Laguna Diagnostics Featured in Brain & Beyond Science Education Series

Laguna Diagnostics is pleased to share a recent educational feature developed by ***Christy Kestner, PhD***, **a neuroscientist, neuroimmunologist, science communicator, and founder of Brain & Beyond.**

Dr. Kestner created an 11-slide educational carousel titled ***Could a Blood Test Help Distinguish Schizophrenia from Bipolar Disorder?*** Highlighting Laguna Diagnostics' research into blood-based messenger RNA (mRNA) biomarkers and their potential applications in differentiating these psychiatric conditions.

Dr. Kestner independently researched and wrote the educational content, with Laguna Diagnostics reviewing the material for factual accuracy regarding its technology.

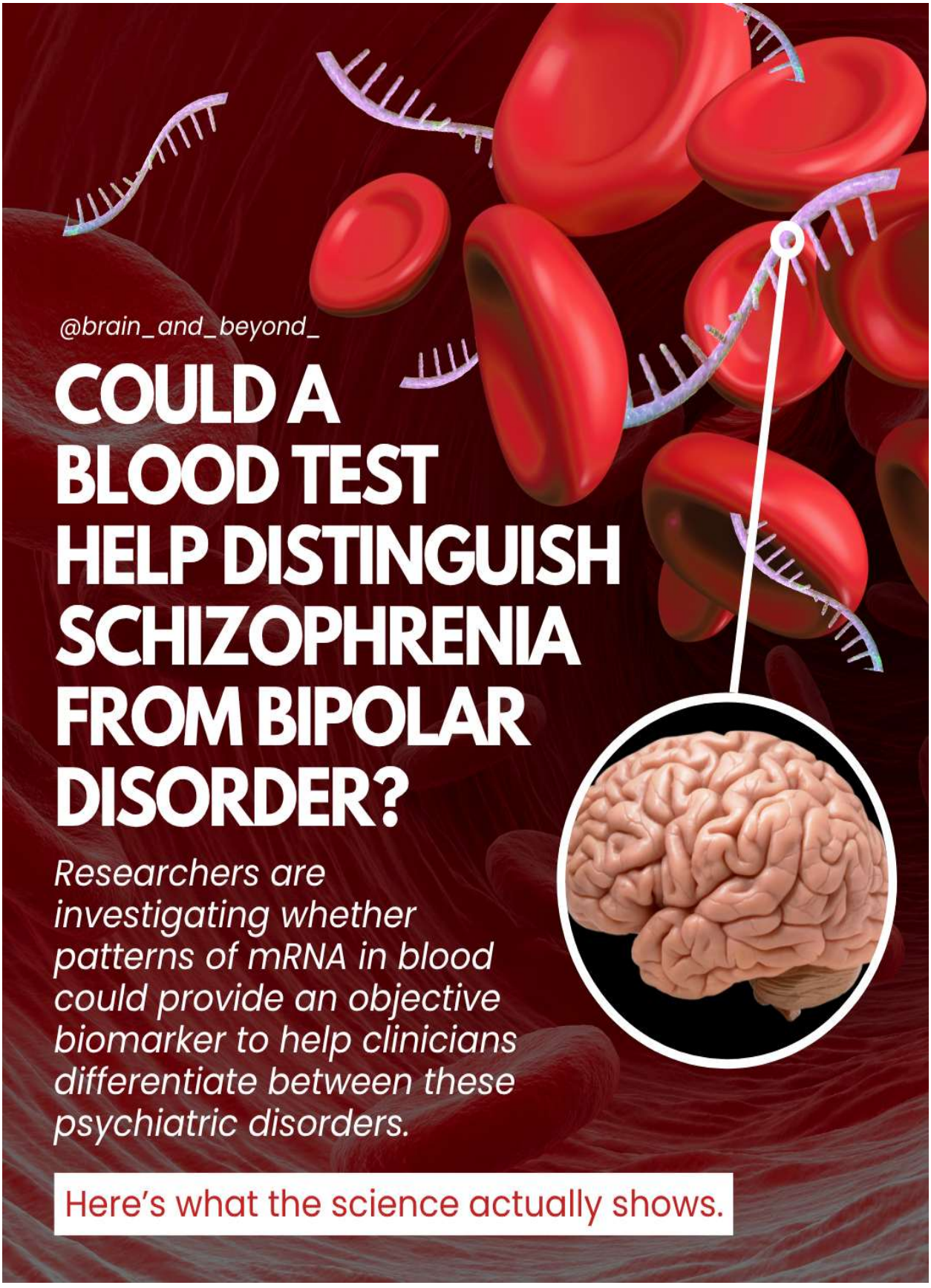
Through Brain & Beyond, Dr. Kestner makes complex neuroscience, immunology, and biomedical research accessible to broader audiences while promoting scientific literacy, critical thinking, and evidence-based communication.

