CerebrumDAO REPORT

Mission Alignment - May 2025
Data-Driven Evaluation

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2025-05-13

TABLE OF CONTENTS:

1. Mission Overview

Primary Mission:

To advance brain health and prevent neurodegeneration, starting with Alzheimer's, by using a decentralized, community-powered model to fund and translate scientific research into real-world therapeutic and commercial solutions.

How CerebrumDAO aims to achieve this:

- Source and fund promising research projects through community governance.
- Tokenize resulting IP using IPNFTs for transparent ownership and licensing.
- Foster translational pathways (e.g., biotech spinouts, licensing to industry).
- Build a multidisciplinary global community (neuroscience + Web3 + business).
- Channel returns back into the ecosystem to fund more research.

2. Community Engagement & Communication

Source: Twitter/X

What We Did:

- Extracted engagement metrics (likes, retweets, replies).
- Analyzed tweet activity and sentiment over time.
- Identified top-performing tweets.

Key Findings:

1. ***Engagement is steady but not rapidly growing.***

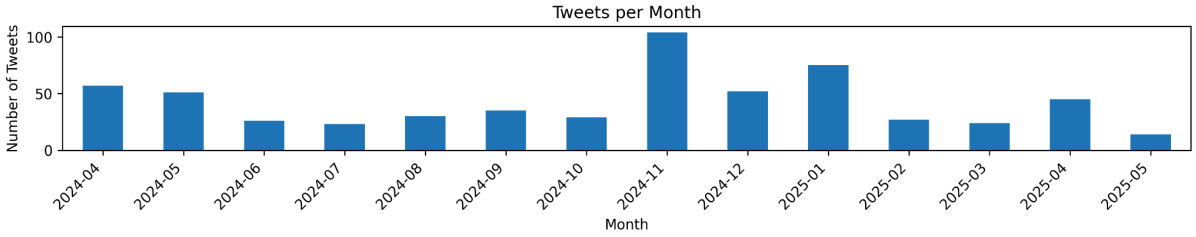


Fig 1. Total tweets per month (includes originals and reposts)

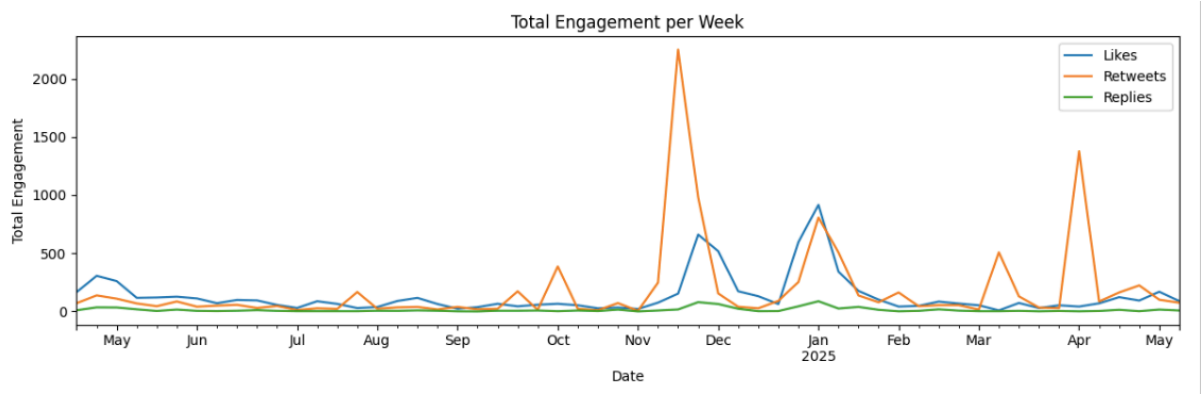


Fig 2. Engagement with tweets (like, repost, reply)

Here we show the volume and engagement of tweets, supporting the point that community activity is present but not accelerating. In general we see an increase of interactions in 2025. Retweets show spikes of interest between end of 2024 and beginning of 2025, overlapping with higher numbers of likes. Replies are steadily low signaling that the community is not engaging with own opinions.

