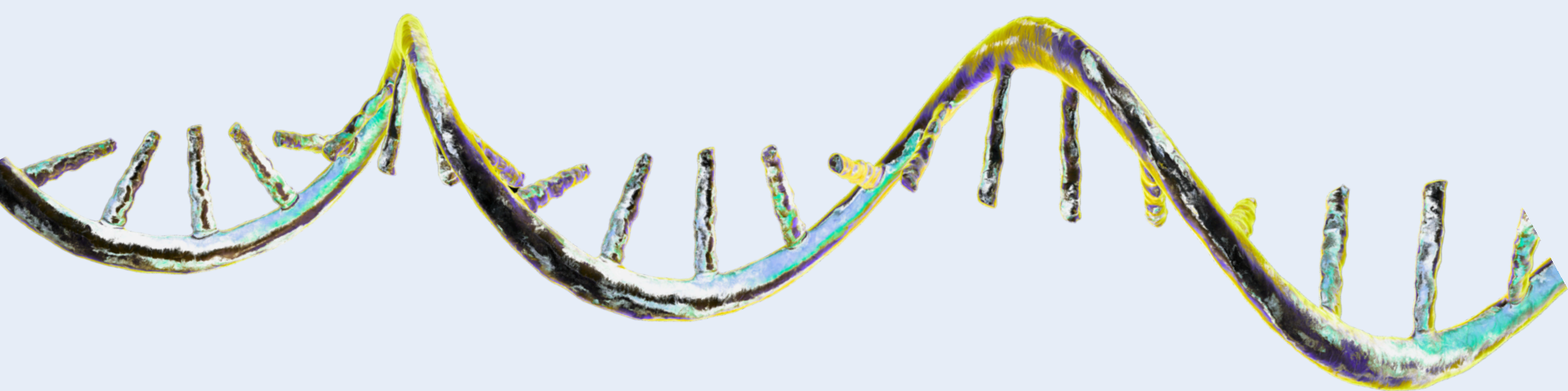


circRNA RT-PCR DETECTION



**MAJOR DEPRESSIVE
DISORDER OBJECTIVE
DIAGNOSTIC BIOMARKER**



what is MDD

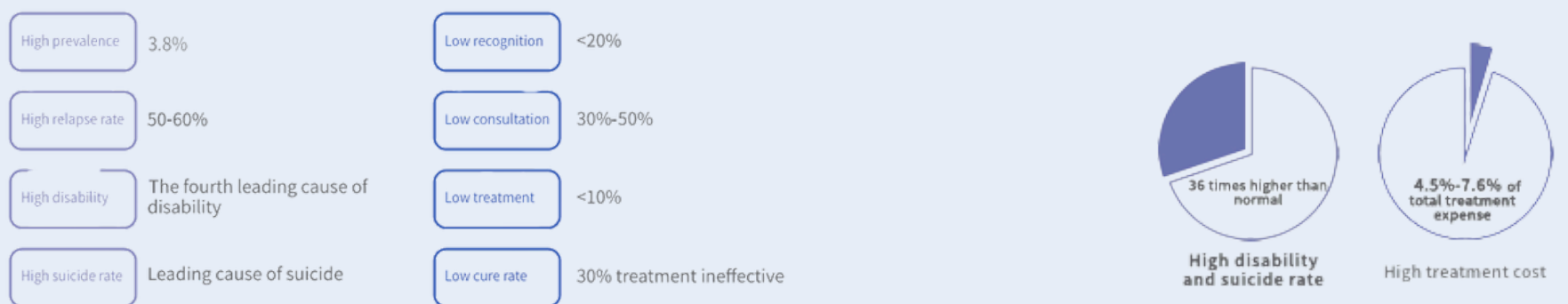
Major Depressive Disorder (MDD) is a chronic, recurrent psychiatric disorder characterized by pervasive low mood, anhedonia (loss of interest in activities), cognitive disturbances, and somatic symptoms. It significantly impacts occupational, and functional capacity. MDD falls within the category of mood disorders and is classified under the Depressive Disorders section of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.

