





# Innovación/en Oncología

Madrid, 14 Abril 2014

### **COMPANY PROFILE FACILITIES**

Founded in 1989, VITRO, S.A. is an independent manufacturer and distributor of IVD products in Spain

Facilities are located over 6.000 m2 in different locations in Seville, Madrid, Salamanca and Granada.

Manufacturer of IVD kits and instrumentation for Cellular and Molecular Diagnostic. Developer of software for QC, Pathology Lab, Bio Banks

ISO9001 certified + ISO13485 certified



Vitro Seville



Vitro Madrid



Master Diagnostica Granada



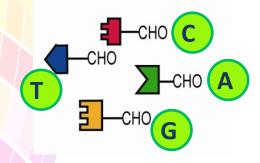
# **DestiNA**Genomics

PCT/GB2008/003185

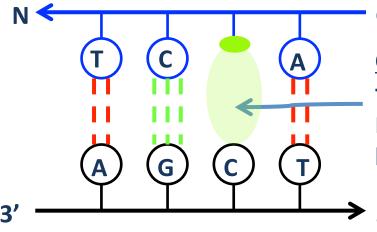


**DGL Probe** – with an abasic position

### **SMART Nucleobases**



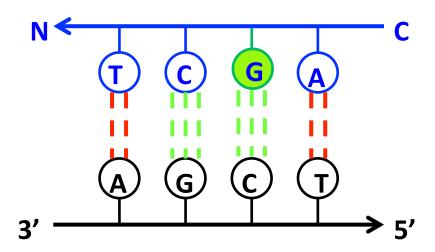
**DestiNA's property** 



Chemical Pocket to be filled by a SMART Nucleobase following W-C base pair ruling

Target NA – with a single nucleotide to interrogate

DGL probe is modified by a SMART Nucleobase – The 4 SMARTs can get in and out the pocket but just complementary SMART is fixed in.



# Two events need to happen for a specific signal to be created:

- 1. Selective hybridisation between probes and target nucleic acid.
- 2. Proof-reading step Selective incorporation of a specific SMART controlled by the interrogating NA

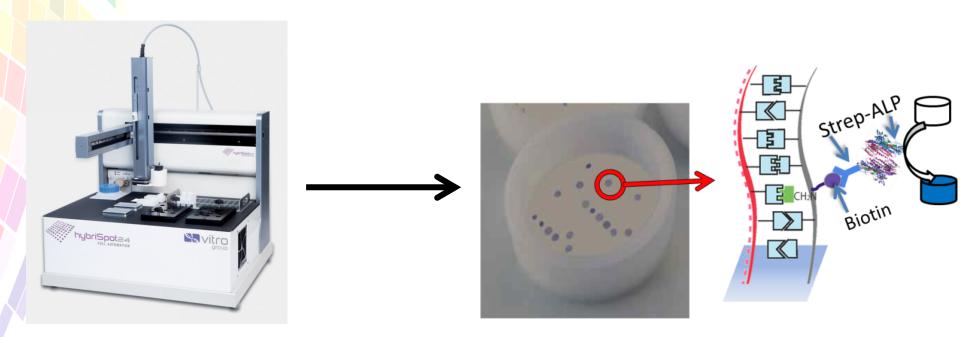
The reaction, within 15 minutes, can ONLY take place when the target nucleic acid forms a **perfect duplex** with a DGL probe. **NOT False Readings** 

# **UNIQUE** Features

- Tm Free Technology Specificity is guaranteed by chemical means.
- Chemical control means Error-free ideal for clinical diagnostics.
   Only technology is the market using chemistry for NA testing.
- Label Free & Enzyme Free Technology Allow Direct Detection of Nucleic Acids.
- Platform-agnostic with high specific multiplexing capability.
   Currently, validated with mass spectroscopy, colorimetric (HybriSpot<sup>™</sup> Master Diagnostica) and fluorescent (including FISH and bead-based flow cytometry) platforms

# **COLORIMETRIC DETECTION**

- HybriSpot™ allows DGL probe hybridise with their target DNA in a 3D porous environment
- Signal is developed by a colorimetric immunoenzymatic reaction via tagging of SMART Nucleobases with biotin



Master Diagnostica and DestiNA Genomics merged technologies used for colorimetric detection

# Master Diagnostica – DestiNA Partnership





- Allow to genotype over 40 SNP per single membrane with high specificity – Unique for array formats.
- 30 minutes assay time.
- Competitive cost if compared to current array-based NA testing platforms.
- Ideal for mutation panels related to pharmacogenetics and drug-resistance infectious diseases.





