エアゾールによる蛋白質のデリバリー：肺での合成ポリペプチド類の吸収と保持

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Opportunties for Protein Delivery by Aerosol: Absorption and Retention of Several Synthetic Polypeptides in the Lung

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ABSTRACT In these experiments the lung appears able to discriminate in terms of absorption rate between smaller and larger F-PHEA molecules. However, this was not the case for a batch of F-PHEA with much smaller MWD (M_w=4.7, M_n=3.3KD). In that case, there was no difference between the elution volumes of absorbed and administered material following GPC of perfusate samples. The molecular sieving capacity of the rat lung becomes apparent for linear hydrophilic molecular weights in excess of about 7kD. Nevertheless, molecules with sizes in excess of those reported here are absorded at finite but slower rates by the lung and a "molecular cutoff", if one exists at all, may be much larger than is presently imagined.

抄録 肺からの高分子吸収には，篩機構が存在することを蛍光標識した高分子，F-PHEAを用い，明らかにした。水溶性の直鎖高分子のラット肺からの吸収の閾値は，約7,000Daltons以上である。しかし，吸収速度は遅いものの7,000Daltons以上のものでも吸収され，現在考えられている"molecular cutoff"の値は，小さすぎる可能性があることを示唆した。

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