1. Emotional Disorder	2. Physical Disorder	3. Cognitive Disorder
<ul style="list-style-type: none"> ● Persistent low or depressed mood ● Loss of interest or pleasure ● Feelings of worthlessness or excessive guilt ● Irritability 	<ul style="list-style-type: none"> ● Changes in appetite or weight ● Sleep disturbances ● Fatigue or loss of energy ● Psychomotor retardation or agitation ● Physical aches and pains 	<ul style="list-style-type: none"> ● Difficulty concentrating or making decisions ● Increased forgetfulness ● Slowed speech or movement ● Thoughts of death or suicide



EPIDEMIOLOGY

The average lifetime prevalence of MDD in Europe is approximately 11%, significantly higher than the global average of 3.8%.



KEY GROUPS



Adolescents



Pregnant and Postpartum women



Elderly



Individuals with High-stress jobs



CLINICAL DATA

Figure 1: Gene1, Gene2, Gene3, Gene4 show significantly increased expression in plasma or saliva samples from depression patients.

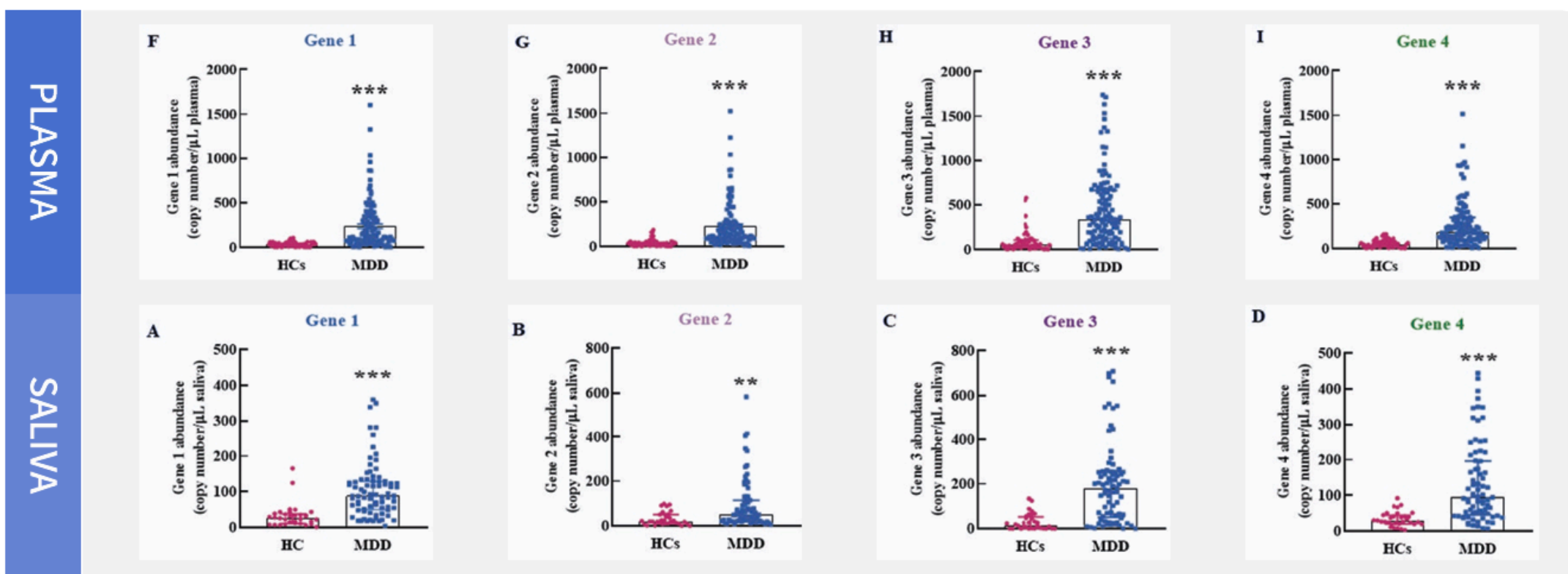


Figure 2: The four-indicator combined test correlates with clinical scale evaluations at 99.5% in plasma or saliva samples.

