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5-HT_{2B} SELECTIVE INHIBITORS

THERAPEUTICS

Novel family of 5HT_{2B}-selective antagonists for neuropathologies, such as Alzheimer's disease, depression, ADHD, and migraines. Potential application in cardiology, gastroenterology, and bone marrow diseases.

TECHNOLOGY TYPE

Small Molecule
Central Nervous System
Natural Product
Neurology

STAGE OF DEVELOPMENT

- Proof of concept for lead candidate demonstrated through in vitro and in vivo testing.

- Additional drug candidates in development.

IP PROTECTION

Nationalized PCT Issued in the US

Methods and compositions related to neuroactive thiazoline compounds
US9751847B2

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Reference Number: U-4922

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TECHNOLOGY SUMMARY

Serotonin receptors are popular targets for many diseases, particularly neuropathologies. The existence of 14 subtypes, however, necessitates selective ligands. Current drugs tend to bind non-selectively to 5-HT_{2A} and 5-HT_{2C} as well as 5-HT_{2B}, limiting their use.

The proposed antagonists offer increased selectivity to 5-HT_{2B}. These compounds exhibit nanomolar to micromolar selective interactions, which increases efficacy and reduces side effects of therapeutics. 5HT_{2B} has additional potential applications in gastrointestinal, cardiac, and bone marrow related conditions.

FEATURES AND BENEFITS

- Increases specificity.
- Improves binding affinity.
- Represents a new chemical class with various applications.

RECENT PUBLICATIONS

Lin, Z., Smith, M.D., Concepcion, G.P., Haygood, M.G., Olivera, B.M., Light, A., Schmidt, E.W. (2017). Modulating the serotonin receptor spectrum of pulicatin natural products. *Journal of Natural Products*. 80(8): 2360-2370. doi: [10.1021/acs.jnatprod.7b00317](https://doi.org/10.1021/acs.jnatprod.7b00317).

INVENTOR PROFILE

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DATE UPDATED: 7/19/2019