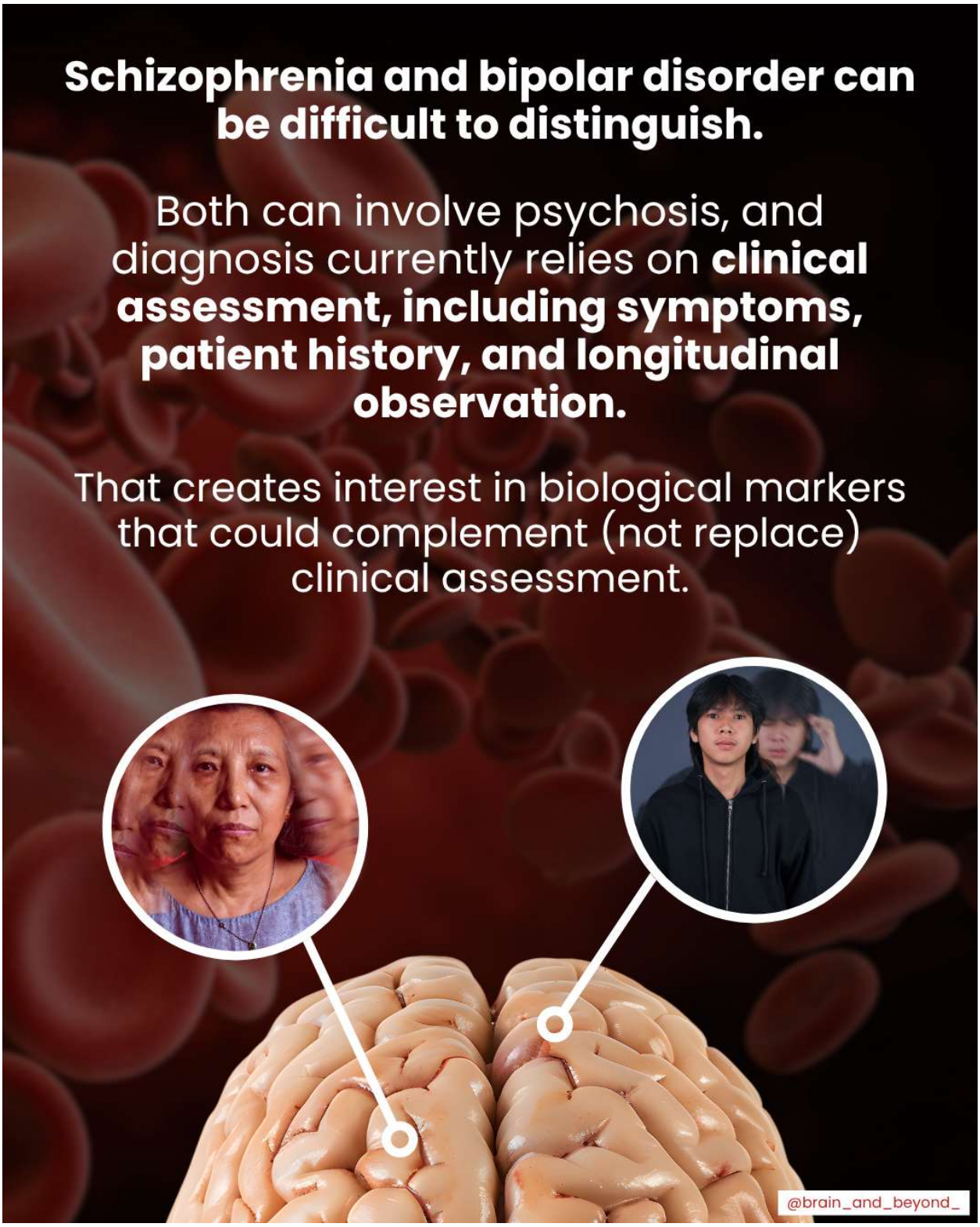
In addition to her independent science communication work, Dr. Kestner contributes to scientific and health education through writing, public speaking, media appearances, and consulting.

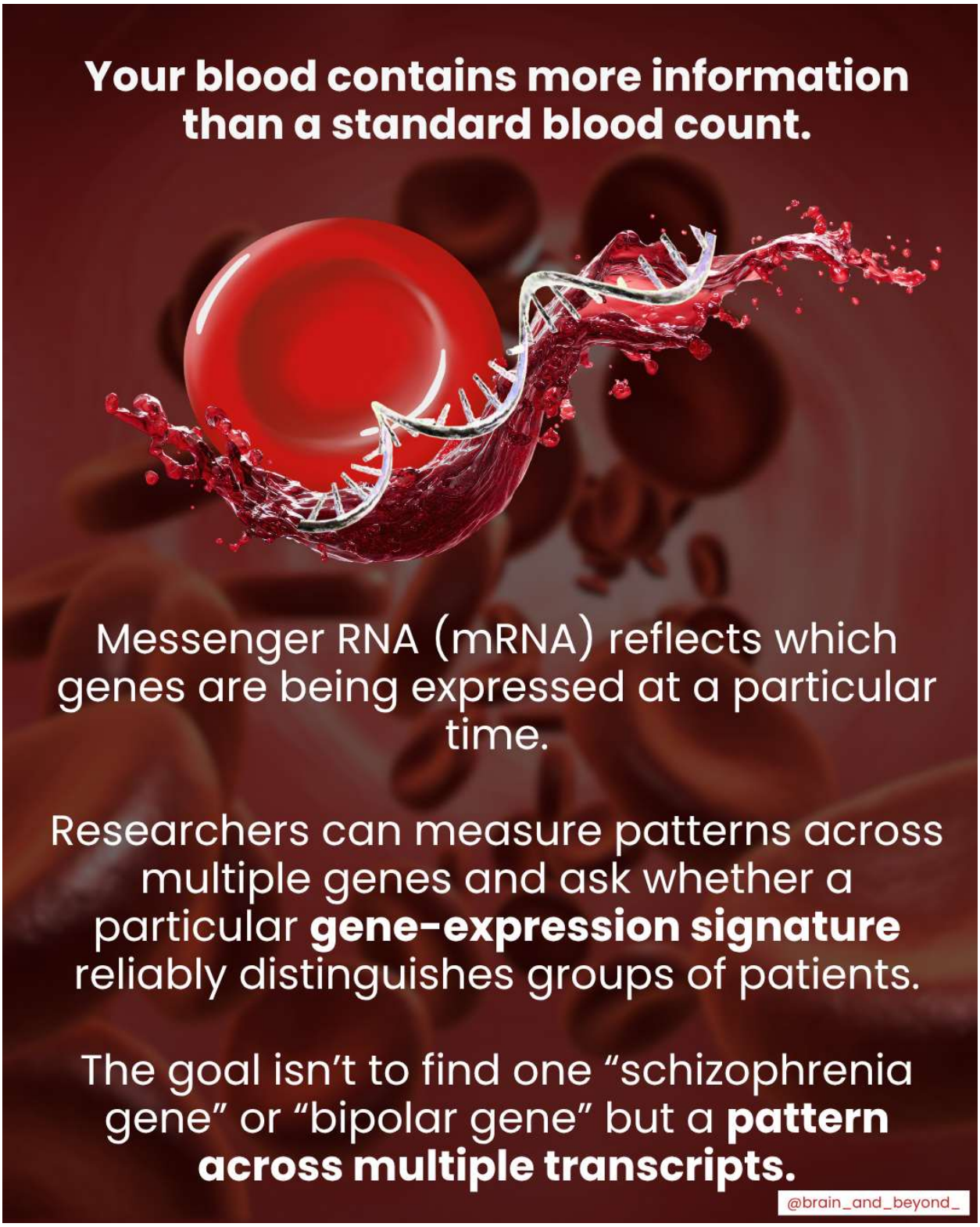
View the educational feature:

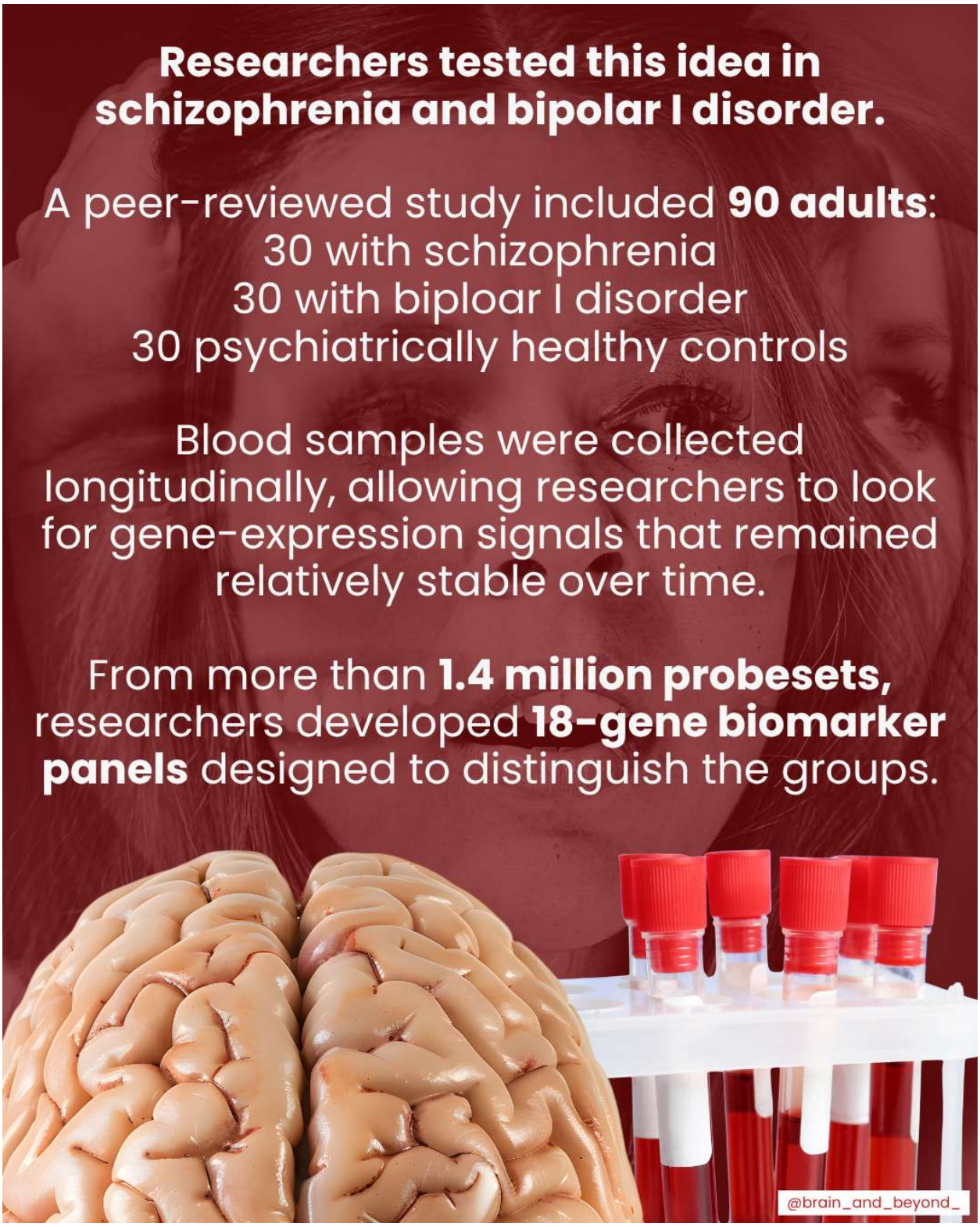
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Learn more about Dr. Kestner's research background, publications, scientific writing, media appearances, and consulting services at christykestner.com.


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COULD A BLOOD TEST HELP DISTINGUISH SCHIZOPHRENIA FROM BIPOLAR DISORDER?
Researchers are investigating whether patterns of mRNA in blood could provide an objective biomarker to help clinicians differentiate between these psychiatric disorders.
Here's what the science actually shows.


Schizophrenia and bipolar disorder can be difficult to distinguish.
Both can involve psychosis, and diagnosis currently relies on clinical assessment, including symptoms, patient history, and longitudinal observation.
That creates interest in biological markers that could complement (not replace) clinical assessment.
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Your blood contains more information than a standard blood count.
Messenger RNA (mRNA) reflects which genes are being expressed at a particular time.
Researchers can measure patterns across multiple genes and ask whether a particular gene-expression signature reliably distinguishes groups of patients.
The goal isn't to find one "schizophrenia gene" or "bipolar gene" but a pattern across multiple transcripts.
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Researchers tested this idea in schizophrenia and bipolar I disorder.
A peer-reviewed study included 90 adults:
30 with schizophrenia
30 with biploar I disorder
30 psychiatrically healthy controls
Blood samples were collected longitudinally, allowing researchers to look for gene-expression signals that remained relatively stable over time.
From more than 1.4 million probesets, researchers developed 18-gene biomarker panels designed to distinguish the groups.
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The intial results were promising.

