# Personalised control and prevention of progression of COPD by a software based scientific expert system

## WISE-Breath technology

**Clinical Value Proposition**

New tool for Medical doctors and Health providers to reduce COPD progression in their patients/clients through the continuous and daily support of these patients by recommendations related to their particular COPD disease situation.

Reduction in mortality, exacerbations, health associated costs

**Patients Value Proposition**

Involvement of self-control of its own disease preventing its progression and achieving better life quality and longer life expectancy.

Recommendations and personalized alarms adapted for each patient for his disease state and environment.

**Product**

**Wise Breath** Implemented technology for use in personal mobile phones by COPD patients through private permission access by payment by Health providers.

**Market introduction**

Estimated time to market 1-2 years.

**Scientific and Clinician Team**

- Clinicians & researchers multidisciplinary team. Based on experience of robust analysis of a large anonymized prospective cohort of 10,449 cases from 147 hospitals, by the clinical expert group of the Spanish hospital network joined to the AUDIPOC-CEPA projects.
- The IP is a MsD Doctor in Epidemiology and Public Health and specialist in data analysis.
- 100% owners of technology.
- Under registry and secret protection
- Currently under software development and technical validation in patients.

**COPD is a complex chronic respiratory disease with a serious impact on the quality of patients' life, is fourth leading cause of death and has a high cost to health systems.**

**Scientific and clinical data show that patients with chronic diseases (such as COPD) actively involved in their self-care, maintain their functionality and quality of life for longer.**

Prevention and maintenance of the progression of COPD depends on: disease control, exacerbations control, adherence to treatment, correct use of medical devices, respiratory training, exposure to environmental risk factors, etc.
COPD associated costs are mainly due to: 40-45% Hospitalisation Expenditure; 30-45% Drugs; 15-25% Visits and diagnostic tests.

Reducing uncontrolled risk factors is expected to accumulate a calculated reduction of about 50% of associated Health costs.

**Improving the prevention and progression of COPD by an active involvement of the patient in control of his COPD situation with a personalised support expert system.**


**Current custom recommendations**

**Support:** FAQ, Emergency number, Chat, Interest Links.

**Alerts:** Medical check, Therapeutic guidelines, Current recommendations

**Aim achievement monitoring**

Our expert system is an algorithm generated from a **knowledge database of scientific and clinical analysis from more than 200 variables in a cohort of more than 10,000 patients.**

The product is presented as **a software to use by COPD patients** that, after an easy inclusion of their personal and health data, **will provide them permanent access to personalized recommendations and alerts that will contribute to enhance their disease control**. It will anticipate and reduce exposure to risks factors, enhance adherence to treatments and support them with information and recommendations for decision-making.
**Physicians will also improve treatment efficacy control and healthcare providers will achieve a reduction in healthcare costs.**

# Investment and Partnering opportunity

## WISE- Breath Expert System for COPD self-management

**Opportunity**

CIBER offers **collaboration for the development** of the product and its validation as well as **seeks investment to take the product to the market.**

The first target market is **Health insurance companies** to offer better COPD control to their customers, better medical outcome to their physicians and reduce health costs for the company. The use of the technology can be provided also from Public Health System.

The same methodology can be developed by the team for other related pathologies, such as for Asthma or in the current pandemic context for better individual disease control: Patients with previous chronic diseases, as COPD, have a greater risk for COVID-19 Infection.

**Target Product Profile**

Label: A software to provide COPD patients with all the tools to self-control their disease progression.

Pricing: Similar to those in the market for health-care software for use in mobile phone. Private access under a license.

**Key Economical Considerations**

- Market: 12% of adult population beyond 40 only in Spain 2.2 M.
- Reduction of hospitalization costs estimated in 50%. About 1200€/patient/year.
- Reduction of exacerbations and mortality by better disease control.

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### The tool for

The product is a software to be used from COPD patient´s personal mobile phones.
The use will be through the payment of a personal licence access.
It is expected that payers will be health providers.

The first market could be main health insurance companies, that will provide them with a competitive value as well as will reduce their health associated cost/ patient.

### IP and Know How

Knowledge data base registered and algorithm and software under secret protection.

### Easy adoption

The tool is

| | Clinical Value | Economic Value |
|---|---|---|
| Patient | Daily self-control of his current health situation.<br>Disease progression reduction, complications reduction, better life's quality, survival increase. | Treatment family costs reduction. |
| Physicians | Complications and deaths reduction.<br>Higher accuracy for treatments.<br>Better adherence.<br>Health interventions evaluation and follow up | Reduced risk of complications and deaths associated costs.<br>Reduction in the frequency of specialized medical checks |
| Software/ eHealth companies | Competitive value for companies offering new clinical information to final costumers. | High market volume for a chronic and very prevalent disease. |
| HealthCare Providers | Reductions of % mortality.<br>Reduction of long hospitalizations.<br>Better disease control. | Hospitalization, diagnostic and treatments costs reduction. |

### Current Situation of the Technology.

Software is under development.
Clinical validation studies in progress.
The team currently analyses other scientific results to achieve new algorithms for use in related pathologies.