



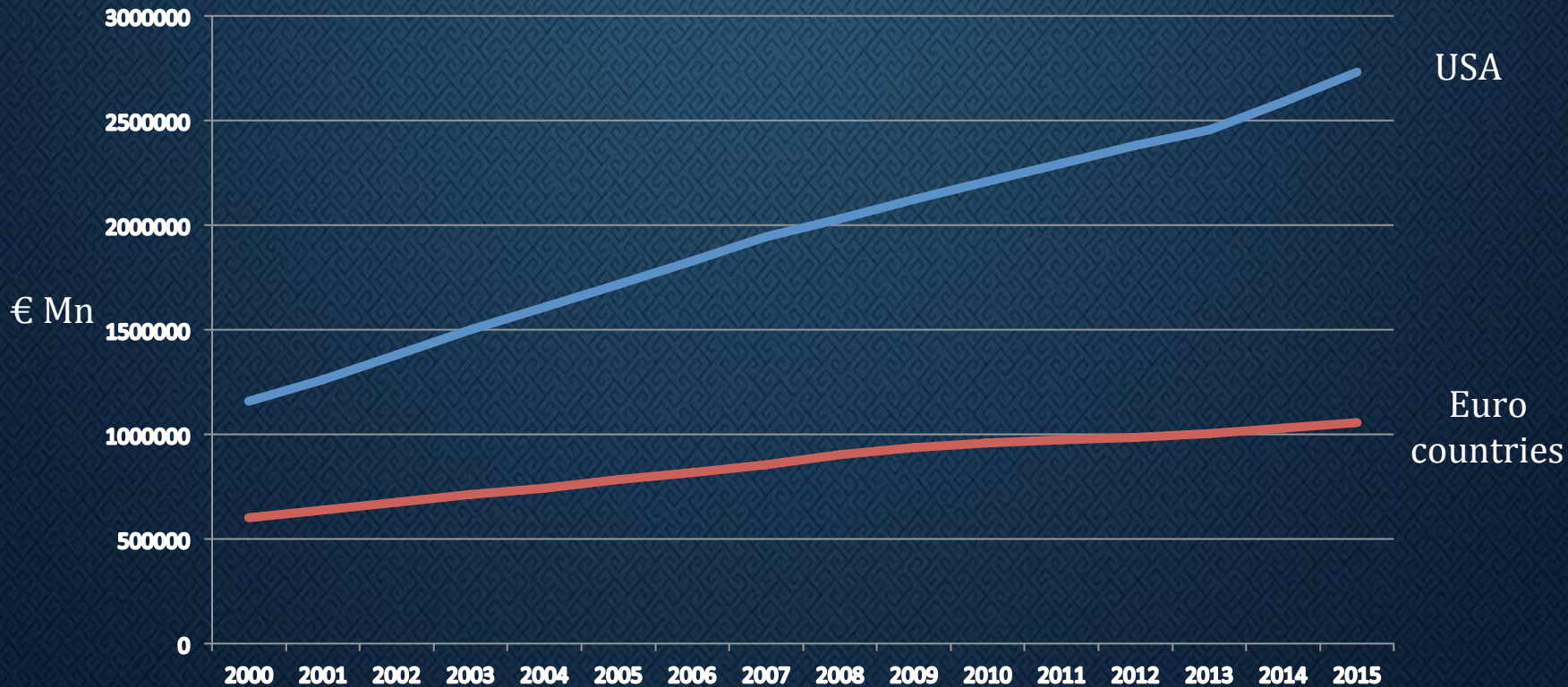
# Clinical Molecular Diagnostics: Enabling Population Health management

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## Healthcare costs are still increasing (\*OECD figures)



Why?