2. ***No significant correlation between tweet sentiment and engagement.***

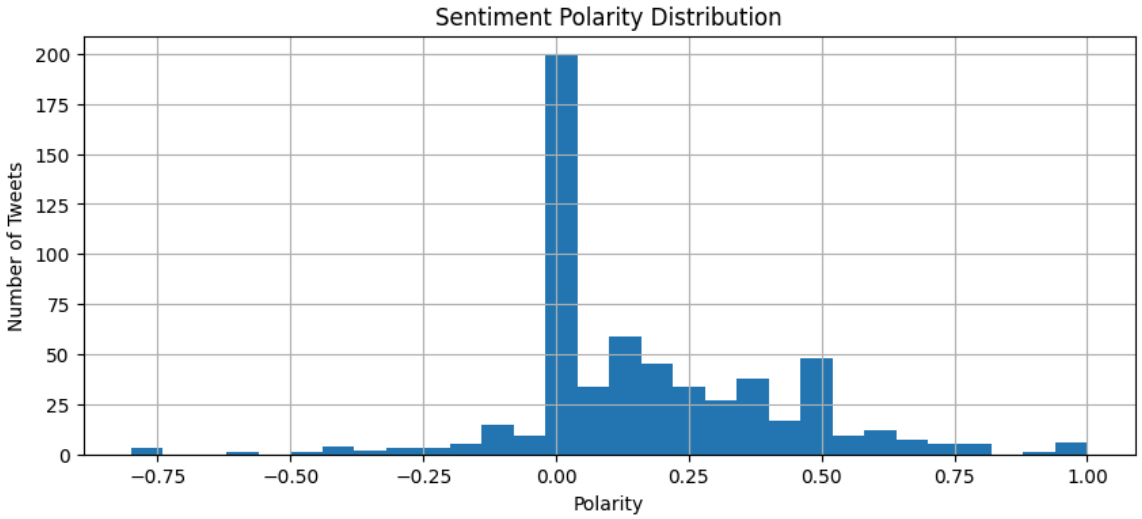


Fig. 3 Sentiment distribution across tweets. (scale: -1 negative, 0 neutral, +1, positive)

Correlation matrix:

	polarity	like_count	retweet_count	reply_count
polarity	1.000000	−0.002972	−0.077045	−0.040266
like_count	−0.002972	1.000000	−0.062359	0.743599
retweet_count	−0.077045	−0.062359	1.000000	−0.047651
reply_count	−0.040266	0.743599	−0.047651	1.000000

Fig.4 Correlation Matrix combining sentiment with likes, retweets and replies

Sentiment analysis on the available Twitter/X dataset indicates in Fig. 3 that the general perception is neutral with a clear tendency towards more positive feelings. As clarified in Fig.4 there is no meaningful linear relationship between tweet sentiment (polarity) and the number of likes, retweets, or replies. In other words, more positive (or negative) tweets do not systematically get more or fewer engagements. Likes and replies seem to be strongly correlated (0.74).

Interpretation

CerebrumDAO's Twitter presence is stable, with occasional bursts of interest, but lacks sustained growth in active community participation. The low number of replies points to a passive audience rather than an engaged, conversational community on this platform. The neutral-to-positive sentiment suggests a generally favorable perception, but this does not translate into higher engagement. The strong correlation between likes and replies implies that when the community does react, it does so in both forms, but overall, sentiment is not a key driver of engagement.

Suggestions

This highlights an opportunity for the DAO to foster more interactive and participatory discussions to deepen community involvement. A steady online presence proves to maintain the community engaged and we observe an improvement in metrix in 2025.

Limitations

No page followers over time available in the data. Could not assess community grow.

3. Governance Participation

Source: Snapshot

What We Did:

- All governance proposals retrieved from Snapshot
- Analyzed proposal activity over time.
- Measured voter participation per proposal.
- Assessed voting power distribution.

Key Findings:

