This file will include simplified concepts regarding the main objective of the Review Paper which is to research and explore the "interaction between insulin and dopamine signalling".

I&D: Insulin and dopamine are two vital signalling molecules in the brain, each playing distinct yet interconnected roles. Insulin, primarily known for its role in glucose metabolism, also acts as a neuromodulator, influencing synaptic plasticity, neurotransmitter release, and neuronal survival. On the other hand, dopamine is renowned for its involvement in reward, motivation, and motor control, but it also plays a role in modulating insulin sensitivity and glucose homeostasis. Together, these two molecules synergistically regulate various physiological and neurological processes throughout the brain.

Review Paper (RP): As we craft the RP, it's essential to outline the individual functions of insulin and dopamine within the brain while exploring how their signalling pathways intersect and influence each other. Consider discussing the mechanisms underlying their interactions, such as the cross-talk between insulin receptors and dopamine receptors, as well as the impact of dysregulated insulin-dopamine signalling on neurological and psychiatric disorders.

…

RP Structure: After reviewing the related review research articles (can be found in the "Preliminary List of Research Articles" file, under the "Review Articles for Reference" subtitle), this is the preliminary structure that matches our requirements:

- **Abstract:** Purpose of Review, Recent Findings, Summary.
- **Introduction:** Background, Overview of Insulin and Dopamine Signaling, Intersection of Insulin and Dopamine Pathways.
- **Main Body:** Main Point I, II, III… (With each Main Point possibly discussing the interaction in a single brain region), Mechanisms of Insulin-Dopamine Interaction, Implications of Dysregulated Insulin-Dopamine Signaling.
- **Conclusion**
- **Acknowledgements**
- **Author information**
- **Ethics declarations:** Conflict of Interest, Human and Animal Rights and Informed Consent.
- **References**