### **CYTOGNOS OVERVIEW**

- About us: Cytognos SL is a biotechnology company dedicated to the design and development of new reagents, software and techniques that provide innovative solutions in the field of clinical flow cytometry.
  - Mission: To transfer scientific advances to the clinical flow cytometry
    - **Vision:** To become a reference in innovative and quality solutions for clinical flow cytometry





**DISTRIBUTION CHANNEL** 

Present in 48

countries

Values:



### **R&D PROJECTS**

- . 6th Framework Programme EuroFlow™: "Flow cytometry for fast and sensitive diagnosis and follow-up of haematological malignancies". European Commission's funding collaboration.
- 7th Framework Programme DIMID: "Development of an Innovative Microfluidic Impedance-based Device for multi parametric cell analysis". European Commission's funding colaboration.
- 7th Framework Programme DIMIDPlus: "Commercialization of an Innovative Microfluidic Impedance-based Device for multi-parametric cell analysis". European Commission's funding colaboration.

• Project with American Foundation Multiple Myeloma Research Foundation MMRF: "Minimal Residual Disease to Characterize Multiple Myeloma Response and Detect Early Relapse" MMRF's funding collaboration.

- · Eureka FRET: "Diagnosis and Classification of Malignances with new tools for sensitive and specific detection of fusion proteins at invidual cell level". CDTI's and Technological funding collaboration.
- IgE: "Identification kit of b cell populations producers of immunoglobulin's IgE, to diagnosis and sorting type hypersensitivity". CDTI's and Technological funding collaboration.
- TIMASCAN: "New detecting, diagnosing and monitoring tool of diseases through the content analysis of the lysosomes in the macrophages with high sensitivity and specificity". Ministry of Economy and Competitiveness funding collaboration

- PIG-A: "Research and development of a new reagent for identify mutations in the PIG-A gene X chromosome, and serve as a warning signal for disease prevention, minimizing as much as possible health risk". ADE Inversiones y
- PRIMER Biomedicina: "Personalized medicine for haematological malignancies". ADE Inversiones y Servicios funding collaboration. (ERDF: European Regional Development Fund)

# **CYTOGNOS: Capabilities and Strenghts**

### REAGENTS DEVELOPMENT CAPABILITIES



- Accessibility to all dyes and antibodies providers
  - flexibility to reach exploitation agreements



- Exclusive product protected by patents
- · Fast and easy interaction and communication with licensors
- Products validation by licensors



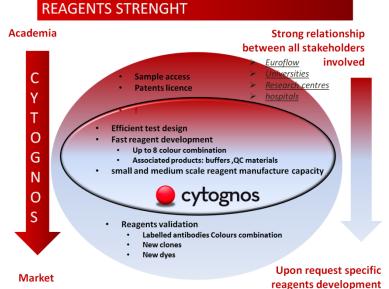
- Quality ISO 9001 and ISO13485 certifications
- Well defined and flexible processes
- Extensive experience in multicolour tubes design
- · Flexibility to change clones and dye position



- Highly experienced team
- Strong background in flow cytometry
- Efficient and rapid decision taking

Education	Number	percentage
biology and biochemistry Phd	6	15%
Biology and Biotechnology degree	9	23%
Software engineers	10	25%

### DEACENTS STRENGUE



### SOFTWARE DEVELOPMENT CAPABILITIES



- Well defined software design processes according to 21CFR Part 11 FDA regulation
- Quality ISO 9001 and ISO 13485 certifications
- Complete tools validation by Academic Euroflow members

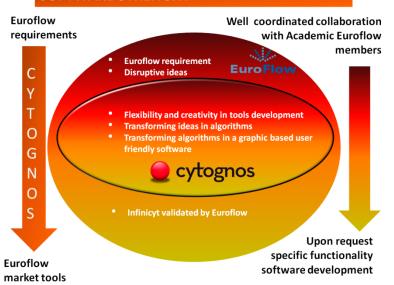


- Highly educated team with strong background on flow cytometry
- Fast and flexible team



- Strong and continued I+D on new tools coming from Euroflow
- Extensive fine-tuning rounds on new tools until functionality works

