

SpineGuard obtains US patent on DSG-enabled active safety stop for hand-held bone drilling power tools in free-hand, navigated or robotically-assisted surgery

PARIS and BOULDER (CO), July 16, 2025 – 6:00 pm CEST - **SpineGuard** (FR0011464452 - ALSGD), an innovative company that deploys its DSG® (Dynamic Surgical Guidance) local conductivity sensing technology to secure and streamline the placement of bone implants, today announced that its patent application directed to enhance safety of bone drilling power tools thanks to a DSG-enabled active safety stop, has received a decision to grant from the United States Patent and Trademark Office.

Stéphane Bette, Deputy CEO and cofounder of SpineGuard, said: *“We are particularly proud of the grant of this new patent, which is a cornerstone in our strategic development in the United States, the first market worldwide in our sector. For years, SpineGuard has pioneered employing its unique DSG guidance technology to secure and enhance surgical tools in skeletal surgery. More recently, we have developed with the academic ecosystem, algorithms to automatically detect bone breach situations in robotic drilling. With this newly granted patent in the United States, SpineGuard presents and protects a breakthrough innovation: an active safety stop applicable to hand-held bone drilling power tools. Conceptually, it allows for broad applications in today’s as well as tomorrow’s surgery, whether in free-hand, navigated, or robot-assisted surgery. We intend to leverage our IP and related product design work toward technology deals with the industry in a near future.”*

Since its inception, SpineGuard has developed and maintained a significant IP portfolio currently including 11 patent families totaling 72 patents and applications as well as 3 trademarks, in the major geographies such as Europe, USA and China. The new patent object of this communication and about to be granted, is the fourth granted patent by SpineGuard in the United States belonging to the category of DSG-enabled “smart” assisted surgery. That is, where the DSG signal is exploited by software/algorithmic intelligence in real time to provide assistance to skeletal surgery, such as providing audio and visual color-coded warning signals, or triggering a safety stop mechanism to block the progress of a drilling tool when a near-breach situation is encountered.

About SpineGuard®

Founded in 2009 in France and the USA by Pierre Jérôme and Stéphane Bette, SpineGuard is an innovative company deploying its proprietary radiation-free real time sensing technology DSG® (Dynamic Surgical Guidance) to secure and streamline the placement of implants in the skeleton. SpineGuard designs, develops and markets medical devices embedding its technology. Over 100,000 surgical procedures have been secured worldwide thanks to DSG® and 36 studies published in peer-reviewed scientific journals have demonstrated the multiple benefits DSG® offers to patients, surgeons, surgical staff and hospitals. Building on these strong fundamentals and several strategic partnerships, SpineGuard is expanding the scope of its DSG® technology to the treatment of scoliosis via anterior approach, sacroiliac joint fusion, dental implantology and innovations such as the « smart » pedicle screw and power drill or surgical robotics. DSG® was co-invented by Maurice Bourlion, Ph.D., Ciaran Bolger, M.D., Ph.D., and Alain Vanquaethem, Biomedical Engineer. SpineGuard has engaged in multiple ESG initiatives. For further information, visit www.spineguard.com

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