1. ***Governance activity is present and declining.***

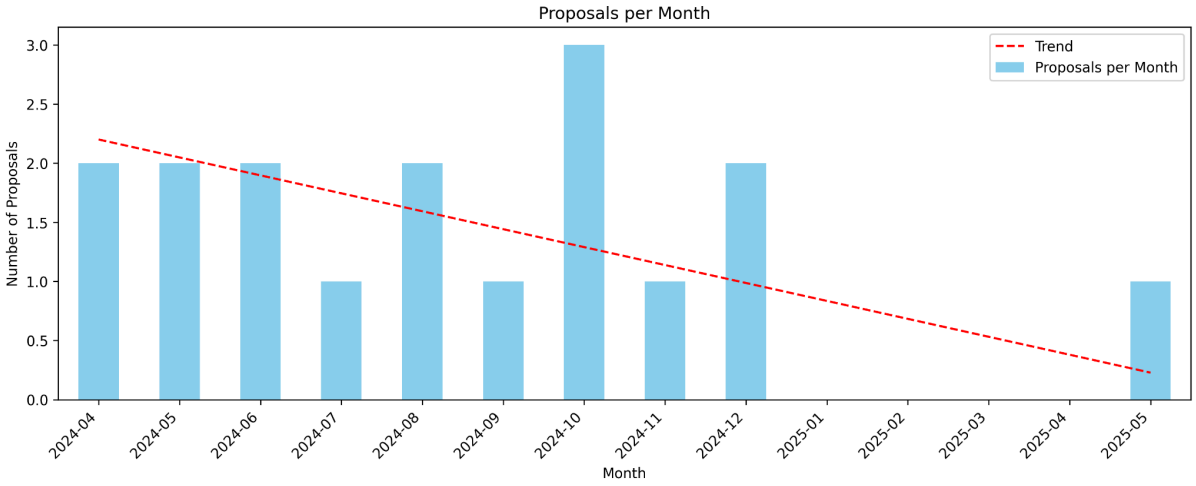


Fig. 5 Governance proposals over time

A total of 17 proposals, all of them closed, were retrieved from Snapshot for analysis. The trend in governance activity indicates that there was at least one active proposal per month through the end of the fourth quarter of 2024, with peak activity observed in October 2024, during which three proposals were submitted. No governance activity was recorded during the first quarter of 2024; however, a proposal submitted in May 2024 may suggest a potential resurgence in activity. The graph demonstrates an overall decline in governance participation throughout 2025. Since its inception, CerebrumDAO has averaged approximately 1.4 proposals per month.

2. ***Voter turnout is decreasing and centralized.***

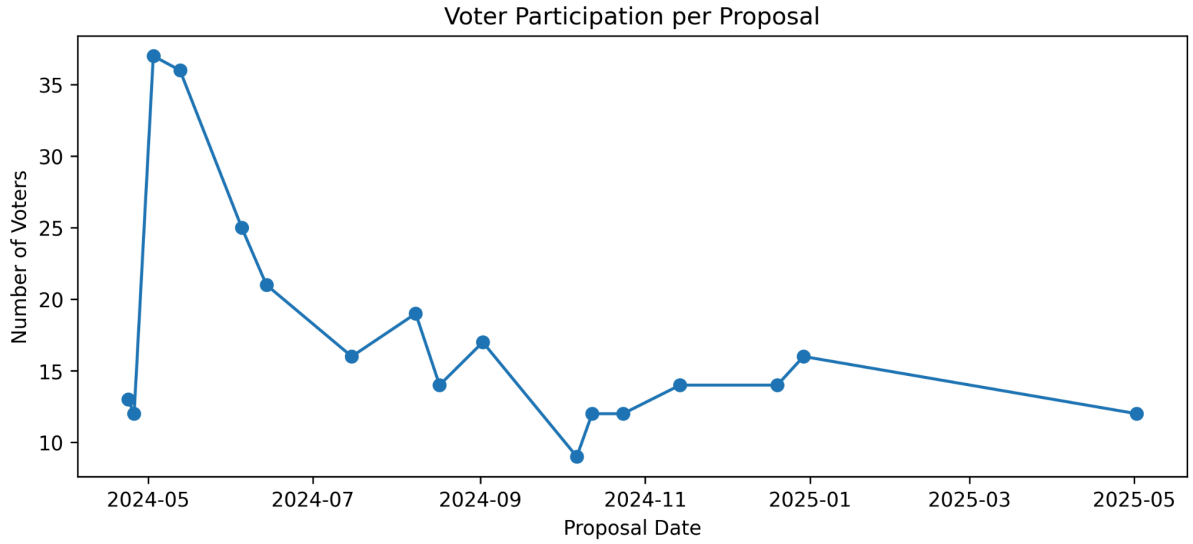


Fig. 6 Voter Participation. The plot shows the total number of votes for each submitted proposal.

