ExpoSignalz

FACT FILE

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1 WHY EXPOSIGNALZ IS TARGETING NEUROLOGICAL DISEASES

Rates of dementia are **increasing globally**. Of these, Alzheimer's disease represents 70% of these cases.

It is **not a normal part of ageing** – Alzheimer's will gradually affect an individual's ability to learn new information, and will lead to disorientation, mood and behaviour changes, and confusion. Ultimately, it will lead to difficulty speaking, swallowing and walking.

Dementia remains the **seventh leading cause of death** internationally.

2 WHAT IS EXPOSIGNALZ?

ExpoSignalz is an ambitious **five-year, EU-funded research project** (2025–2029) that will explore the connections between our wider environment and how it is affecting our brains. The project involves **nine European partners**.

The human body is exposed to a variety of **chemical pollutants** whilst we interact with our environment. It is known that certain pollutants **can affect the brain**, but the underlying mechanisms are still generally unknown.

ExpoSignalz is investigating, with a particular **focus on Alzheimer's disease**, if specific chemical pollutants can contribute to the development of dementia.

3 OBJECTIVES

- **Identify pollutants** that can affect our brains, potentially contributing to trajectories that can end in Alzheimer's disease.
- **Characterise pollutant signatures** associated with brain ageing and Alzheimer's disease, tracking chemicals.
- Understand the underlying **'mechanisms of action'** behind pollutants and how they affect the brain.
- **Discover** how early exposure to chemical pollutants might **increase the risk** of Alzheimer's disease later in life.
- **Create a toolbox** with a database of pollutants, helping **pass knowledge** on to policymakers, citizens and public authorities.

EXPOSIGNALZ PARTNERS

Inserm | Luxembourg Institute of Health | Uppsala University | Inserm Transfert | Utrecht University | University Of Bordeaux | Beta Technology | Umeå University | EHESP French School of Public Health

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