



LineBacker



TECHNOLOGY DESCRIPTION

LineBacker is a platform of small molecule X-bonded polyphenols. X-bonding is a molecular tuning technique that modifies a natural compound to induce potency, efficacy, bioavailability, and trans-membrane permeability while maintaining safety, toxicity, and tolerability.

Natural polyphenols have demonstrated strong potential in treating and preventing a range of diseases by inhibiting TNF- α and indication specific causes (e.g. neurology, anti-inflammatory, oncology).

Two novel discrete LineBacker molecules have been synthesized and characterized including in vitro testing.

PATENTS/INTELLECTUAL PROPERTY SUMMARY

Thompson, Daryl Lee and Milton Joseph Ahrens. 2011. Composition and method for the treatment of neurological disorders. U.S. Patent #8,034,838 issued October 11, 2011.

Thompson, Daryl Lee. 2018. Electrophilically enhanced phenolic compounds for treating inflammatory related diseases and disorders. U.S. Patent #10,123,991 issued November 13, 2018.

Both patents were filed under the Patent Cooperation Treaty (PCT).

MARKET OVERVIEW (SIZE, COMPETITION, TRENDS)

There is significant global market opportunity for LineBacker:

- Neurology: \$33B with CAGR 3.5% through 2025
Source: *BCC Research*
- Anti-Inflammatory: \$106B with CAGR 5% through 2025
Source: *Allied Market Research*
- Oncology: \$150B in 2017 with CAGR 10% through 2025
Source: *IQVIA*

Market size and growth rate will vary by indication.

VALUE PROPOSITION/BASIS FOR DIFFERENTIATION

LineBacker is anticipated to be effective in crossing the blood-brain barrier and would be delivered orally.

Significant pre-clinical testing has been completed in neurology, anti-inflammatory, oncology, anti-infective, and viral disease states to demonstrate response to LineBacker.

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Publications include:

Myricetin Derivatives Ameliorate Deficits in 6-OHDA Animal Model of Parkinson's Disease.

(2018). *International Society for Neuroscience*.

<https://www.criver.com/sites/default/files/resource-files/SH-SFN-18-myricetin-derivatives-ameliorate-deficits-in-6-OHDA-animal-model-of-parkinsons-disease.pdf>

Potential of Flavonoid-Inspired Phytomedicines against Covid-19. (2020). *Journal of Molecules*.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7321405/>

PRODUCT DEVELOPMENT STATUS

LineBacker is in pre-clinical development stage with two characterized molecules which can potentially enter phase one studies.

FINANCIALS

Time-to-market and time-to-revenue are contingent on target claims, development time, manufacturing, and legal and regulatory requirements.

POTENTIAL AGREEMENT STRUCTURE(S)

LineBacker is available for worldwide licensing, joint venture, and/or co-development agreements.

COMPANY SUMMARY AND CONTACT INFORMATION

Impact BioMedical, Inc. is a wholly-owned subsidiary of Document Security Systems, Inc. and drives mission-oriented research and development that addresses unmet needs in human healthcare.

Impact BioMedical, Inc. has worldwide rights to LineBacker technology and is seeking partners to develop and/or commercialize this technology.

For more information:

<https://www.impbio.com>

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