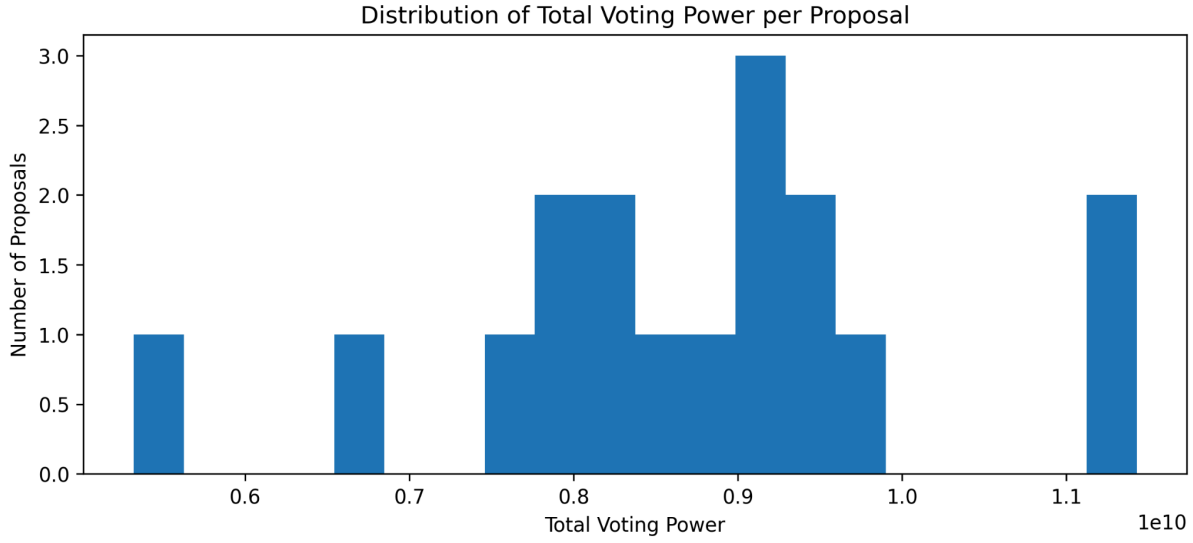


Fig. 7 Distributions of votes based on voting power

Voter participation in CerebrumDAO was initially high, with over 30 active voters, but has declined to less than half over time (Fig. 6), highlighting ongoing challenges in maintaining governance engagement. Additionally, voting power appears to be concentrated among a small number of participants (Fig. 7), suggesting that governance may be dominated by a few large stakeholders rather than being broadly decentralized.

3. ***Proposals are mostly related to DAO governance.***

An analysis of proposal content indicates that the majority are focused on administrative or management topics, with minimal emphasis on neuroscience, research, or funding initiatives. Notably, none of the top ten most frequent terms in proposal texts are related to neuroscience. This suggests that the DAO is currently in an administration-heavy phase, which may be contributing to reduced interest and participation among token holders, as community members may be more motivated to engage with proposals that align with the DAO's core scientific mission.

Fig. 8 Wordcloud representation of proposal topics

Interpretation

The analysis of governance activity within CerebrumDAO reveals several important trends. While the DAO maintained consistent proposal activity through late 2024, including a peak in October 2024, there was a notable absence of governance actions and a general decline in proposal submissions throughout 2025. This pattern is mirrored in voter participation, which started strong but has since dropped to less than half of its initial level, indicating persistent challenges in sustaining member engagement. This trend is possibly linked to a strong prevalence of administrative decisions to be taken Furthermore, the observed concentration of voting power among a limited number of participants suggests a risk of governance centralization, potentially undermining the principles of decentralization and collective decision-making.

Suggestions

To address these issues, CerebrumDAO should consider implementing mechanisms to incentivize broader participation, such as reward structures or engagement campaigns, and explore governance models that promote a more equitable distribution of voting power, such delegation frameworks. These measures could enhance both the inclusivity and resilience of the DAO's governance processes.

