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(57) Abstract :
The invention discloses a wearable biosensor system for continuous monitoring of metabolic biomarkers, including glucose, lactate, and ketones. The system integrates a biosensor array (101), flexible substrate (102), signal processing unit (103), wireless module (104), AI analytics system (105), and power management unit (106). The patch provides real-time, predictive, non-invasive monitoring with seamless wireless connectivity and prolonged operation. It enhances preventive healthcare, early detection of metabolic disorders, and improved disease management, offering user comfort, accuracy, and clinical applicability.

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