

Panacea Life Sciences Sponsors Colo. School of Mines STEM Students to Explore Viability of Producing Graphene from Hemp

By exploring the use of hemp waste to produce graphene, an incredibly useful material, Panacea aims to improve sustainability while diversifying income streams

GOLDEN, CO, UNITED STATES,
September 17, 2021 /

EINPresswire.com/ -- Exactus, Inc. (OTCQB:EXDI), soon to be [Panacea Life Sciences](#), Inc. (OTCQB:PLSH)(the "Company"), a cGMP certified, vertically integrated premium CBD company located in Golden, Colorado, has

agreed to sponsor groups of chemical engineering students at the Colorado School of Mines, a prestigious research university focused on science and engineering and also located in Golden, Colorado, to explore the viability of using the company's hemp waste to create the highly usable

material, [graphene](#). Through this project, Panacea is rewarded four-fold by pursuing the production of graphene, providing Mines' students an opportunity to conduct research in a real-world scenario, improving sustainability by decreasing process energy waste from cannabidiol (CBD) product manufacturing, and diversifying income streams. Courses at the School of Mines employ these realistic, semester-long projects to give students an authentic industry experience, which provides the sponsoring companies innovative opportunities with minimal risk. Panacea's Doug Grego, the New Project Development Manager will be mentoring two groups of 16 students throughout the fall semester.

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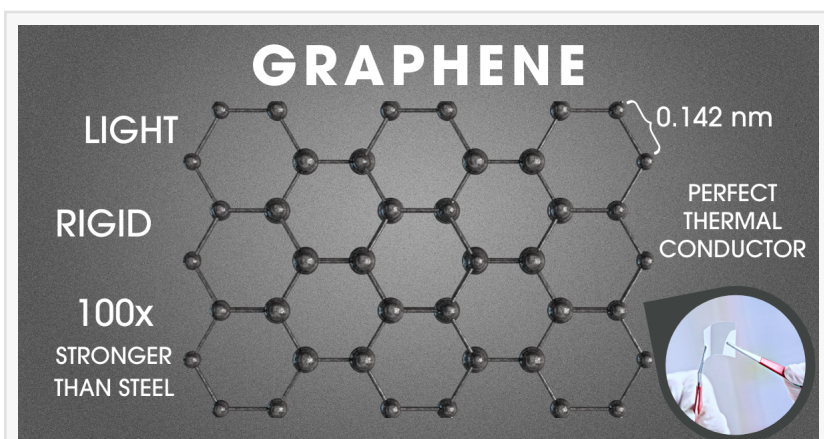
*Doug Grego, New Project
Development Manager at
Panacea*



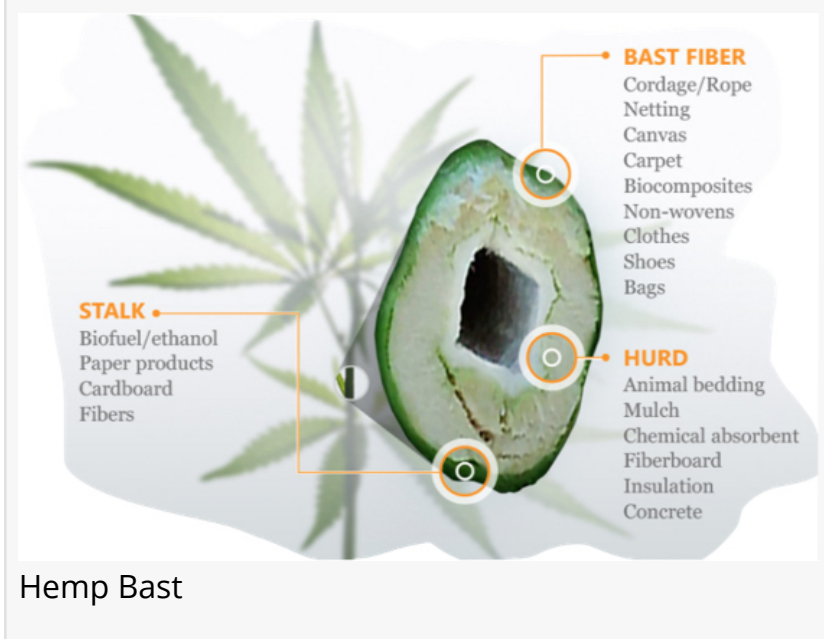
"Senior-level design courses are a great chance for

engineering students to get a taste of completing projects much like they will experience in their careers” accounts Grego. “Partnering with the School of Mines' Chemical Engineers allows us to explore ways to reduce waste and expand the breadth of Industries that hemp can support, all while mentoring the next generation of environmentally conscious STEM students.”

