

Advancing Interdisciplinary Research in the Circular Bioeconomy

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Replacing fossil feedstocks with renewable biomass sources will be one of the key elements required for a successful circular bioeconomy. The carbon needed for bioproducts abounds in the environment, but it is locked into materials that are not yet cost-effective to use. The Virtual Institute on Feedstocks of the Future (VIFF) addresses this gap in access by “turning the carbon we have into the carbon we want.” VIFF, a program developed by Schmidt Sciences with support from the Foundation for Food & Agriculture Research (FFAR), is a multi-institute research consortium of consortia. The mission of VIFF is to expand the science, technology, and engineering available to advance the use of future feedstocks in bioproduction, creating new economic and environmental benefits. Launched in 2024, VIFF provides substantial, sustained funding to 5 complementary, interdisciplinary, and regionally distributed teams of researchers including universities and national laboratories with industry and community partners. Independently, the 5 VIFF Project Teams focus their innovative research approaches on different obstacles and opportunities relevant to specific future feedstocks, processing and conversion approaches, and regional biomass utilization. Collectively, they share knowledge and joint efforts to help build a future in which nontraditional and waste biomass feedstocks bring us closer to a sustainable and circular bioeconomy. As the VIFF Community enters its 2nd year, early findings indicate that the 5 VIFF Project Teams are poised to make significant, real-world impacts due to their active engagement with industry leaders and stakeholders.