



L'Ingénierie Métabolique

Avancées scientifiques et place dans les
domaines agricoles et de l'alimentation

Emergence du concept d'Ingénierie Métabolique

› Article fondateur de James Bailey - 1992

Toward a Science of Metabolic Engineering

JAMES E. BAILEY

Science, Vol. 252

Application of recombinant DNA methods to restructure metabolic networks can improve production of metabolite and protein products by altering pathway distributions and rates. Recruitment of heterologous proteins enables extension of existing pathways to obtain new chemical products, alter posttranslational protein processing, and degrade recalcitrant wastes. Although some of the experimental and mathematical tools required for rational metabolic engineering are available, complex cellular responses to genetic perturbations can complicate predictive design.

Biologie moléculaire

Gènes

Enzymes

Fonctions de régulation

Transport

Amélioration des activités cellulaires

Production de biomolécules

Emergence du concept d'Ingénierie Métabolique

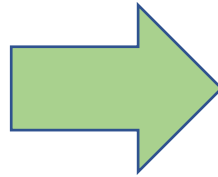
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Réseaux métaboliques

Protéines hétérologues

Substances chimiques

Ingénierie rationnelle

Perturbations génétiques

Production de biomolécules

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