LP-SPOL

Legionella pneumophila

Spoligotyping

BMX-LP-42 (42 spacers)

« Spoligotyping » (tubercle bacilli Direct Repeat or CRISPR genotyping), invented 1997 at the RIVM in the Nederlands and transfered on a microbeads format in the CDC in 2004, is one of the services offered by IGM (experts in CRISPR loci typing on microbeads in Europe and a partner of Luminex®). We propose both custom genotyping services as well as are selling oligonucleotide-coupled microbeads, whether polystyrene ou paramagnetic, to run CRISPR typing techniques to prevent infectious diseases spreading on Luminex devices. As TB-SPOL (spoligotyping of Mycobacterium tuberculosis Complex CRISPR locus) , we developed a technique that cover the known CRISPR diversity in L.pneumophila and permet to distinguish 3 classes of isolates. Transfer of LP spoligotyping techniques to the microbead-based system allows to improve quality of results, a 5x highter throughput and a computerized interpretation that promotes cost-effective genotyping.

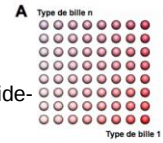
Advantages

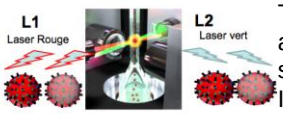
- Fast (2 to 3h)
- High throughput (96 well plates)
- Internal controls
- Universaly recognized technique
- Numerical results (easily shared on the web)
- Training and Expert technical support

Applications, References

- Subtyping of the worldwibe clinically predominant *L.pneumophila* sequence types
- Discrimination for the 264 undistinguishable ST1/Paris pulsotype isolates
- Implementation to new international Public health laboratories and international connected database for surveillance.

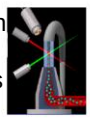
Works with xMAP® or MagPlex® Oligonucleotide-coupled microbeads

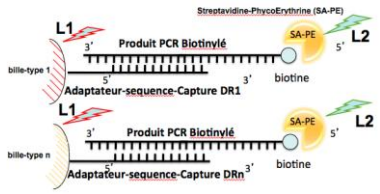




Two lasers allow signals Identification and Quantification

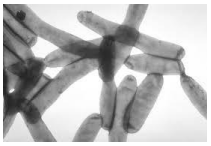
Innovation in Chemistry Microfluidics Lasers Bioinformatics

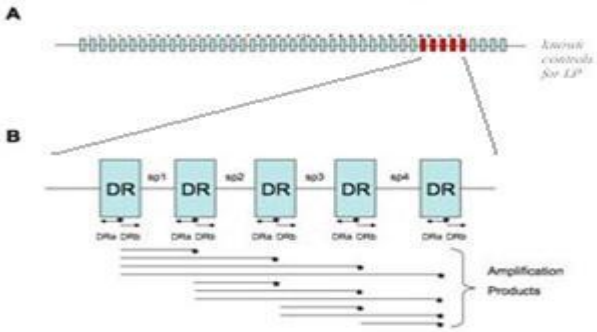




Fluorescent PCR products analysis

DNA Extraction
(from biological samples or culture..)



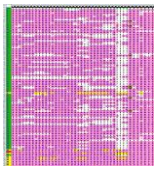


Hybridization on microbeads, detection

Magpix®
MagPlex® beads

Luminex 200
xMAP® beads

Numerical Result



Computerized data management

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