

# Microfluidics for Biomarker Discovery Innovations and Applications

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#### Point-of-care testing

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#### Microfluidic PCR

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## Rapid results

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## Integration with detection

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## Applications in disease diagnosis and monitoring

## **Cancer biomarkers**

## Circulating tumor cells (CTCs)

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### Exosomes

Infectious diseases: la la la aellee f fermine aelle af e e e ea e al la e :

## Pathogen detection

#### Serodiagnostics

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# Neurological disorders

## Cerebrospinal fluid (CSF) analysis

#### Neuroinflammation markers

#### Cardiovascular disease

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# Lipid profiling

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## Biomarkers of myocardial injury

## Advantages of microfluidic systems

#### Increased sensitivity

#### **Reduced sample volume**

#### High throughput

#### Integration and automation

#### Discussion

## Standardization and reproducibility

## Scalability

#### Data management

#### Integration of artificial intelligence

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#### Personalized medicine

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## Point-of-care applications

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### Conclusion

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- F€ĚU liç^là ŮÕĚt Yi}•[]À TSĚt S^||Ă ÖČĚt Óæ\*æ]: k Øk ÇFJJÌD Ù^•c^ {æd&k ~`}&d[}ælk analysis of the yeast genomeĚV [^}å•kĎi[c^&@] [ |kFÎKHTIHĚH Ï ÌÈ