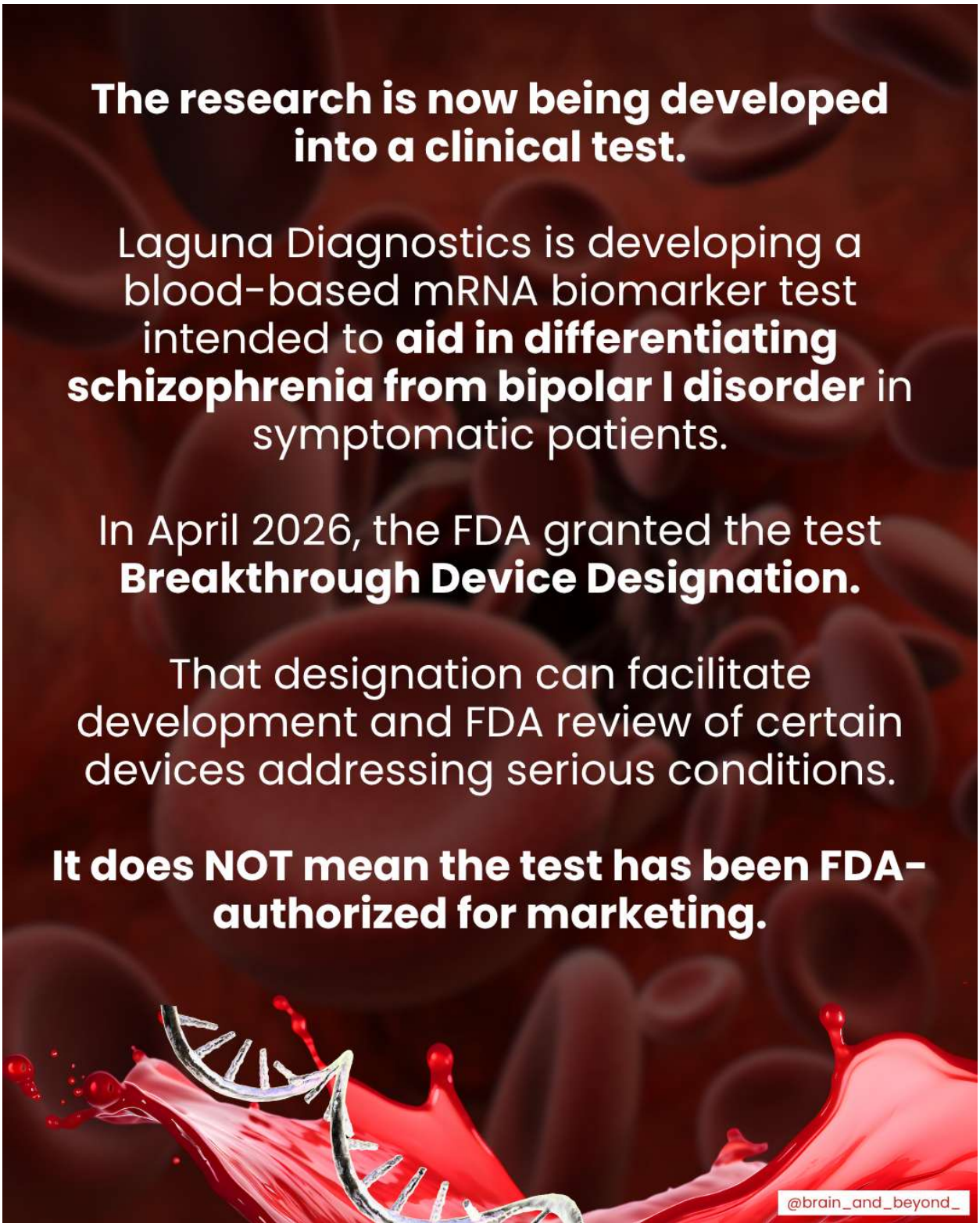
Across clinical visits, the 18-gene models differentiated the three groups with approximately **83-88% accuracy** in the original peer-reviewed analysis.

