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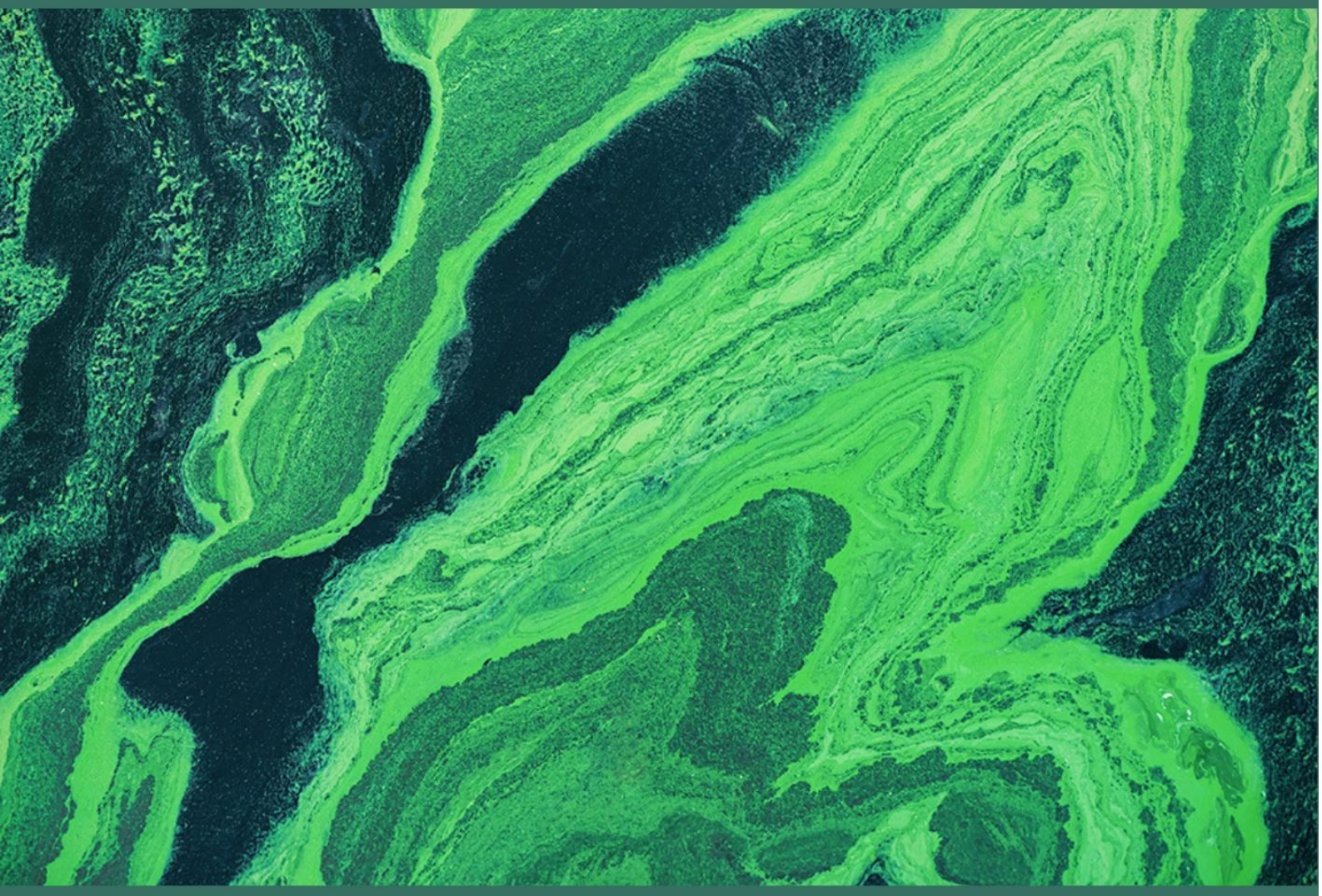

Through science we can

From Soil to Gut: the Role of Urban and Forest Soil in Bank Vole Gut Microbiota

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Abstract

Growing evidence supports the biodiversity hypothesis, which posits that exposure to diverse environmental microbiomes is essential for the development of a balanced immune system. For humans, this hypothesis, together with the rapid expansion of urban areas, may explain the rise in allergies and other inflammatory disorders. However, little is known about how this exposure to urban and forest microbiota affect gut microbiota development, especially in wildlife.

In this study, first generation captive bank voles (*Myodes glareolus*) were exposed to soil collected from urban forests and national parks. Over four weeks, we monitored changes in body measurements and gut bacterial and fungal microbiota. We found that while soil exposure significantly affected gut fungal composition, bacterial communities remained relatively stable. Notably, changes in certain beneficial taxa, such as Bifidobacteria, suggest potential health benefits for hosts.