



Pioneering the canine model in microbiota-gut-brain research for social and affective disorders.

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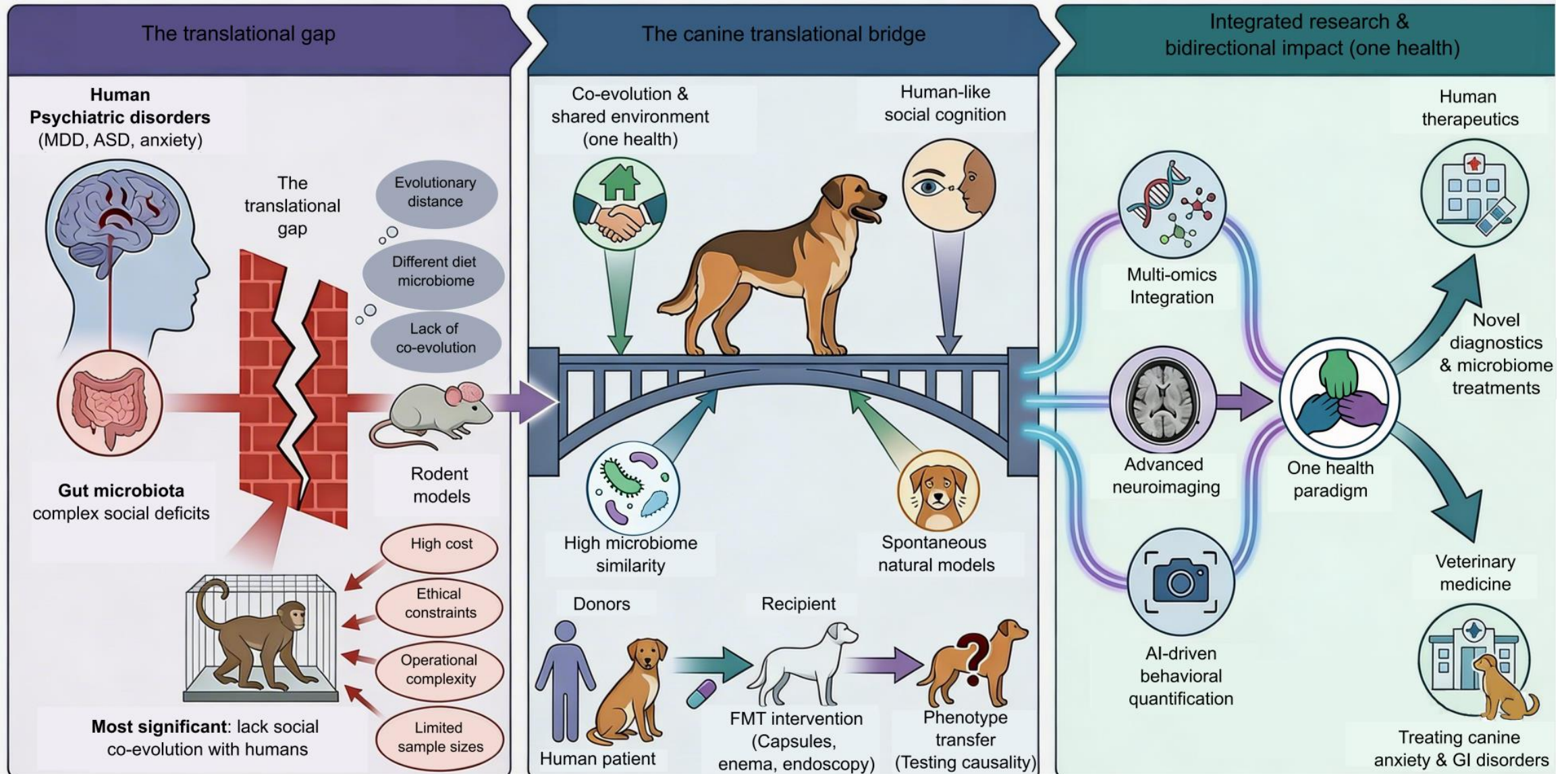
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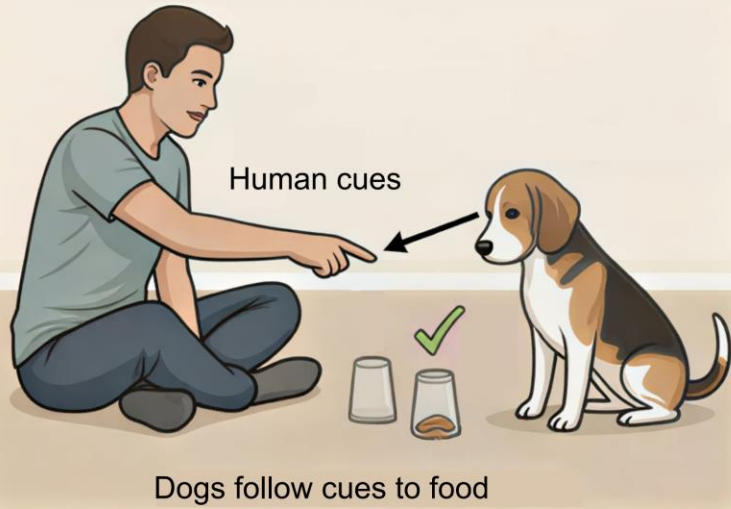
Limitations of Traditional Models