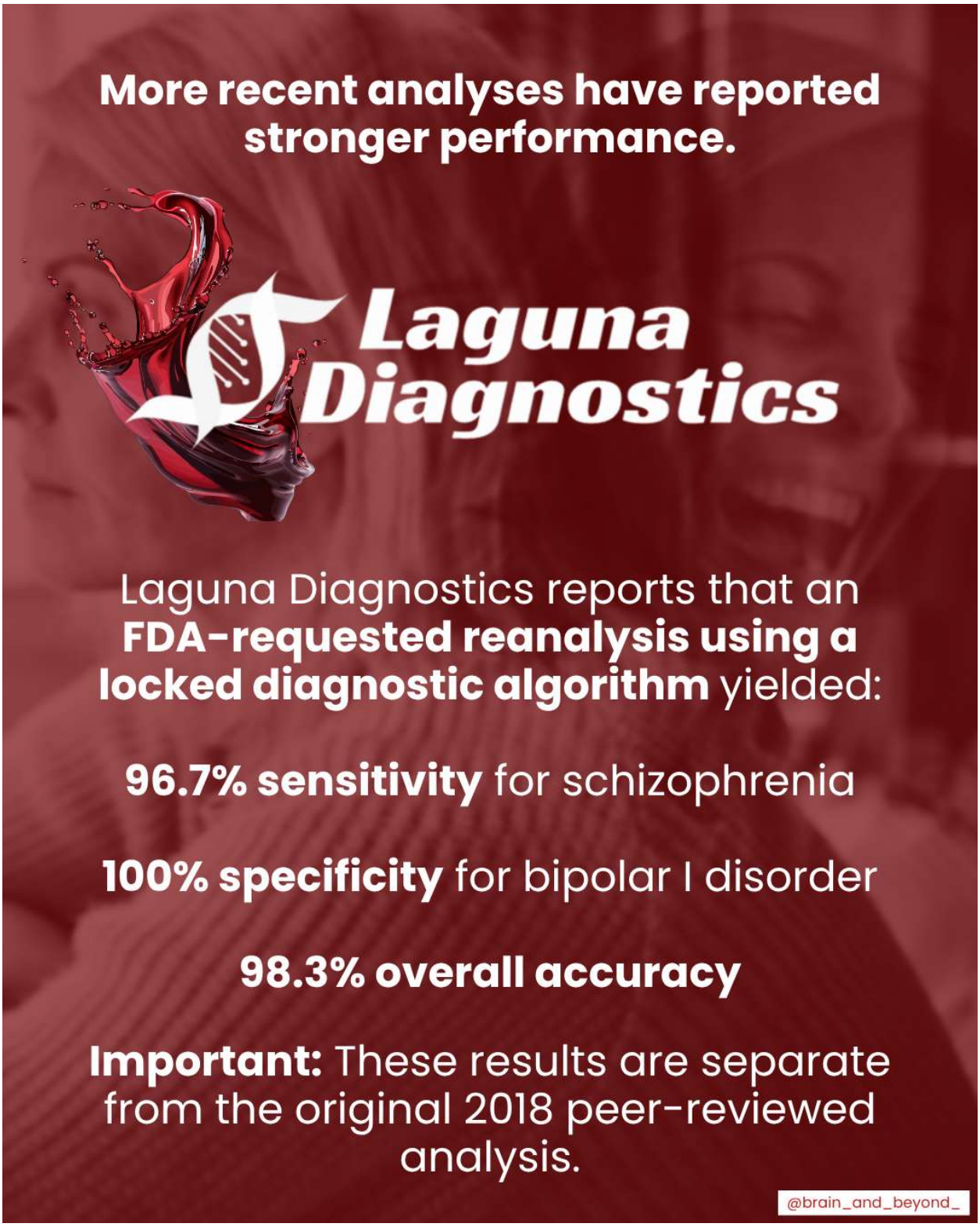
The researchers also evaluated the signature in an independent gene-expression dataset of younger, medication-free patients with schizophrenia, where the **area under the ROC curve (AUC) was >0.866.**

