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### 新疆青海极端环境发现大量未知放线菌

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Discovery of a vast amount of unknown actinomycetes from extreme environments in Xinjiang and Qinghai Province, China

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- 摘要
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摘要 从新疆、青海的重盐碱地区、盐湖采集样品,分离其中的嗜盐、嗜碱及低温放线菌.研究了它们在几种盐的不同浓度,不同 pH 条件下的生长情况.利用多相分类程序进行鉴定,发现嗜盐放线菌、放线细菌的新科 1 个(*Yaniaceae*),新属 2 个(*Yania* and *Streptomonospora*),新种 8 个,嗜碱放线菌新种 4 个,低温放线菌新种 1 个.对其中部分新种、新属做了描述.认为新疆、青海的重盐碱地区蕴藏着大量的未知放线菌资源;新菌种必然有新基因,新产物,新活性和新用途,是药物开发的重要来源.

关键词: 极端环境 放线菌 放线细菌

Abstract: Soil and sediment samples were collected from saline and alkaline soil and lakes in Xinjiang and Qinghai Province, P.R.China. Halophilic, alkalophilic and psychrophilic actinomycetes and actinobacteria in these samples were isolated. The strains were identified by using cultural, physiological, biochemical, molecular biological procedures. One new family (*Yaniaceae*), two new genera (*Yania* and *Streptomonospora*) and eight new species of halophilic actinomycetes and actinobacteria, four new species of alkalophilic and one new species of psychrophilic actinomycetes were found. Basing on the research results that there is a very high density of new or unknown actinomycetes resources in the extreme environments in Xinjiang and Qinghai, China. It is inexorable that new species contains new genes, new metabolites, new activities, and must have new use. Actinomycetes under high salt and alkaline environments may be an important source for discovery of new drugs.

Key words: extreme environment actinomycetes actinobacteria

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