AION Diagnostics

"Our motivation is medical need, our commitment is to meet it."

Dr. med. dent. Anna Kluczewska, CEO

Dr. med. dent. Anna Kluczewska
President / CEO of AION Diagnostics

AION Diagnostics is a global research-based imaging company whose vision is to enhance the delivery of care through early detection and diagnosis of disease. Our focus is on prevention rather than cure.

AION is committed to commercialization of products that enhance current medical imaging contrasts and targeted molecular imaging agents, allowing timely intervention before symptoms arise.

Company Description

AION Diagnostics is a global research-based imaging company whose vision is to enhance the delivery of care through early detection and diagnosis of disease. Our focus is on prevention rather than cure.

AION is committed to commercialization of hybrid imaging contrast agents and targeted molecular imaging agents, allowing timely intervention before symptoms arise.

History

AION's platform technology is based on a novel discovery made by QinetiQ, formerly the UK Government Defense Evaluation & Research Agency (DERA). Silicon made porous, is biodegradable and biocompatible in animals and humans. AION has since created a unique imaging platform on a modified form of porous silicon, providing the ability to be visualized on key imaging modalities in a single formulation.

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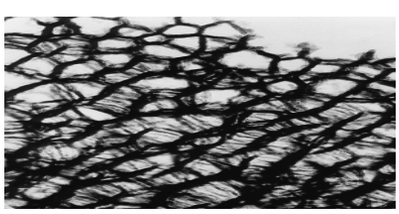


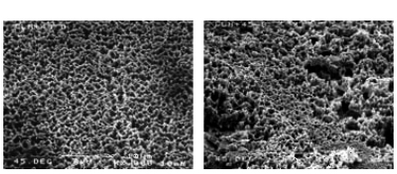
Electron micrograph of nano-structured porous silicon

AION exploits the 10-year history of QinetiQ, in developing the nanomaterial used in these applications, as well as $50 million in cumulative previous investment in the technology.

Technology

AION's primary platform technology is a modified form of nano-structured porous silicon (mpSi). mpSi retains key properties of silicon and is specifically engineered for in vivo hybrid imaging. Porous silicon (pSi) is a biocompatible, micromachinable material that breaks down into silicic acid, a naturally occurring substance in everyday food and water.

Precise engineering of the internal porous structure allows control of size, shape and location of pores enabling controlled biodegradation of the material. Degradation can be controlled from hours to months.



4 weeks 12 weeks

Scanning electron micrograph of in vivo degradation of porous silicon performed within subcutaneous tissue

Safety studies have shown porous silicon to possess a low risk of allergic reaction or inflammation in humans.

Porous silicon has also been proven visible across the four major imaging modalities of ultrasound, x-ray, computed tomography (CT) and magnetic resonance imaging (MRI)

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forming the basis of AION's multi-modality imaging product portfolio. Porous silicon can be manufactured to form a range of various forms such as fibres woven into a mesh, as well as coating of standard medical fabrics. The porous structure of mpSi allows for loading with other molecules such as antibodies and proteins, providing extensive development potential. Silicon has a proven history of manufacturing with over 40 years experience in the electronics industry. The element silicon forms 28% of the earth's crust making it abundant and a cost effective new material.

Product Development

AION has three product divisions; Marking Agents, Hybrid Contrast Agents and Molecular Imaging Agents. An additional strategic objective is the sale and licensing of its modified porous silicon platform (mpSi) to create superior versions of existing products.

Marking Agents

Marking Agents are used in a variety of surgical procedures to mark a site of interest for future relocation, monitoring and/or therapy. Combinations of materials currently achieve visibility on several modalities. AION Markers, based on the mpSi platform, provide significant advantages through controlled biodegradation, flexibility in size and design, and ease-of-use through conformance with a variety of application techniques.

The imaging platform is uniquely versatile allowing incorporation into other surgical devices for visualization across all key imaging modalities.

Hybrid Contrast Agents

AION's mpSi platform has been shown to be visible under a range of modalities, and therefore offers a solution to the drawbacks of traditional contrast agents. AION's hybrid contrast agents will offer imageability under combinations of key modalities (x-ray, computed tomography (CT), magnetic resonance imaging (MRI), and ultrasound), in a single formulation. The rate of degradation can be adjusted to suit the procedure, producing an agent that can be altered to last minutes, or hours, depending on the requirements.

Molecular Imaging Applications

AION is in a unique position to exploit the commercial potential of the molecular imaging industry through the development of molecular imaging agents based on its mpSi. Using the Company's hybrid contrast agent as a foundation, AION is developing hybrid molecular imaging agents visable on several key modalities. AION's molecular imaging agent, designed for the early detection and monitoring of a range of significant diseases can be applied to critical disease indications.

Intellectual Property

AION has exclusive IP rights to the porous silicon platform technology for medical imaging and diagnostics applications. AION's IP portfolio covers 14 patent families, 21 granted patents, 44 patent applications in key markets including US and Europe.