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## Spintech Holdings, Inc. Awarded Two United States Air Force Research Laboratory STTR Program Contracts totaling \$300,000 **as a part of AFWERX's Agility Prime Initiative**

02/08/2021 (Xenia, OH) Spintech Holdings, Inc. has been awarded two United States Air Force Research Laboratory STTR Program contracts with partners the University of Dayton Research Institute (UDRI), Aurora Flight Sciences, a Boeing company, and a Leading electric vertical take-off and landing (eVTOL) OEM as part of AFWERX's Agility Prime Initiative.

The first contract with UDRI and a leading eVTOL OEM will begin work on phase 1 of the project "Advanced Manufacturing of Propeller Blades". The project team will explore novel methods of manufacture and materials leading to improved manufacturing, reduced cost, and increased structural efficiency of propeller blades for electric eVTOL type aircraft. Phase 1 of 3 of the STTR program will provide a detailed compilation of information surrounding the propeller blade and dictate which direction to go in Phase II. The team will investigate dry fiber application techniques using automation, possibly braiding, filament winding, and others, as well as methods to apply Smart Tooling for the co-molding of propeller blades to improve quality, reduce cost, and increase throughput

The second contract with UDRI and Aurora Flight Sciences will begin work on phase 1 of the project "Topology optimized structure to replace core stiffened composites". The team plans to replace core stiffened composite structures with topology optimized reinforced structures manufactured using tailored fiber placement, resin infusion, and Smart Tooling. The program is targeted at reducing weight, cost, and manufacturing time of eVTOL aircraft. Phase 1 of 3 of this program will produce analytical results of a topology optimized structure as compared to a cored laminate baseline, as well as a relevant physical article demonstration that incorporates the organic topology optimized load paths co-infused and cured with laminate skins that will replace the baseline cored composite design.

"These projects will leverage UDRI's expertise in topology optimization to design light weight components that are structurally equivalent to cored composite baselines; Spintech Holdings' expertise in designing and fabricating complex composite structures using Smart Tooling solutions; and Aurora's history and expertise in air vehicle design and fabrication and a market leader in eVTOL aircraft design and fabrication."

- Tom Margraf, President of Spintech Holdings, Inc.

The [Small Business Technology Transfer \(STTR\) programs](#) are highly competitive programs that encourage domestic small businesses to engage in Federal Research/Research and Development (R/R&D) with the potential for commercialization. Through a competitive awards-based program, STTR enables small businesses to explore their technological potential and provide the incentive to profit from the resulting commercialization.

[University of Dayton Research Institute](#) is a national leader in scientific and engineering research, serving government, industry, and nonprofit customers. For more information, visit [www.udayton.edu/udri](http://www.udayton.edu/udri).

[Aurora Flight Sciences](#), a Boeing Company, specializes in creating advanced aircraft through the development of versatile and intuitive autonomous systems, in addition to advanced composite manufacturing. Operating at the intersection of technology and robotic aviation, Aurora leverages the power of autonomy to make manned and unmanned flight safer and more efficient. For more information, visit [www.aurora.aero](http://www.aurora.aero).

[Spintech Holdings, Inc.](#) has two primary divisions, including the reusable shape memory polymer tooling solutions provider, Smart Tooling, and the high value composite part manufacturer Hawthorn Composites. They both primarily serve the aerospace and defense industries. For more information, visit [www.spintechinc.com](http://www.spintechinc.com).