Genomics has revealed the largely untapped source of microbial natural products and the associated opportunities to discover novel natural products, which continue to serve as inspiration for new chemistry, enzymology, biology, and medicine. The Scripps Research Institute hosts one of world’s largest actinobacteria collection, totaling >125,000 strains. A current effort has been focused on sequencing the strain collection to establish the Natural Products Genomics Resource Center for the broad scientific community. Selected studies on platensimycin and platencin, C-1027 and tiancimycin, and leinamycin and guangnanmycin will be presented to highlight how to leverage the strain collection, and the natural product biosynthetic gene clusters (BGCs) they encode, to enable natural products studies.