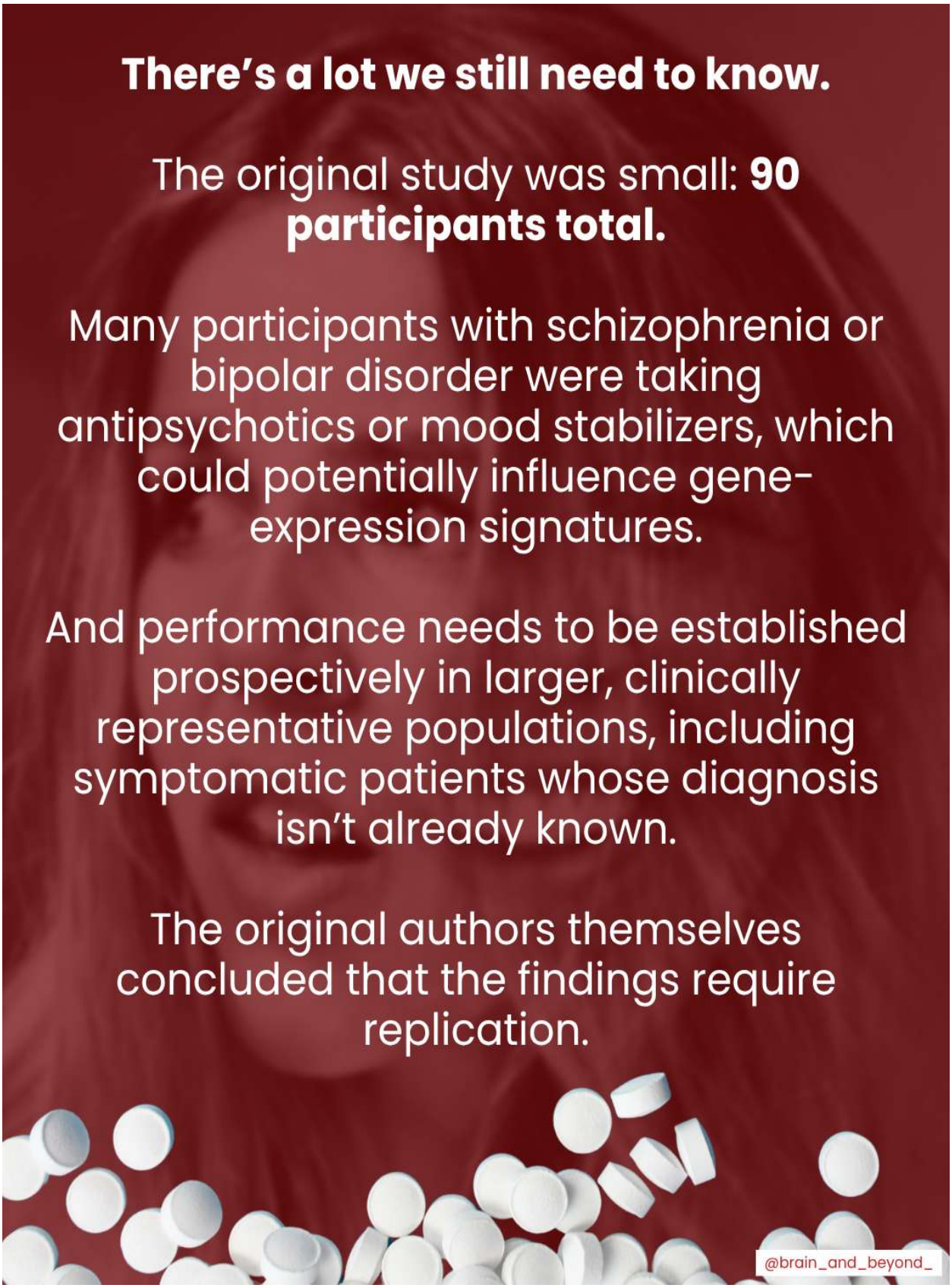


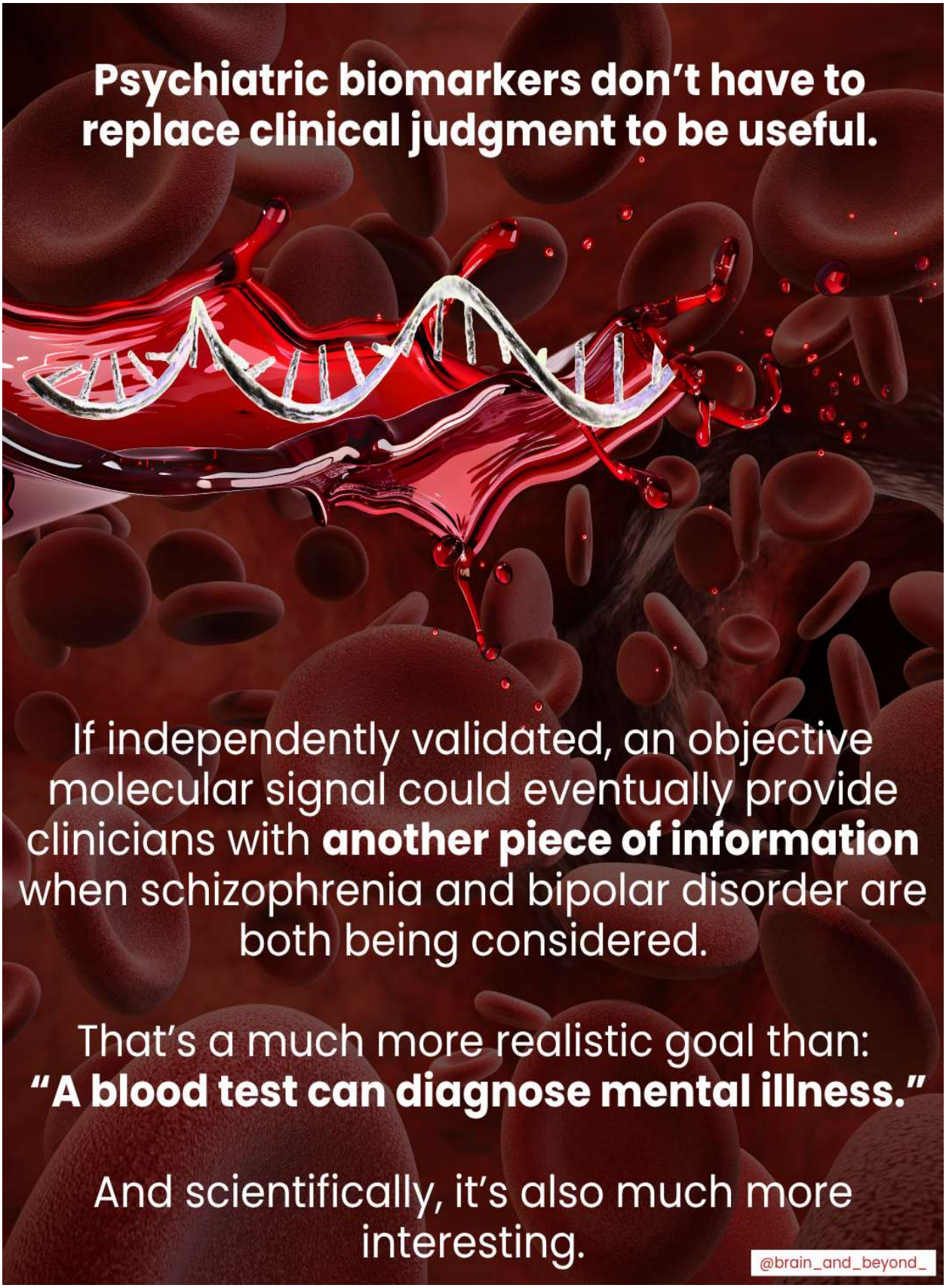
But there's an important distinction: promising classification performance ≠ a clinically validated diagnostic test.

