Horizontaler Gentransfer, genetransfer

“Copilot, GPT- 4” Zusammenfassung vom 03.06.2024:

- **Horizontaler Gentransfer bei Prokaryonten**: Der horizontale Gentransfer ist bei Bakterien und Archäen ein alltäglicher Prozess.
- **Eukaryonten und Gentransfer**: Bei Eukaryonten (Pflanzen, Tieren, Pilzen) ist der horizontale Gentransfer unter erschwerten Bedingungen möglich und führt zu weniger stabilen Chimären.
- **Medizinische Implikationen**: Ereignisse des horizontalen Gentransfers können im medizinischen Bereich zu Autoimmunkrankheiten, Tumoren und anderen Krankheiten führen.
- **Methylzyklus**: Der Methylzyklus ist einer der Mechanismen, der fremde Gene stumm schalten kann.

Das Dokument enthält eine umfangreiche Liste von Referenzen zu diesem Thema.

"Copilot, GPT- 4" abstract from 03.06.2024:

- **Horizontal gene transfer in prokaryotes:** Horizontal gene transfer is a commonplace process in bacteria and archaea.
- **Eukaryotes and gene transfer**: In eukaryotes (plants, animals, fungi), horizontal gene transfer is possible under more difficult conditions and leads to less stable chimeras.
- **Medical implications**: Events of horizontal gene transfer can lead to autoimmune diseases, tumors and other diseases in the medical field.
- **Methyl cycle**: The methyl cycle is one of the mechanisms that can silence foreign genes.

The document contains an extensive list of references on this topic.

Bei Prokaryonten (Bakterien und Archäen) ist der horizontale Gentransfer die Regel, sozusagen das Tagesgeschäft.

Bei Eukaryonten (den zellkernhaltigen Lebewesen; Pflanzen, Tieren, Pilzen) ist der horizontale Gentransfer in der Regel nur unter erschwerten Bedingungen (z.B. Genbeschuss oder Verpackung durch kationische Nanolipide) möglich. Die dadurch entstandenen Chimären sind in der Regel weniger stabil. Sie sind weniger lebensfähig als das Original. Mehrere Ausnahmen aber sind bekannt: der horizontale Gentransfer bei Fadenwürmern, bei Taufliegen, bei einer Art von Rädertieren und im Zusammenhang mit Pflanzen, Tieren und Pilzen. Im Medizinbetrieb werden entsprechend auftretende Ereignisse umschrieben mit: Memory Zell-Manipulation, Autoimmun-Krankheiten, Krebsstammzellen http://www.xerlebnishaft.de/krebsstammzelltherapie.pdf, Tumoren, und mit phosphorylierten Tau Proteinen https://www.novumverlag.com/onlineshop/ratgeber-sachbuch/alltag-lebensfuehrung/was-zu-tun-ist-bei-alzheimer-und-mikrobiellen-parasitaeren-ursachen.html.

Makroskopisch führt ein horizontaler Gentransfer bei Eukaryonten in der Regel zu einer Störung des Zusammenhalts, zu Kohärenz-Problemen, zu Störungen und Defekten im Immunsystem des Patienten, zu Entzündungsreaktionen, Krankheit und Aktivierung von Reparaturmechanismen, im günstigsten Fall dann zu einem neuen Gleichgewicht (einer neuen Insel der Ruhe), d.h. zu Veränderungen im physischen und psychischen Gleichgewicht, im günstigsten Fall z.B. in dem erhofften Effekt bei aktiven Impfungen zu einer neuen Immunitätslage.

Einer der zahlreichen Ordnungsmechanismen ist der Methylzyklus http://www.xerlebnishaft.de/bildmethyl-arginin.pdf. Der Methylzyklus schaltet Fremd-Gene stumm.

In prokaryotes (bacteria and archaea), horizontal gene transfer is the rule, the daily business, so to speak.

In eukaryotes (the organisms containing cell nuclei; plants, animals, fungi), horizontal gene transfer is usually only possible under more difficult conditions (e.g. gene bombardment or packaging by cationic nanolipids). The resulting chimeras are generally less stable. They are less viable than the original. However, several exceptions are known: horizontal gene transfer in threadworms, in fruit flies, in a species of rotifers and in connection with plants, animals and fungi. In the medical field, the corresponding events are described as: Memory cell manipulation, autoimmune diseases, tumors, cancer stem cells http://www.xerlebnishaft.de/krebsstammzelltherapie.pdf and with phosphorylated tau proteins

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Macroscopically, horizontal gene transfer in eukaryotes generally leads to a disruption of cohesion, to coherence problems, to disturbances and defects in the patient's immune system, to inflammatory reactions, disease and activation of repair mechanisms, in the best case to a new balance (a new island of calm), i.e. to changes in physical and psychological balance, in the most favorable case, for example, in the hoped-for effect of active vaccinations to a new immunity situation.

One of the numerous mechanisms of discipline is the methyl cycle. The methyl cycle http://www.xerlebnishaft.de/bildmethyl-arginin.pdf switches foreign genes silent.

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„Transmission of symbionts through plants likely represents an underappreciated means of infection, both in terms of symbiont epidemiology and the movement of symbionts to new host species.“

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“We also discovered a remarkable plasticity in BBA57-mediated spirochete immune evasion strategy because its loss, although resulting in near clearance of pathogens at the inoculum site, triggers nonheritable adaptive changes that exclude detectable nucleotide alterations in the genome but incorporate transcriptional reprograming events. Understanding the malleability in spirochetal immune evasion mechanisms that ensures their host persistence is critical for the development of novel therapeutic and preventive approaches to combat long-term infections like Lyme borreliosis.”

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