4. On-Chain Activity & Token Flows

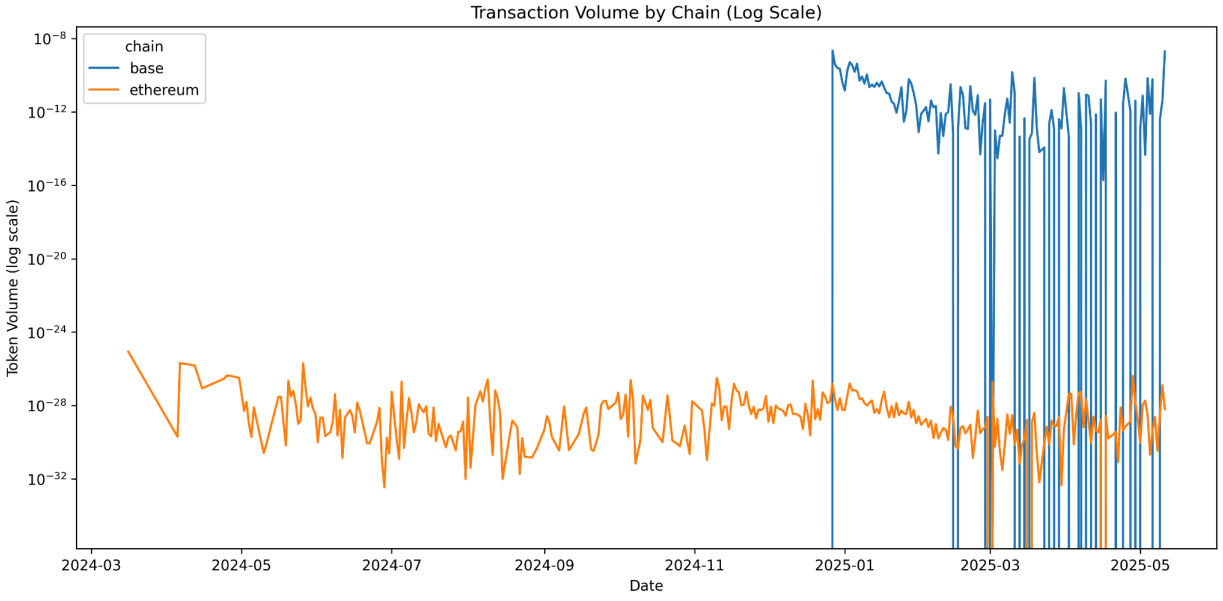
Source: Etherscan & Basescan

What We Did:

- Analyzed activity on both Ethereum and Base chains separately
- Analyzed transaction volume and activity on-chain combined
- Compared transaction patterns and volume between chains.

Key Findings:

1. ***Base chain shows much higher transaction volume and activity than Ethereum.***