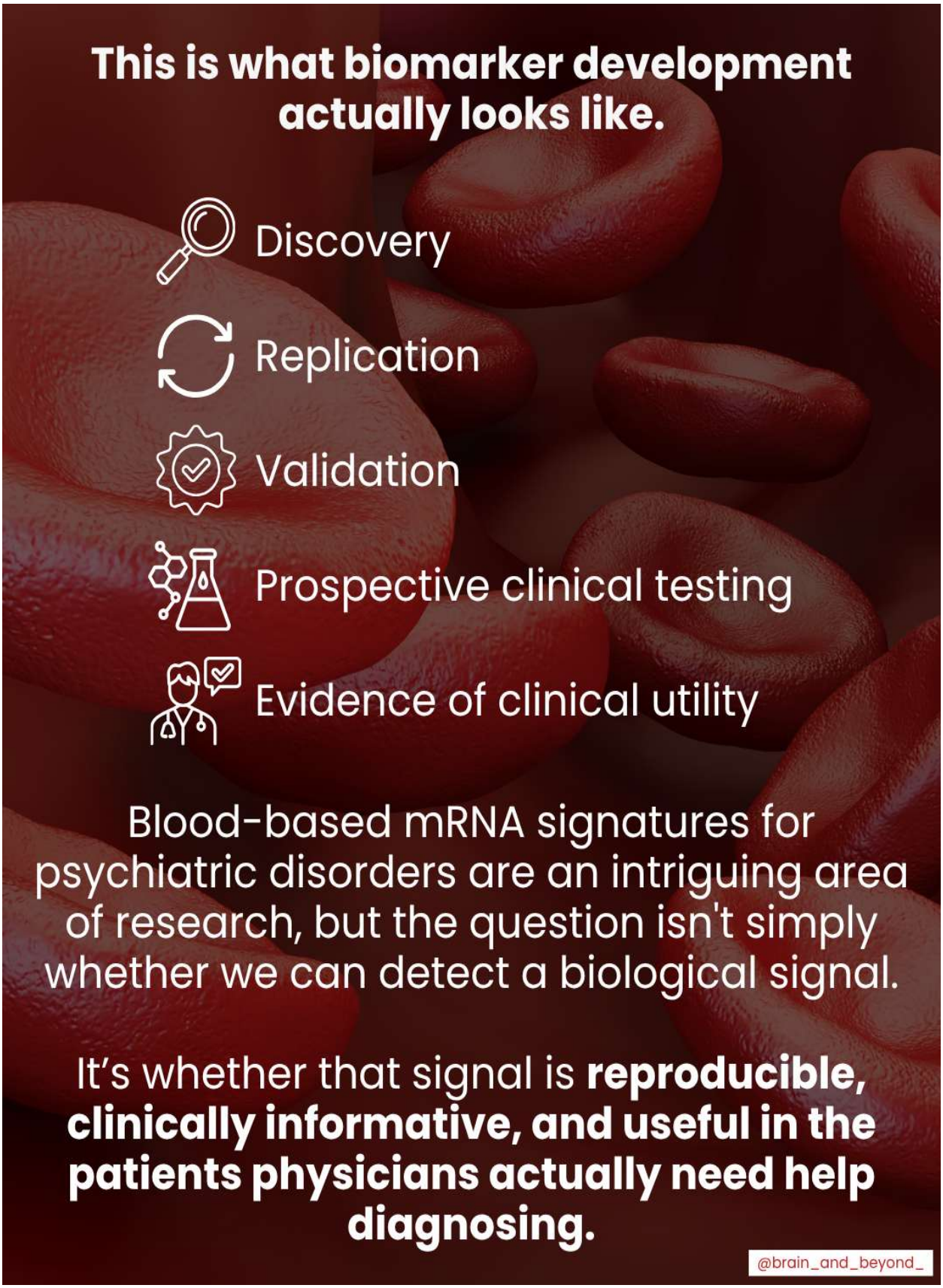
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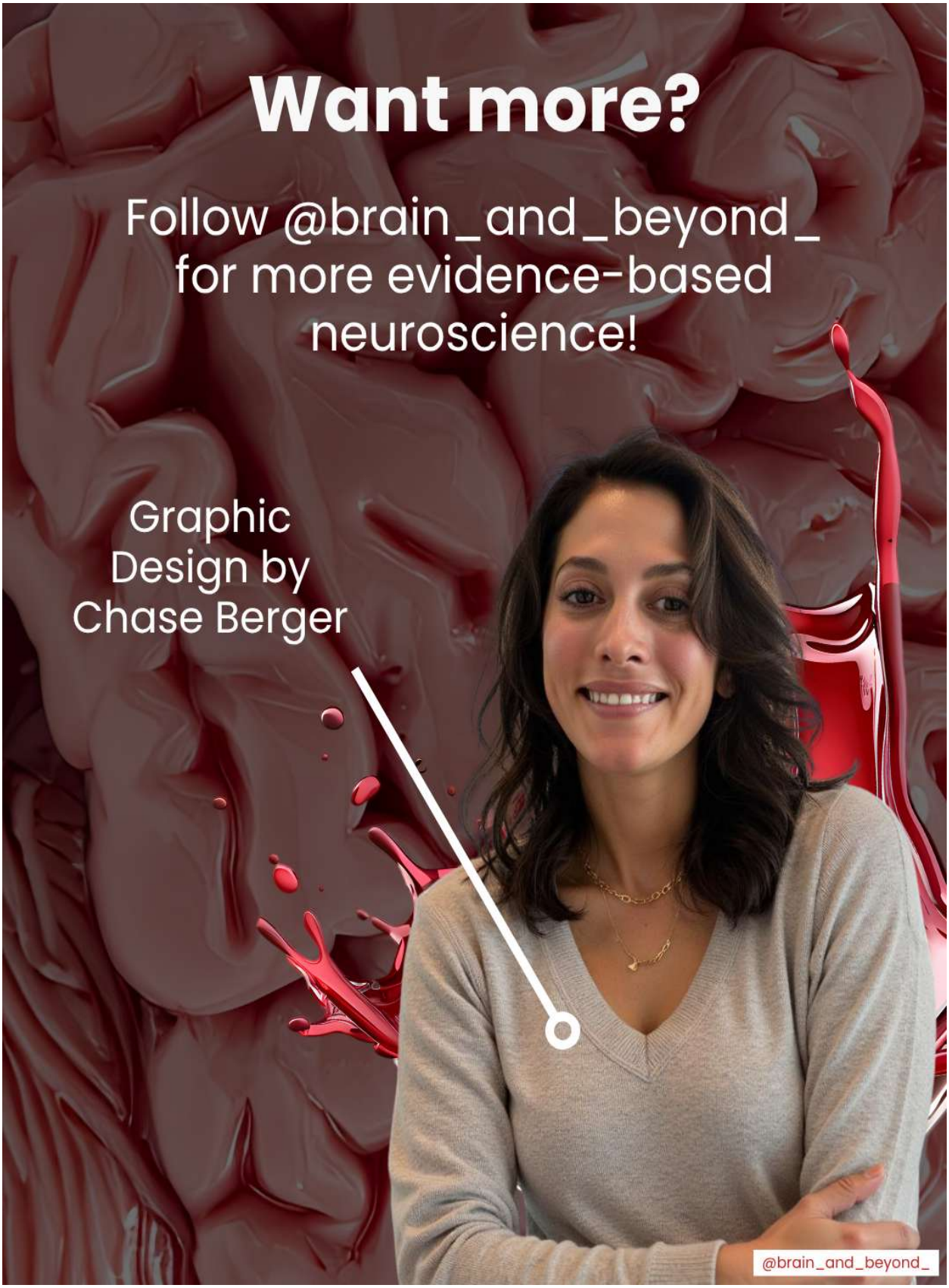

