

Title (en)

GENETICS-ASSISTED TARGET EVALUATION IN ANTIBACTERIAL DRUG DISCOVERY

Title (de)

GENETISCH UNTERSTÜTZTE ZIELGENANALYSE ZUM AUFFINDEN ANTIBAKTERIELLER WIRKSTOFFE

Title (fr)

ESTIMATION DE CIBLES ASSISTEE GENETIQUEMENT ET UTILISEE DANS LA CONCEPTION DE MEDICAMENTS ANTIBACTERIENS

Publication

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Application

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Abstract (en)

[origin: WO9960111A1] The present invention provides a method, which is designated GATE (Genetics-Assisted Target Evaluation), for gene analysis in pathogenic bacteria. GATE functionally classifies genes according to their essential or nonessential character with respect to bacterial growth or pathogenicity. The technology uses a nonessential scorable gene as an internal standard against which the dispensability of a given target gene is assessed by gene disruption by Campbell-type integration. Functional analysis was performed on 26 genes in the Gram-positive pathogen *Streptococcus pyogenes*. Application of this method resulted in a clear identification of essential and nonessential loci: 16 of the 26 genes evaluated in *S. pyogenes* clearly encoded functions essential for bacterial growth, while the remaining 10 encoded functions that were nonessential. The successful application of GATE has also been demonstrated in *Staphylococcus aureus*.

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IPC 8 full level

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