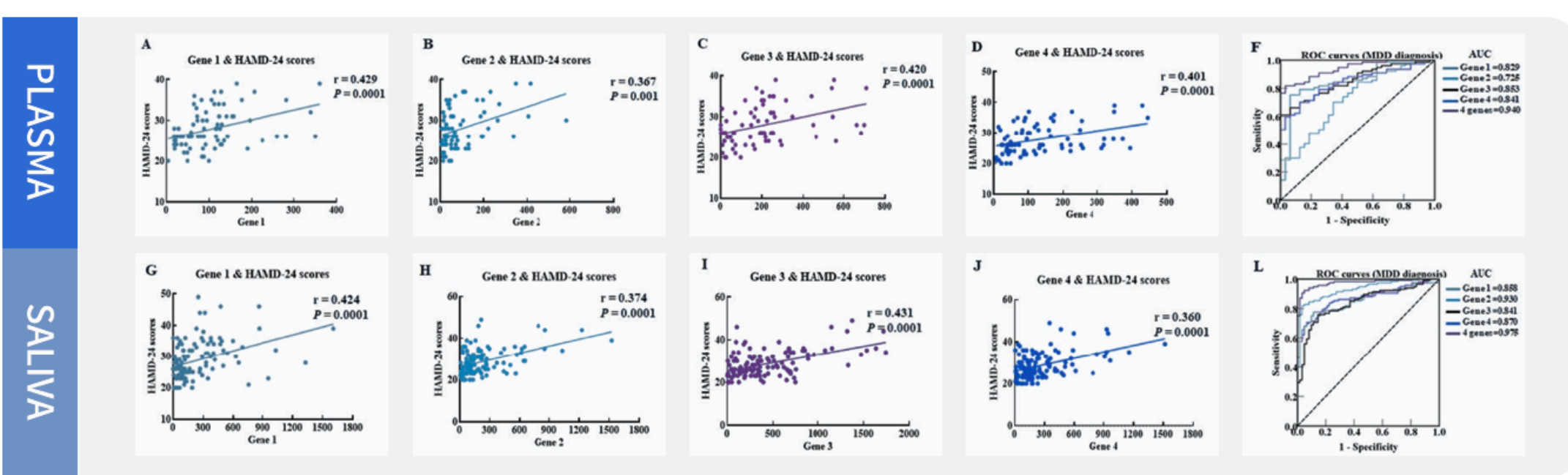


Figure 3: Gene1, Gene2, Gene3, Gene4 show good therapeutic effects in plasma or saliva samples from depression patients.

