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# Breaking transcriptional locks to discover novel microbial antibiotics

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More than 70% of clinically approved antibiotics originate from *Streptomyces* bacteria.<sup>1</sup> And, over the last ten years, sequencing of their genomes has revealed the presence of a vast number of unsuspected gene clusters that are predicted to direct the biosynthesis of new natural products.<sup>2</sup> Thus new strategies for natural product discovery have been developed.<sup>3,4</sup> However, many of these gene clusters remained silent in the laboratory environment due to the presence of pathway-specific transcriptional regulators.<sup>5</sup> By investigating the detailed molecular mechanisms of the regulation of antibiotic production in *Streptomyces* bacteria, additional approaches for antibiotic discovery are being developed.<sup>6</sup> In particular inactivation of specific transcriptional repressor genes or overexpression of specific transcriptional activators have successfully resulted in the production of novel bioactive metabolites.<sup>7,8</sup>

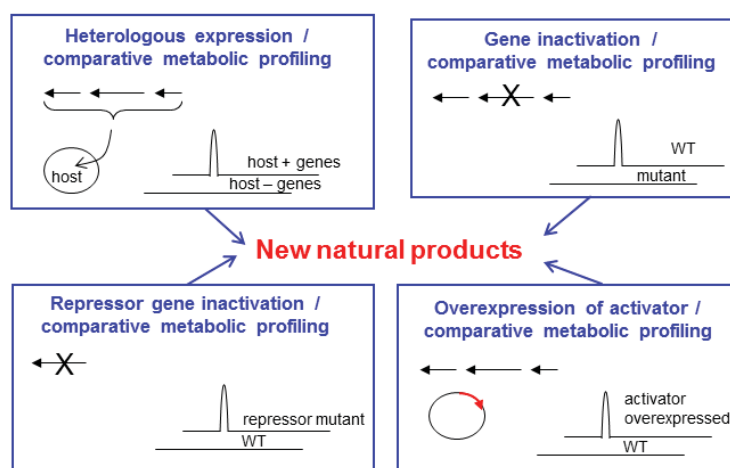


Fig. 1: Novel approaches for natural product discovery.

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