Non-thermal Cycling for Polymerase Chain Reaction (PCR)

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BACKGROUND

PCR is the most widely used method for in vitro DNA amplification. However, it requires thermocycling to facilitate DNA melting and enzymatic replication (switching between double and single stranded DNA). Heating/cooling limits device design and thermocycling is a power-hungry process so that isothermal approaches have been sought as improvements to conventional PCR.

TECHNOLOGY DESCRIPTION

University researchers have developed a PCR method and device that does not rely on thermal cycling. The invention can be implemented on a fluidic chip platform and is compatible with standard sample preparation and detection schemes; it offers a totally integrated approach that enables overall reaction efficiency, reduced power consumption and device portability.

INTELLECTUAL PROPERTY INFO

The invention is available for licensing and research sponsorship.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,909,172	03/06/2018	2011-366
United States Of America	Issued Patent	9.410.171	08/09/2016	2011-366
United States Of America	Published Application	0181685 A1	06/11/2020	2011-366

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OTHER INFORMATION

KEYWORDS

PCR, DNA amplification, lab on a chip

CATEGORIZED AS

- **Medical**
  - Devices
- **Research Tools**
  - Nucleic Acids/DNA/RNA

RELATED CASES

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