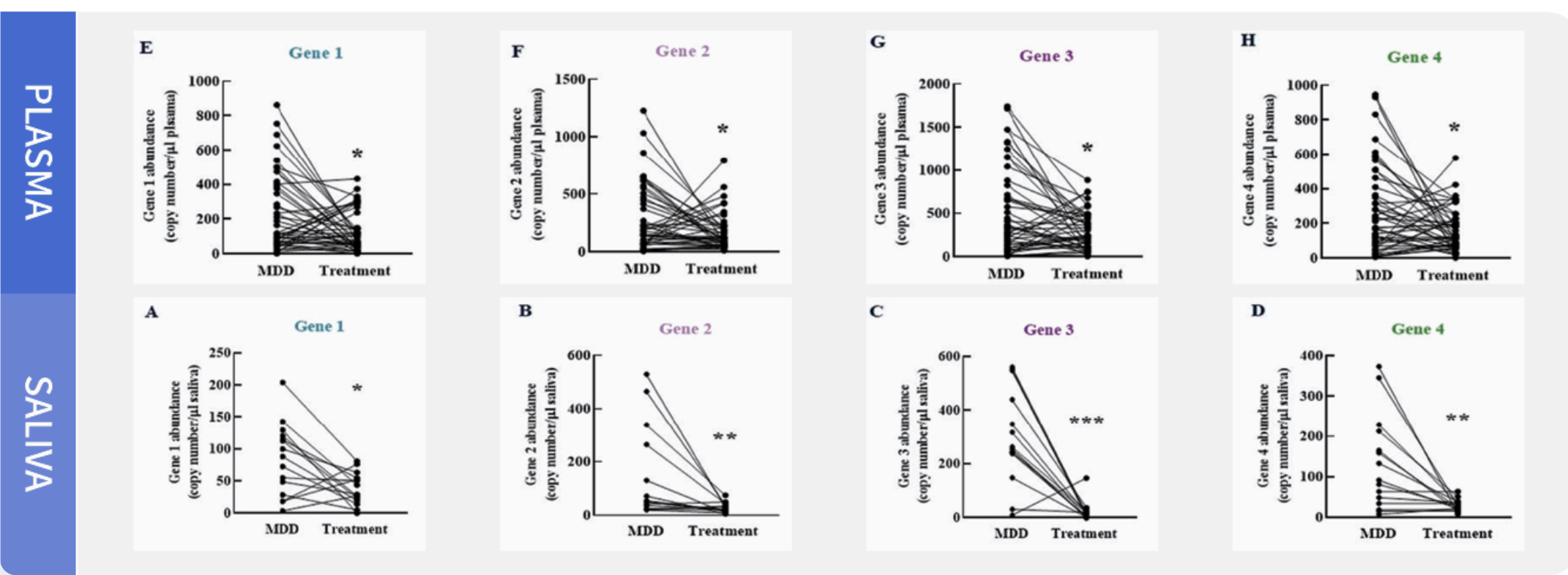
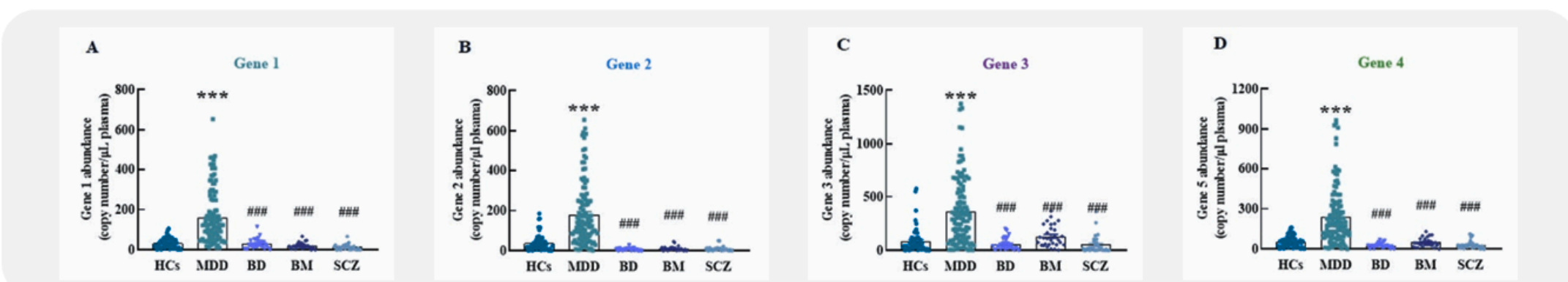


Figure 4: Gene1, Gene2, Gene3, Gene4 exhibit excellent specificity, showing 100% specificity only in depression clinical samples.



Assessment Tools: Depression severity: 24-item Hamilton Depression Rating Scale (HAMD-24)/Montgomery-Asberg Depression Rating Scale (MADRS)/Patient Health Questionnaire-9 (PHQ-9).



