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Advancements in the Chemical Synthesis of Natural Cannabinoids

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Abstract: This presentation will begin with an easily-accessible lesson about the chemistry and structural features of minor cannabinoid compounds. Next, I will provide an up-to-date overview of the pre-clinical and clinical research landscape concerning minor cannabinoids and their relevance to human health. I will highlight important recent biomedical studies concerning minor cannabinoids. Finally, I will discuss how these molecules are assembled by biosynthetic plant machinery and how they can alternatively be manufactured by genetically engineered organisms or by chemical synthesis technologies. I will provide an overview of the technological race that is presently underway to achieve cost-efficient bulk manufacture of several rare cannabinoids in high purity. Overall, this presentation will offer an overview of the interesting chemistry and promising biology of rare cannabinoid molecules - some of which will likely not be considered "rare" in the coming years..