The research is now being developed into a clinical test.
Laguna Diagnostics is developing a blood-based mRNA biomarker test intended to aid in differentiating schizophrenia from bipolar I disorder in symptomatic patients.
In April 2026, the FDA granted the test Breakthrough Device Designation.
That designation can facilitate development and FDA review of certain devices addressing serious conditions.
It does NOT mean the test has been FDA-authorized for marketing.
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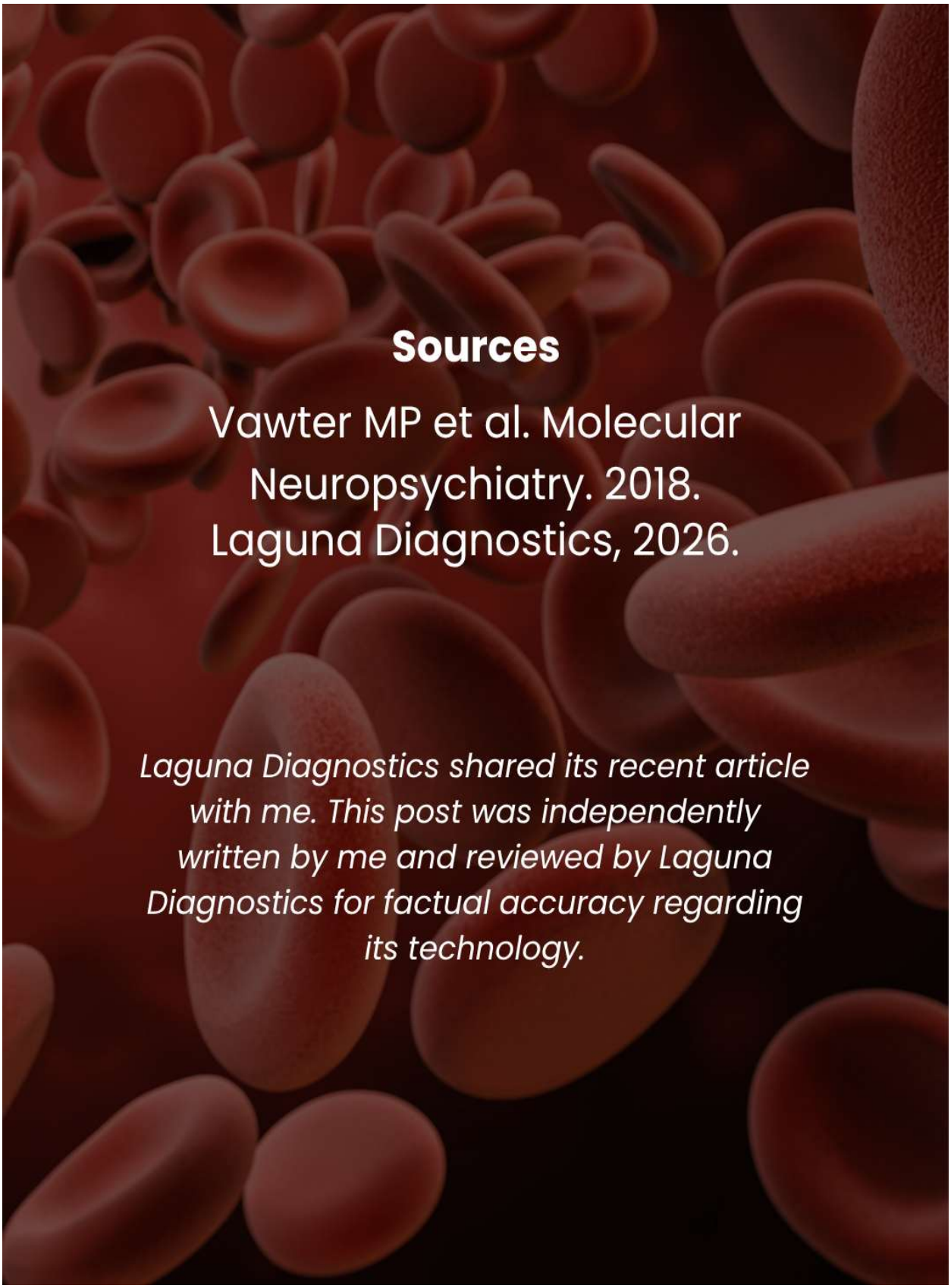

More recent analyses have reported stronger performance.
Laguna Diagnostics
Laguna Diagnostics reports that an **FDA-requested reanalysis using a locked diagnostic algorithm** yielded:
96.7% sensitivity for schizophrenia
100% specificity for bipolar I disorder
98.3% overall accuracy
Important: These results are separate from the original 2018 peer-reviewed analysis.
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There's a lot we still need to know.
The original study was small: 90 participants total.
Many participants with schizophrenia or bipolar disorder were taking antipsychotics or mood stabilizers, which could potentially influence gene-expression signatures.
And performance needs to be established prospectively in larger, clinically representative populations, including symptomatic patients whose diagnosis isn't already known.
The original authors themselves concluded that the findings require replication.
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Psychiatric biomarkers don't have to replace clinical judgment to be useful.
If independently validated, an objective molecular signal could eventually provide clinicians with **another piece of information** when schizophrenia and bipolar disorder are both being considered.
That's a much more realistic goal than: **"A blood test can diagnose mental illness."**
And scientifically, it's also much more interesting.
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This is what biomarker development actually looks like.
Discovery
Replication
Validation
Prospective clinical testing
Evidence of clinical utility
Blood-based mRNA signatures for psychiatric disorders are an intriguing area of research, but the question isn't simply whether we can detect a biological signal.
It's whether that signal is reproducible, clinically informative, and useful in the patients physicians actually need help diagnosing.
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Sources
Vawter MP et al. Molecular Neuropsychiatry. 2018.
Laguna Diagnostics, 2026.
Laguna Diagnostics shared its recent article with me. This post was independently written by me and reviewed by Laguna Diagnostics for factual accuracy regarding its technology.