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Ethereum total volume: 2.125333784596652e-43
Base total volume: 8.107215716523613e-27
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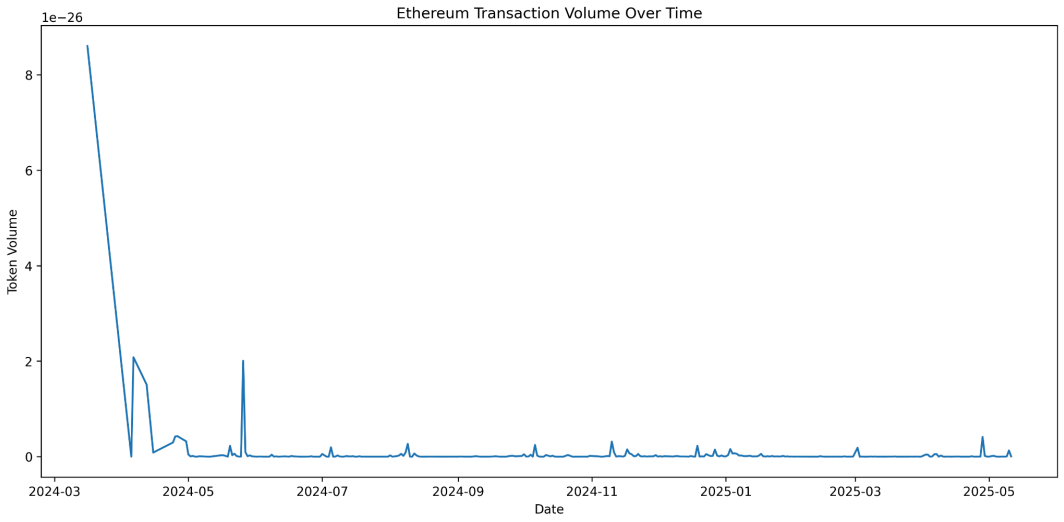
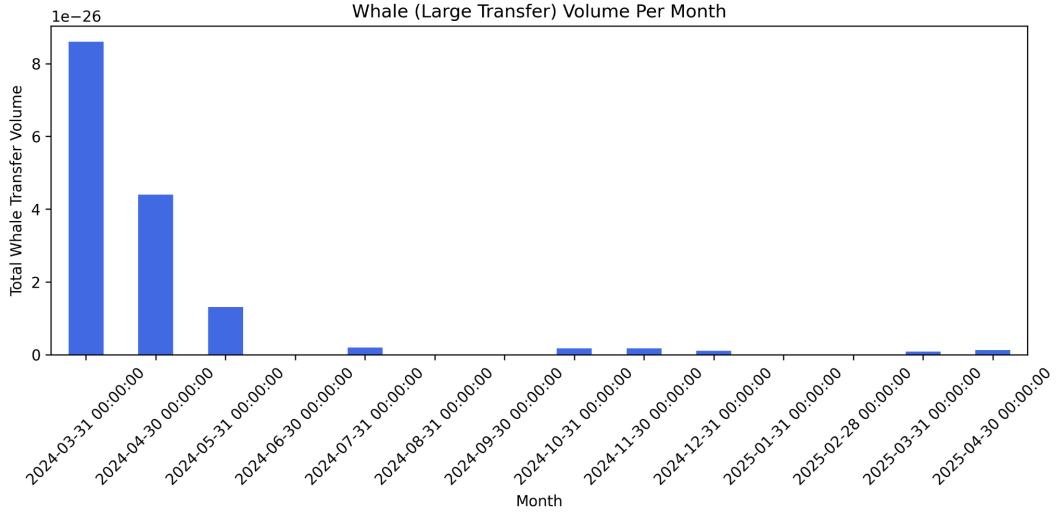
Fig 9. Transaction volume by chain (log scale)

