A new phytotoxic nonenolide, namely (7R, 9R)-7-hydroxy-9-propyl-5-nonen-9-olide, which was designated with the trivial name herbarumin III (3) was isolated during the reinvestigation of the fermentation broth and mycelium of the fungus *Phoma herbarum*. The known compounds herbarumins I (1) and II (2) were also obtained. The structure of 3 was elucidated by spectroscopic methods and molecular modeling. Compounds 1-3 interacted with bovine-brain calmodulin and inhibited the activation of the calmodulin-dependent enzyme cAMP phosphodiesterase.