DIAGNOSTIC METHODOLOGY COMPARISON

	PATHOLOGICAL EXAMINATION	MEDICAL IMAGING	BIOELECTRICAL SIGNAL	PROTEIN	RATING SCALE	NIACIN	circRNA (PLASMA/SALIVA)
PATHOLOGICAL FEATURES	✓	✓	✓	✓	✗	✓	✓
NON-INVASIVE	✗	✓	✓	✓	✓	✓	✓
REPEATABILITY	✗	✓	✓	✓	✓	✓	✓
HIGH SENSITIVITY AND SPECIFICITY	✗	✗	✗	✗	✗	✗	✓
EARLY SCREENING AND DIAGNOSIS	✗	✗	✗	✗	✗	✗	✓
MASS SCREENING	✗	✗	✗	✗	✓	✓	✓
MEDICATION GUIDANCE	✗	✗	✗	✓	✗	✓	✓



PRODUCT ADVANTAGES



1.Objective Assessment
Innovative diagnostic method



2.High Accuracy and Specificity
4 biomarkers, specificity $\geq 95\%$, accuracy $\geq 90\%$



3.Circular RNA Detection Technology
Ground-breaking technology



4.Saliva or Plasma sample
Easy to collect, non-invasive, well-accepted, and widely applicable



5.Quantitative Detection
Differentiation of mild, moderate, and severe depression in patients



6.Therapeutic Effects Evaluation
Evaluation of therapeutic effects, provide treatment reference



OPERATING PROCEDURE

01 SAMPLE COLLECTION (SALIVA, PLASMA)



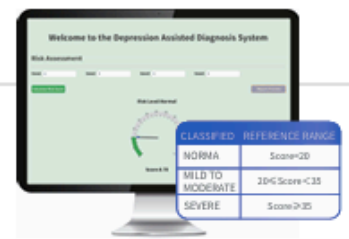
02 circRNA EXTRACTION



03 RT-PCR PROCEDURE



04 DATA ANALYSIS (CALCULATE THE SCORE AND PROVIDE THE TEST RESULTS)



Saliva Collection Kit

Funnel
Collection Tube



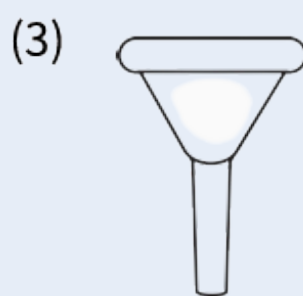
Collection Instructions:



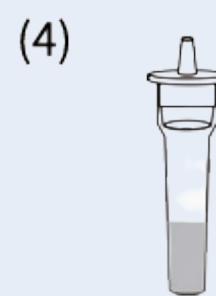
(1) Before collecting saliva, rinse your mouth with water for 30 minutes to clean out any debris.



(2) Relax the cheek muscles and gently massage for 30 seconds, or use the tip of your tongue against the roof of your mouth or lower teeth to stimulate saliva production. Gently spit into the collection funnel until the liquid saliva reaches the scale (around 2mL).



(3) Unscrew the collection funnel from the tube and dispose of it (handle as hazardous waste to avoid contact or contamination).



(4) Secure the cap on the saliva collection tube to complete the sample collection.



(5) Place the collection tube and test request form into the foam box for shipping. If the temperature is above 25°C, ice packs (provided) should be used (follow ice pack packaging instructions).

Notes:

1. Do not eat, drink, smoke, or chew gum for 30 minutes before sampling.
2. Before collecting saliva, relax the cheek and gently massage for 15–30 seconds to stimulate saliva flow.
3. Ensure the collection tube's outer packaging is intact and confirm that the saliva tube is not leaking.
4. This product is for single use only. Do not share the collection tube between individuals.



TEST REPORT

CIRCRNA FOUR-INDICATOR TEST REPORT

Score value

- **Normal (Total Score < 20):**
Indicates the sample is within the normal range, with a low risk of depression
- **Mild and Moderate (20 ≤ Total Score < 35):**
Indicates a higher risk of mild to moderate depression. Clinical and psychological evaluation is recommended
- **Severe (Total Score ≥ 35):**
Indicates a higher risk of severe depression. Clinical and psychological evaluation is recommended

STATEMENT :

The test results are for auxiliary purposes only, such as for clinical or research purposes and cannot be used as a definitive diagnosis of depression. The final interpretation of the test results is to be made by a clinical doctor or psychological assessment expert.