Increased understanding of social determinants of health and pertinence to healthcare costs



## The Challenge

Population Health:  
Factors (and weighting) that influence health, disease  
progression and healthcare costs

Physical Environment  
(pollution, location)  
10%

Health care  
(access to it and quality of it)  
20%

Health behaviours  
(diet, exercise, alcohol,  
tobacco)  
30%

Socioeconomic  
(age, education, employment,  
income, social support)  
40%

If left unchecked, everyone will funnel into requiring  
higher cost healthcare addressing multiple  
simultaneous chronic diseases

This is unsustainable





## Solutions

### Physical Environment:

Screen high risk subjects for early signs of tissue damage or dysfunction

### Health care:

Enable healthcare practitioners to rapidly diagnose, prognose, and prescribe prevention and/or intervention as a function of patient status

### Health behaviours:

Enable primary care practitioners to punctually, easily, routinely and accurately test at-risk patients and prescribe low cost prevention before high cost intervention

### Socioeconomic:

For high risk population groups (low income = poor nutrition = disease or/ disease progression as a function of age) monitor disease progression and prescribe low cost interventions which restore functionality and reduce comorbidities

The solution has to be affordable, efficacious, high quality  
and reduce long-term healthcare costs  
i.e. test early, test frequent, prescribe prevention NOT intervention

Otherwise.. No one is going to reimburse it





## Our Molecular Analysis Products enable these solutions

### Early Stage Biomarkers (RNA/miRNA- NGS)

DILI/Toxicology\*  
Cancer  
NAFLD/NASH\*  
Sarcopenia  
Cachexia  
Cardiac/CVD disease  
Epilepsy  
Rare diseases  
Drug Development  
(throughout whole development  
cycle as miRNA are evolutionary  
conserved)



### Medical Genetics (DNA - NGS)

Cancer screening  
Disease onset  
Nutrigenetics  
Mutational analysis,  
Metabolic alterations  
Transcriptome analysis  
Exome sequencing  
Metagenomics  
Epigenetic analysis  
Methylation measurements

**One platform: multiple applications**

\*biomarker recently semi-qualified by EMA/FDA for use during clinical validation





## Principal focuses and customers

- Cancer (multiple types)
- Heart and skeletal muscle diseases (either singular or as comorbidities)
- Liver disease and liver toxicity
- Metabolic diseases and nutrition
- Rare diseases
- Mitochondrial diseases



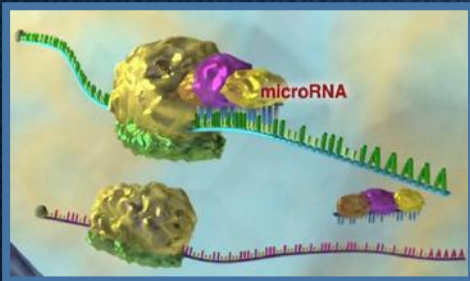
### Customers:

- Primary care/home health care (following reimbursement approval by govt)
- Health insurance companies
- Private clinics
- Companies developing therapeutics/medical devices
- Nutriceutical companies
- Environmental agencies



## Pipeline: what's in development

- Totally non-invasive measurement approaches (saliva and urine)
- Lower technological requirements without compromising outcomes
- Point of Care devices (multi partner collaboration)
- Increased nutrigenetic analyses
- Broader application (more indications and other geographic markets)







## Company History

Patent filed by academic inventors claiming that miRNA have relevance as biomarkers in muscle disease: 2009-2011

Patent licensed exclusively to Genechron (formerly known as: Ylichron): March 2013

Non-GLP commercially valid method that absolutely quantifies miRNA validated: April 2014

GLP **commercially method validated** that absolutely quantifies miRNA: May 2014

First proof of concept of clinical validity of some of the proprietary markers and method in a non GLP assay: June 2014

First proof of concept of clinical and commercial validity GLP assay: July 2014

Numerous scientific publications released confirm the scientific validity of our proprietary miRNA as cardiac and skeletal muscle disease biomarkers: 2011-2016

Lazio Innova with local Business Angels invest €580.000 **to commercialise miRNA as valid biomarkers for disease diagnosis**, patient care and therapeutic efficacy measurement: August 2016

Genechron opens Lazio based medical diagnostic laboratory: Summer 2017

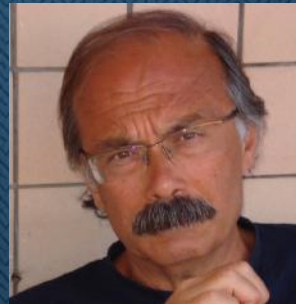




## Management team



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