10
PARTNERS

4 years
DURATION

5,6 M€
FUNDING

8
COUNTRIES

DIAGORAS OBJECTIVES

The DIAGORAS project aims to develop a **device** that will **speed up** the diagnostic workflow for oral infections and **reduce the costs** incurred with current diagnostic procedures. This rapid, highly sensitive and specific **microbiological diagnostic system** will allow dentists to make more informed and targeted decisions for the correct treatment of patients.

DIAGORAS acts as a **decision-support diagnostic tool**, helping to reduce costly treatment.

The project will improve the social and economic aspects impacted by **oral infections**.

MILESTONES

EARLY 2017
Biological assays and discs ready as components

MID 2018
Analytical validation in laboratory conditions completed

END 2017
System integration of components completed into first prototype

JUNE 2019
End of the project with clinical testing of the platform

PARTNERS

1. Hahn Schickard
2. AIT Austrian Institute of Technology
3. University of Zurich[UZH]
4. Erasmus MC
5. ASKION engineering • production • service
6. MagnaMedics
7. ClinicaGeno
8. BioVendor
9. SPARKS & CO
10. Karolinska Institutet

WANT TO KNOW MORE ?

www.diagoras.eu

@DiagorasEU

The Diagoras project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 633780.

DIAGORAS

Chairside Diagnosis of
ORAL INFECTIONS
for Personalised Treatment

CONTEXT

Oral infections, such as periodontitis and caries, are the **most prevalent chronic diseases** worldwide:

▷ Periodontitis affects the gums and the bony tissue of the teeth and can lead to tooth loss.

▷ Caries affects the hard tissue of the teeth. Caries can lead to toothache, tooth decay, difficulties in eating, aesthetic impairment and finally tooth loss, too.

50% of the European population is suffering from periodontitis and the age-group of 60-65 is affected the most. These infections severely **deteriorate the quality of life** (chronic pain, dental decay, tooth loss, etc.), but they also constitute **an enormous cost burden on global healthcare systems**: industrialised countries spend 5-10% of their public health expenditures on oral health. Even today, diagnosis is time and resource consuming.

A better diagnosis process therefore would help reduce oral health-related costs and improve individuals'quality of life worldwide.

HIGH SOCIETAL IMPACT

DETECT ORAL INFECTIONS AT THE DENTAL PRACTICE

REDUCING

- **OVERALL BURDEN TO HEALTHCARE SYSTEMS**
- **TIME TO DIAGNOSIS**

THE CURRENT DIAGNOSIS OF ORAL INFECTIONS

▷ Combination of clinical examination, the history of patient and X-rays

▷ Samples have to be sent to specialised centres for analysis

▷ Dentists obtain the results after a week

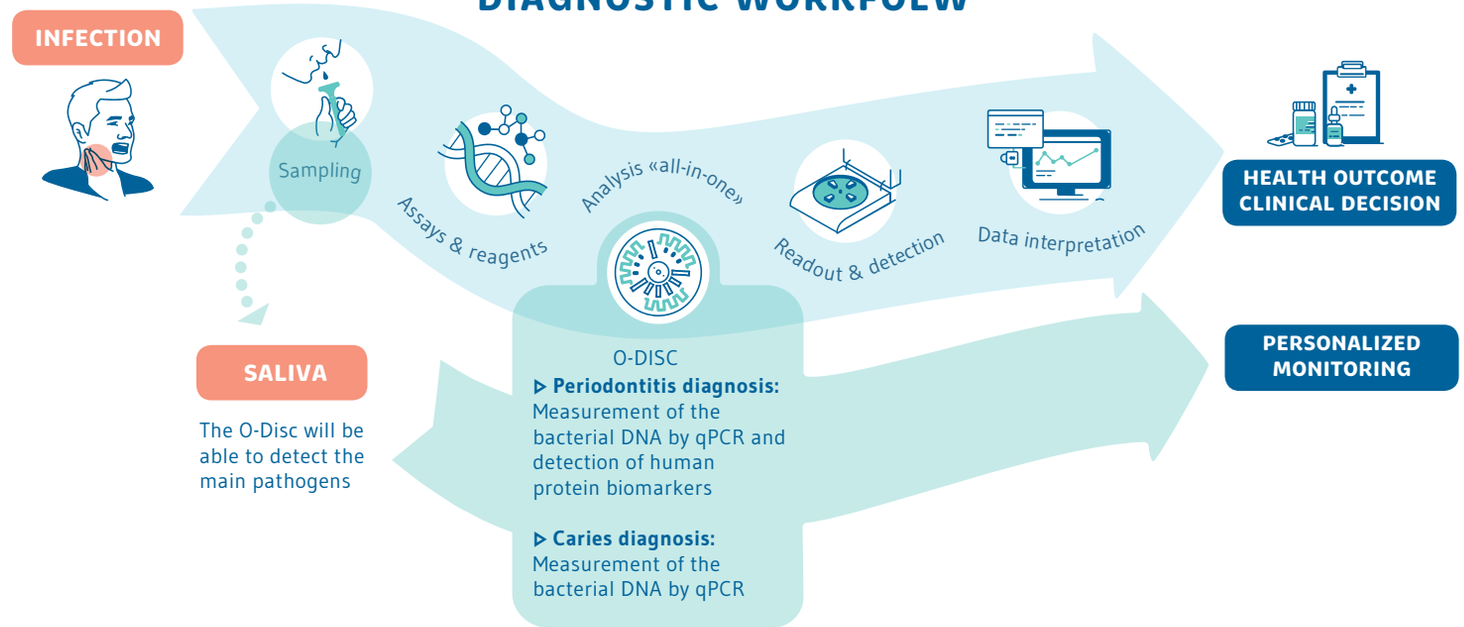
INNOVATIONS ASSOCIATED WITH DIAGORAS

▷ Detection and quantification of oral bacteria and promising host protein biomarkers

▷ Samples are tested on a compact platform which integrates a microbiology lab into a disc

▷ Dentists obtain the results rapidly, on site, and with minimum manual effort

DIAGNOSTIC WORKFOLW



DIAGNOSTIC PANEL

Periodontitis bacteria
Porphyromonas gingivalis
Tannerella forsythia
Treponema denticola
Fusobacterium nucleatum
Campylobacter rectus
Prevotella intermedia
A. actinomycetemcomitans

Caries bacteria
Streptococcus mutans
Streptococcus sobrinus
Oral Lactobacilli

The new device gives results of specific bacteria and total bacteria load

Host protein biomarkers
Provide in-depth insight into the patients periodontitis diagnosis