



**FLUIDDA**



*The annual listing of 10 companies that are at the forefront of providing Medical Imaging solutions and impacting the industry*

## FLUIDDA Revolutionizing Lung Disease Diagnostics

The world of medical devices and solutions today is incredibly expansive and constantly improving with the assistance of modern technology. One of the most innovative methods currently creating waves of change in the field is functional respiratory imaging (FRI): a set of technologically-enabled techniques to help provide a new dimension of visibility when diagnosing any complications concerning lung diseases. It combines the conventional methods of medical imaging such as CT scans with more modern, digitalized processes. With the help of this budding new technology, doctors are empowered to better observe airways, blood vessels, lung volumes, and several other anatomical structures with more precision and clarity, resulting in a significantly enhanced level of patient care. One company, in particular, called FLUIDDA, is further bolstering FRI innovation with its dedicated research and product development to help provide highly valuable and actionable information pertaining to the inner workings of a lung patient's respiratory system. And the story behind what makes FLUIDDA's FRI solutions highly desirable lies within its leadership team: a father-son duo that brings together their collective expertise to revolutionize medical imaging and drug development.



Dr. Jan De Backer

“**Functional Respiratory imaging helps improving diagnosis and treatment of lung diseases, because without quantification you leave much information on the table**”

Founded in 2005, it is interesting to note that FLUIDDA initially specialized in computational fluid dynamics (CFD), a process that helps better understand the movement of fluids and how to solve related problems. “I am an aerospace engineer by training, and my father, Dr. Wilfried De Backer, is a respiratory physician. We applied our knowledge of each respective field together and thus are able to gather more insights to improve the treatment of lung diseases,” expresses Dr. Jan De Backer, CEO of FLUIDDA. With a comprehensive understanding pertaining to the nature of complex respiratory infections and diseases, especially after the effects of the COVID-19 pandemic, Dr. De Backer strongly believes

in FRI and intends to make it more accessible and affordable, allowing physicians to better manage a similar crisis in the future.

Presently, owing to the intricate nature of lung diseases, it is still a complex process to accurately diagnose a disease within varying patients. Physicians may conduct common functional tests to check for several ailments and often prescribe medicines according to their findings. “When a patient's sample slides are sent for observation, we simply hope the magic happens and understand what ails them. However, it is not always the case,” explains Dr. De Backer. With the help of FRIs, on the other hand, a diagnosis can be seamlessly fast-tracked. The process typically begins with conventional low-dose CT scans, where

a radiologist observes the results in a 2D format, which is a fairly subjective approach and not scalable. FLUIDDA's FRI solutions leverage the innovations of artificial intelligence, cloud, and deep learning to convert the 2D images into 3D reconstructions of anatomical structures. These 3D models provide healthcare professionals with a comprehensive set of quantitative outcome parameters that visualize lung, airway, and arteries/veins volumes; ventilation, airway resistance, fibrosis, and aerosol deposition, among many other details. The company's intelligent software, post-3D reconstruction, is highly objective with as few variables as possible to provide both clinical researchers and doctors the relevant information to work toward drug development and better patient care, respectively. “What makes FLUIDDA unique in the marketplace is its ability to facilitate both clinical trials as well as clinical practice,” adds Dr. De Backer.

With such a robust solution and a team of renowned experts, FLUIDDA is one of the world's leading authorities in identifying respiratory problems quickly and accurately, promising future generations a new dimension in lung treatment. The company currently works with pharmaceutical and medical device organizations, bolstering their clinical research through its innovative Broncholab offering: a clinical practice application and image analysis, alongside project management services. Maintaining its 510(k) clearance in the US, FLUIDDA is set to help improve the lives of lung disease patients across international borders as well. Moving forward, striving for the next breakthrough in respiratory medicine, Dr. De Backer states that the company's vision is very clear: to solidify the link between a prognosis and diagnosis in the clinical practice. **HT**