Analysis indicates that transaction volume on Ethereum is substantially lower than on Base, as evidenced by both aggregate and daily transaction metrics. The disparity since launching NEURON on base chain in 2025 suggests a significant migration of activity to the Base network, likely driven by reduced transaction fees and increased user engagement. Ethereum appears to be utilized primarily for infrequent or high-value transactions, whereas Base facilitates a higher frequency of smaller transactions. This distribution aligns with typical DAO behavior, where operational activity is shifted to lower-cost networks to optimize for participation and efficiency.

2. *Distribution of tokens is centralized.*





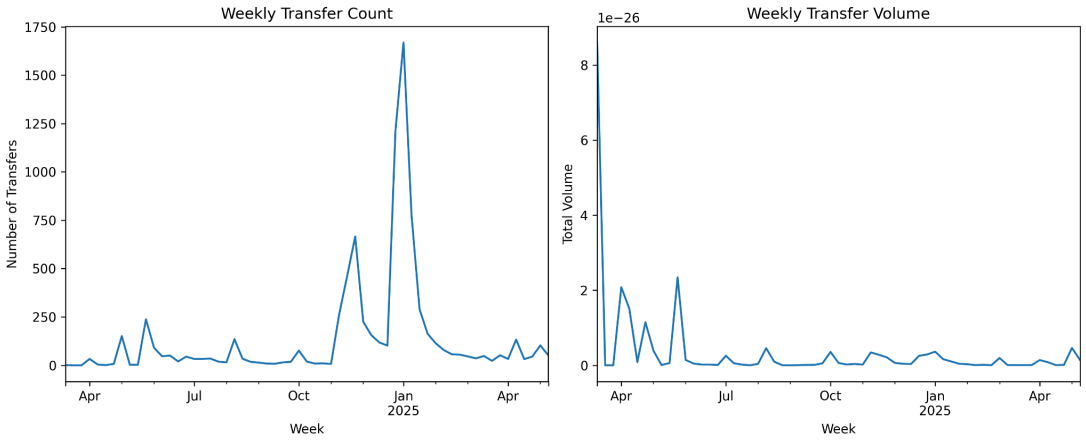
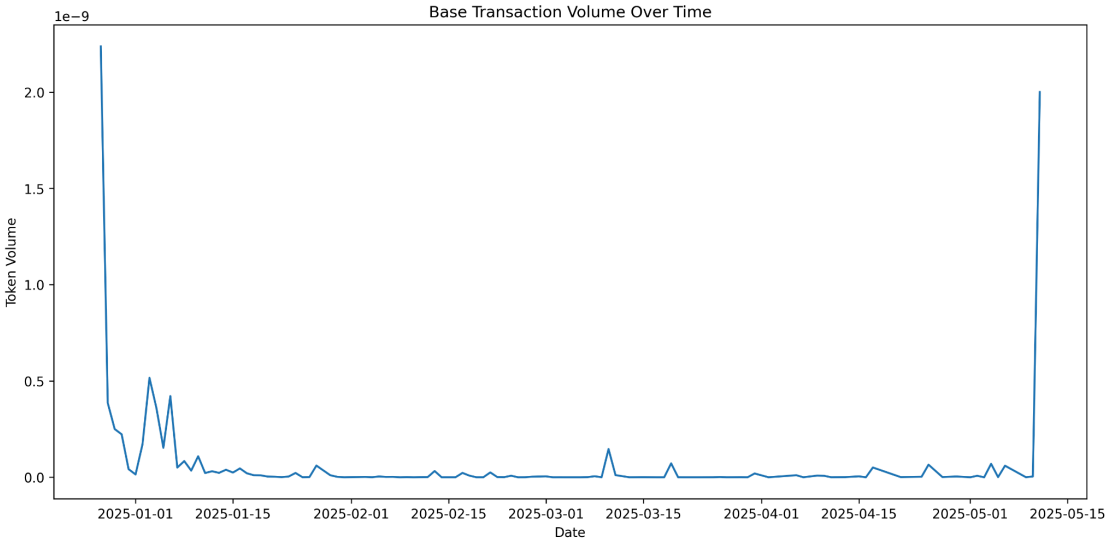
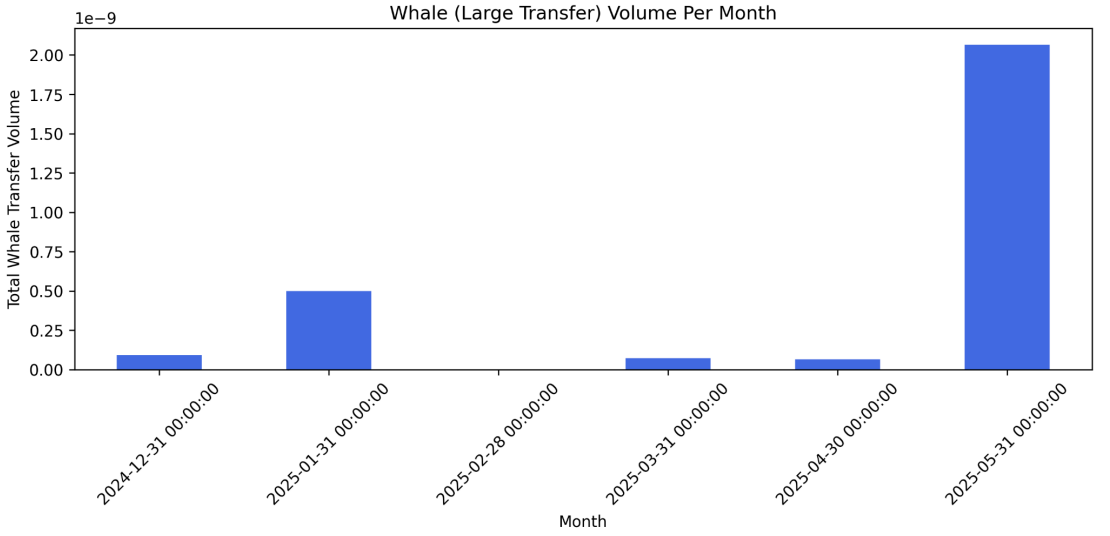


Fig. 10 ***Etherscan*** *transactions over time (Whale transactions > 1% total supply)*