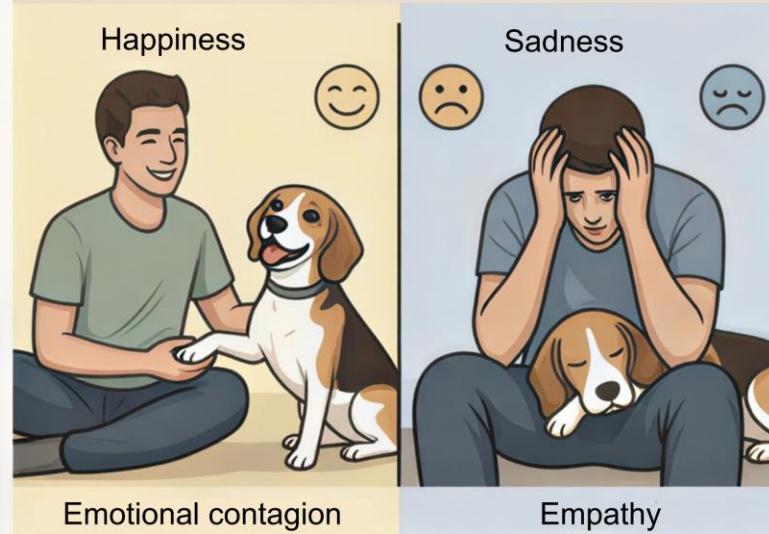


The Unique Advantages of Dogs

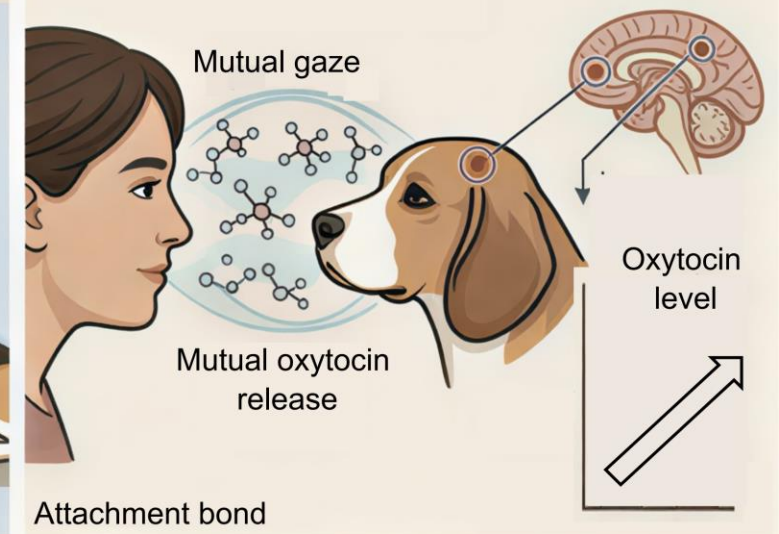
(A) Pointing gesture experiment



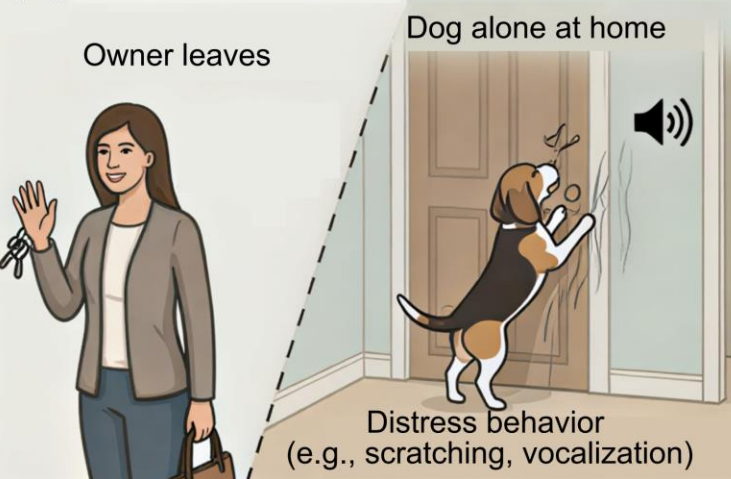
(B) Emotion recognition and empathy



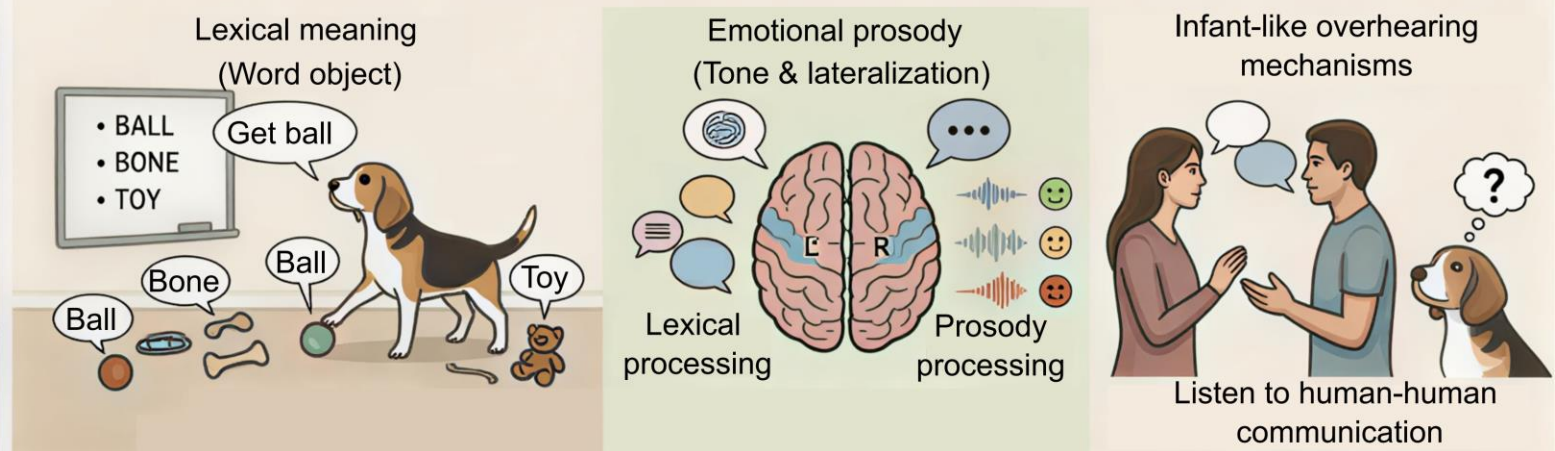
(C) Oxytocin bonding



(D) Separation anxiety & distress behavior

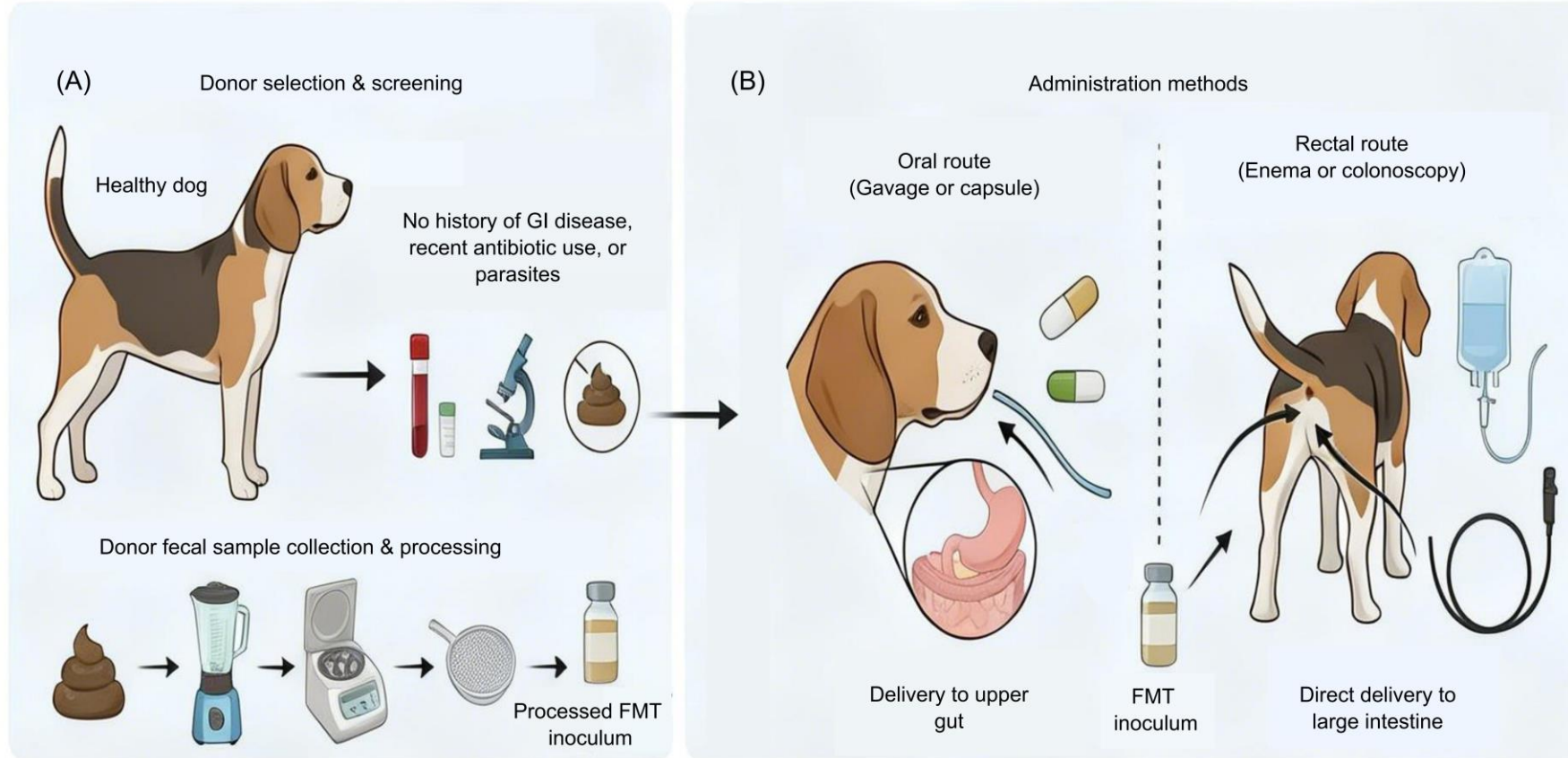


(E) Sophisticated language comprehension





Building Canine Models via FMT



Step one: Deplete the indigenous gut microbiota in laboratory Beagles using standardized protocols.

Step two: Characterize behavioral changes following depletion .

Step three: Transplant microbiota from human patients with psychiatric disorders into dogs to induce relevant behavioral phenotypes — creating a humanized model.

Step four: Test whether microbiota from healthy human donors can rescue or reverse these behavioral alterations.



Summary

- ❑ The canine model fills a critical translational gap, offering high face and predictive validity in both social behavior and gut microbial ecology.
- ❑ This approach embodies the One Health paradigm. Breakthroughs in treating canine behavioral disorders can directly inform human clinical trials — and insights from human microbiome research can, in turn, optimize veterinary care for dogs.

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