

ラット肺でのポリペプチド吸収：投与量と荷電の影響

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Polypeptide absorption in the rat lung: Dose and charge dependence

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ABSTRACT *N*-substituted polyasparagines were synthesized with average degrees of polymerization corresponding to 47 to 54 amino acid residues. Polymers, with and without a fluorophore label were administered, in different doses directly to the airways of the isolated, perfused rat lung. Their kinetics of absorption were studied as functions of time, dose, polymer charge and the presence of the fluorophore. Fluorophore-labelled neutral polymers were absorbed in a dose-dependent fashion. At high doses absorption rates tended to a maximum. Absorption kinetics of polycationic material of similar molecular size were different to those of neutral macromolecules. Absorption mechanisms for the different polymers are presently under investigation.

抄録 47~54 アミノ酸残基よりなるN置換ポリアスパラギンを合成した。蛍光標識あるいは未標識のポリアスパラギンを直接、摘出灌流肺の気道より投与し、それらの吸収キネティクスについて検討した。その結果、蛍光標識した電的に中性のものの吸収は、投与量に依存することがわかった。しかし、正荷電のポリマーの吸収キネティクスは、荷電していないもののキネティクスとは異なっていた。

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