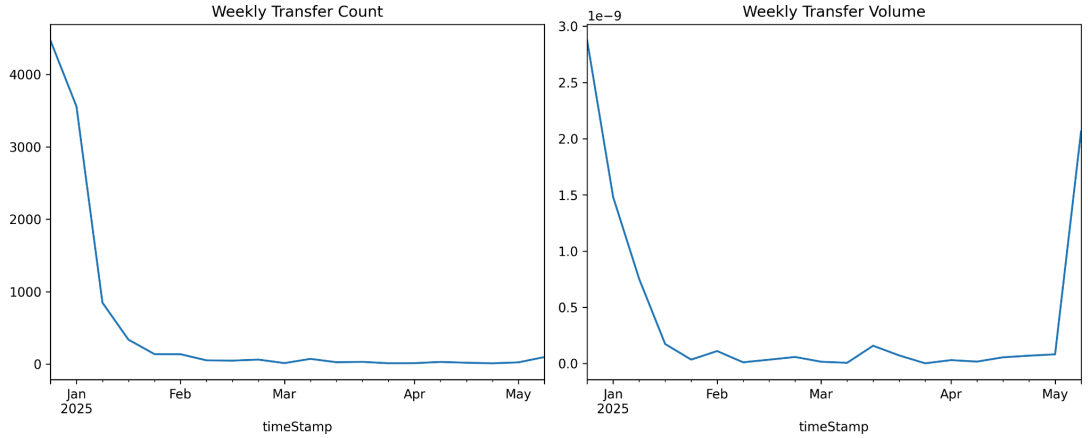


Fig. 11 ***Basescan*** *transactions over time (Whale transactions > 1% total supply)*

Analysis of token distribution reveals significant concentration among top holders. On Ethereum, the top 10 addresses listed on Etherscan collectively control 88.68% of the total token supply. In contrast, on Base, the top 3 addresses identified on Basescan account for 93.61% of the total supply, indicating an even higher degree of centralization. This elevated concentration on Base may suggest that the majority of funds are managed by a small group of core participants, potentially those with greater technical expertise or direct involvement in the project.

Large token transfers are particularly prevalent during the initial launch phase, as evidenced by the observed transaction patterns. The migration of substantial token volumes to Base is reflected in the high transaction volume recorded during this period. Specifically, 30 whale transfers were identified on Ethereum, compared to 12 on Base, further illustrating the movement and consolidation of assets among major stakeholders during the transition to the Base chain.

Interpretations

Analysis shows that, following the launch of NEURON on Base in 2025, transaction volume has shifted significantly from Ethereum to Base, as reflected in both aggregate and daily metrics. This migration is likely driven by lower transaction fees and higher user engagement on Base, with Ethereum now primarily used for infrequent or high-value transfers, while Base supports more frequent, smaller transactions—consistent with DAO practices optimizing for cost and participation. Token distribution analysis reveals strong centralization: the top 10 Etherscan holders control 88.68% of supply on Ethereum, while the top 3 Basescan holders account for 93.61% on Base, suggesting that a small group of core participants manage most funds, especially on Base. Large token transfers were concentrated during the initial migration phase, with 30 whale transfers on Ethereum and 12 on Base, highlighting the consolidation of assets among major stakeholders during the transition.

Suggestions

To address high token concentration and centralization, consider implementing incentives for broader token distribution and increased participation, such as targeted rewards for smaller holders. Enhance transparency around large transfers and continue monitoring whale activity to support a more decentralized and resilient ecosystem.

5. Mission Alignment

Is CerebrumDAO Achieving Its Goals?

CerebrumDAO is making good progress toward its mission, with active community funding and governance already in place. The project has built a strong foundation, especially since moving to the Base network. However, there are still some hurdles to overcome. The focus on scientific goals, particularly neurodegeneration, could be stronger, and most of the decision-making power is held by a small group. Community participation has also slowed down. Overall, CerebrumDAO is on the right track, but it will need to strengthen its scientific direction, encourage broader involvement, and work towards a fairer distribution of influence to fully achieve its goals.

Strengths:

- Community-powered funding and governance are in place.
- On-chain activity and token utility are established, especially on Base since launch.

Challenges:

- Scientific focus is diluted: Not all funded projects are clearly aligned with neurodegeneration.
- Community engagement and governance participation are limited and declining.
- A strong centralization of tokens.

6. Recommendations

- **Sharpen scientific focus.** Prioritize and clearly communicate projects directly related to neurodegeneration. Engagement and endorsement by leading scientists could be a great boost, especially on Twitter which is the main social for research

- **Rekindle community participation**. Incentivize interactions and make governance more accessible. This might go hand in hand with increasing the interest of the scientific community and not only the Web3 communities, the former would support the project long term independently from token value.

- **Ensure a fairer distribution of voting power**. Explore delegation frameworks or similar models or develop targeted incentives for smaller holders. Possibly increase transparency around large transfers, and monitor whale activity to reduce centralization risks.