### **SOFTWARE STRENGHT**

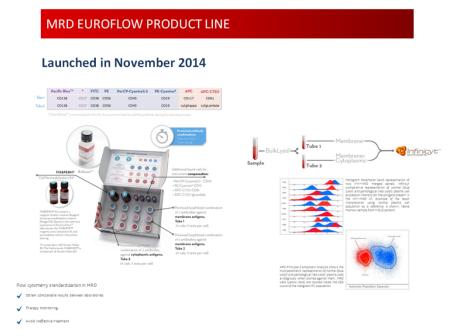


# **CYTOGNOS: Oncology Innovation solutions**

SCREENING AND CLASIFICATION EUROFLOW PRODUCT LINE

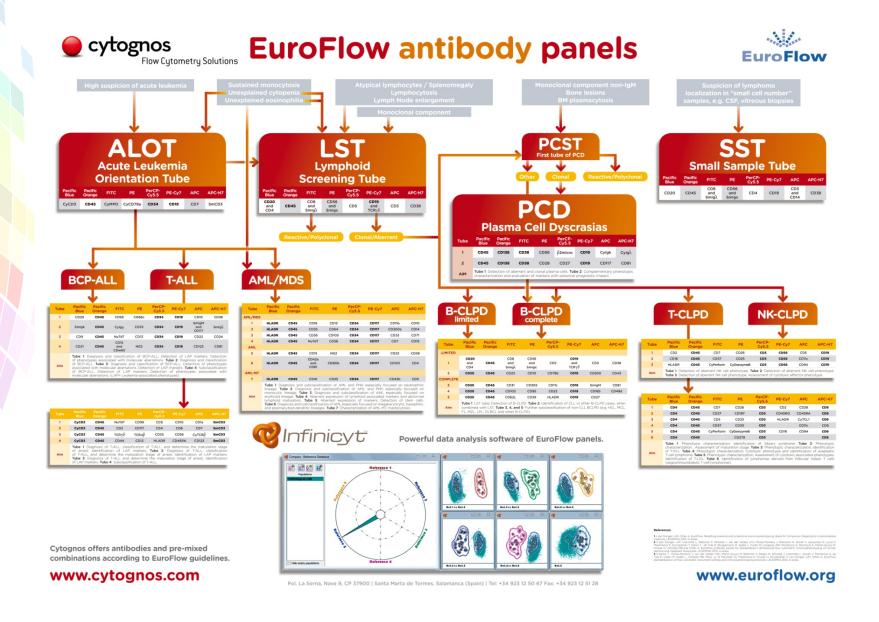
**Launched in September 2013** 



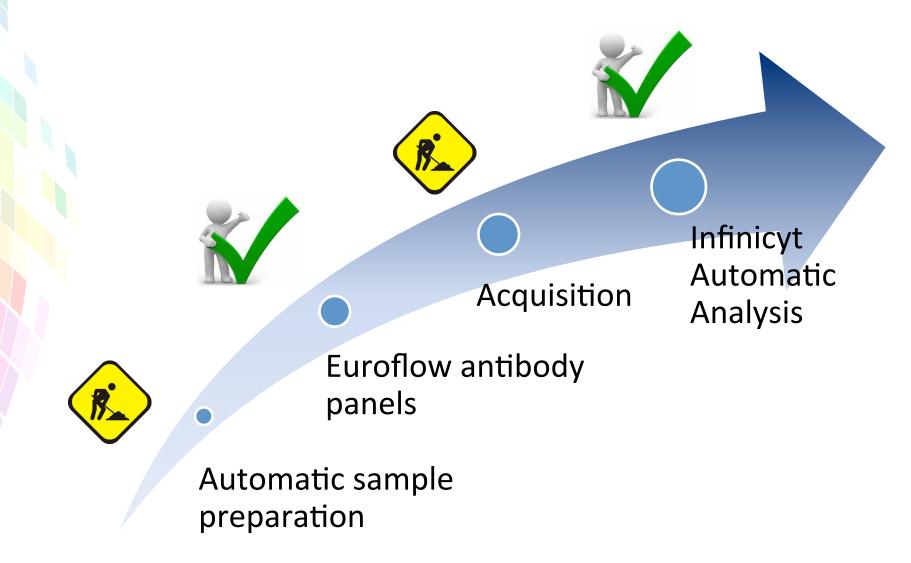


Diagnosis and MRD Euroflow tubes		
application	Diagnosis and MRD's follow up of hematological malignancies	
Market	Leukemia and lymphomas (hematology)	
Main Competitive advantage	Standardization combined with automatic analyze	
Specific uses	Companion DX	

# How does Euroflow concept work?

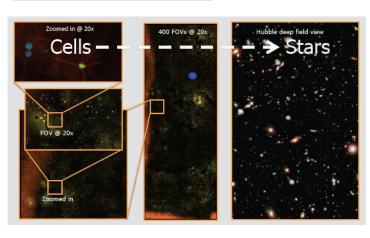


# **FUTURE COMPLETE SOLUTION**

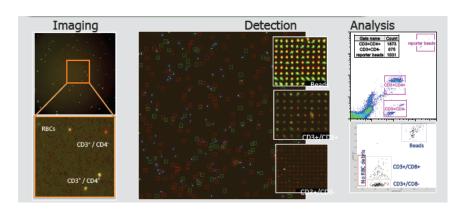


# **FUTURE COMPLETE SOLUTION**

# **Acquisition**



# **Based on Celular Astromy**



# Automatic sample preparation

**Based on fluidic filters** 