Graphene is a material composed of only carbon atoms, arranged in a lattice structure that gives this material an extraordinary strength-to-weight ratio, but more importantly, makes graphene a great conductor of electricity. Graphene has potential use in a wide range of industries from energy storage to advanced electronics and even has uses in medicinal therapeutics.[1] It is projected that by 2026, the global graphene market will reach USD 221.4 million at a CAGR of 47.7%.[2] The goal for these teams of students is to design a process that converts hemp and hemp-waste into graphene oxide and/or other graphene products, using the spent hemp feedstocks from extraction processes and/or hemp biomass collected prior to extraction of hemp resins.



Graphene



Hemp Bast

Panacea will own any intellectual property that comes out of the project which could offer them a starting point as they dive into new technologies. The biggest challenge the students face is figuring out if it is viable and cost-effective to separate the bast (the core of the hemp stalk) from the cannabinoid-rich inflorescence. Panacea's Grego will be engaged with the groups weekly to answer questions, offer feedback, and to set expectations around project deliverables.

Sustainability is a large initiative for Panacea Life Sciences – something that differentiates the company from most others. The major sources of waste in the industry include chemical fertilizers, pesticides, fibrous waste, and packaging. Panacea is answering the call by never using chemical fertilizers or pesticides at their farm located on the western slope of Colorado, and they are in the process of implementing sustainable packaging by using product boxes made with recycled hemp. As a [Silver Partner](#) of the Colorado Department of Public Health and Environment's (CDPHE) Environmental Leadership Program (ELP), as well as being Leadership in

Energy and Environmental Design (LEED) certified under the U.S. Green Building Council (USGBC), Panacea has already implemented several sustainable practices and made a statement about their care and commitment to sustainability. The results of these projects at the School of Mines could very well help them to achieve an even higher accolade as they push to improve sustainability and minimize hemp waste while generating a new, high-functioning material such as graphene.

1 Safder, A., Kouzegaran, V. J., & Kutun, Ö. (n.d.). 60 uses of graphene – the ultimate guide to graphene's (potential) applications in 2019. Nanografi Nano Technology. Retrieved September 15, 2021, from <https://nanografi.com/blog/60-uses-of-graphene/>.

2 American Carbon Company. (n.d.). Retrieved September 15, 2021, from <https://amcarbon.com/products/advanced-materials/graphene/graphene-types/>.

Exactus, Inc. (OTCQB: EXDI) (the "Company"), acquired Panacea Life Sciences, Inc. on June 30, 2021. Panacea, founded by Leslie Buttorff in 2017 as a woman-owned business, has attracted \$20 million in initial investments. In 2019 followed a \$14 million investment from 22nd Century Group, Inc. (NYSE American: XXII), a leading plant biotechnology company focused on technology to decrease nicotine in tobacco plants and uses its expertise for genetic engineering of hemp plants to modify cannabinoid levels used in manufacturing CBD, CBG and CBN.

Panacea Life Sciences is a leader in production of legal, trace THC, hemp-derived cannabinoid products for consumers and pets that operates a 51,000 square foot cGMP certified facility in Golden, Colorado and the PANA Organic Botanicals farm in western Colorado, complete with fully integrated extraction, manufacturing, testing and fulfillment. Panacea produces softgels, gummies, tinctures, sublingual tablets, cosmetics, and other topicals for purchase online (www.panacealife.com) and in stores as well as in smart kiosk vending machines being rolled out nationally.

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Forward-Looking Statements:

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding our strategic partnership with the Colorado School of Mines. The words "believe," "may," "estimate," "continue," "anticipate," "intend," "should," "plan," "could," "target," "potential," "is likely," "will," "expect" and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, and financial needs. Important factors that could cause actual results to differ from those in the forward-looking statements include the possibility that our partnership with the Colorado School of Mines is unsuccessful. Other risks are included in filings with the SEC made by Exactus, Inc., parent company of Panacea. Any forward-looking statement made by us herein speaks only as of the date on which

it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement except as required by law.

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