Saphyr Platform

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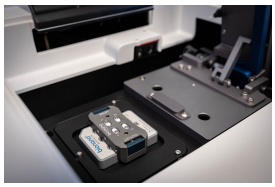

Brand

Bionano Genomics

Type

Contact

Elio Schijlen (elio.schijlen@wur.nl)

Organisation

Plant Sciences Group

Department

Bioscience

Description

The Bionano Genomics Saphyr system uses a non-sequencing based optical mapping technology to analyse extremely long strands of genomic DNA. This DNA is fluorescently labelled with the new Direct Labelling (DLS) technology and is imaged after individual DNA molecules are separated in thousands of channels on a nano-fluidic chip.
With this system large structural variants including insertions and deletions, translocations and inversions at genomic scale can be analysed. A favourable method for researchers interested in for example plant trait development, domestication, or polyploidy. With high quality software and improved computational resources, assembly, scaffolding, variant calling and annotation is readily available for our customers.
This allows construction of high precision genome maps which, combined with other NGS technologies, generate exciting new possibilities to reconstruct complex genomes. The power of this combination can be found in an increase in the contiguity of the assembly, to benefit both in a practical and economical way.

Technical Details

• Bionano Saphyr Optical mapping device
• Up to 640 Gigabases data per run including 2 samples
• Structural variation detection ranging from 500 bp to megabase pairs in length
• Optical data derived molecules()Long molecules from 100,000 bp to megabase pairs
• In house developed procedure to combine flow sorted nuclear DNA to get optical mapping data from largest possible DNA molecules

Applications

• De-novo genome map
• Structural variant analysis