‑competitive AChE (inhibitor screen) | ~45 µM |