PARI Pharma
Advancing Aerosol Therapies

Drug Testing with eFlow®*rapid*

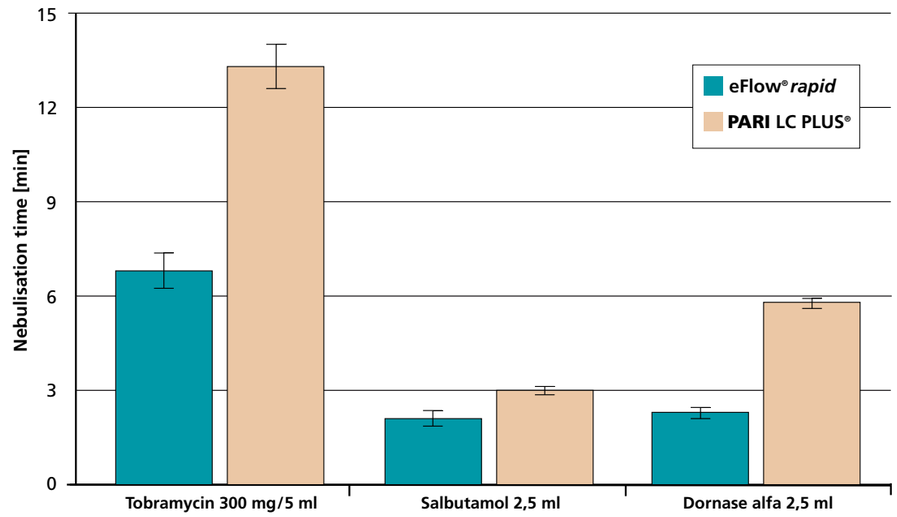
eFlow® rapid

eFlow® rapid

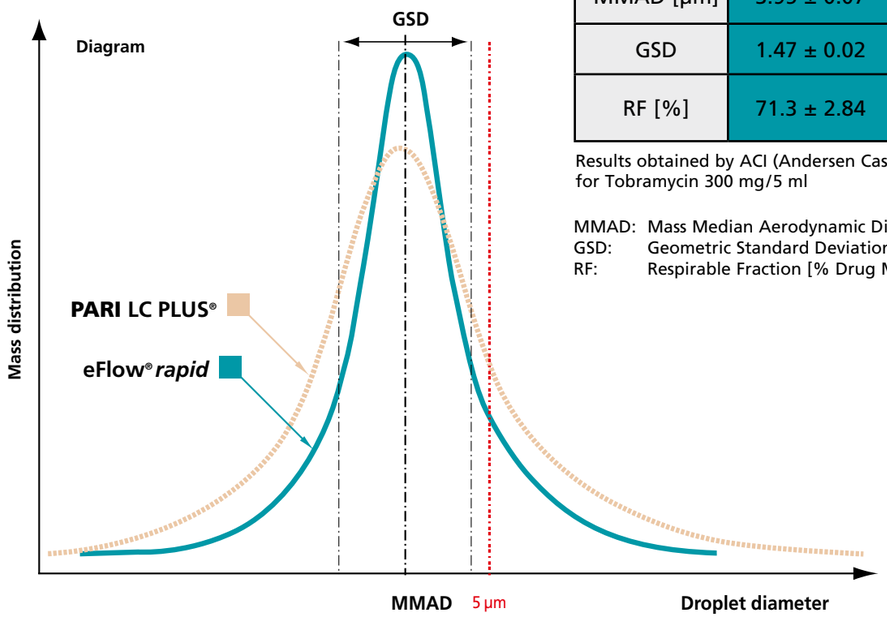
Results using Tobramycin 300 mg/5 ml

S. Seemann, A. Schmitt, R. Waldner, M. Hug, M.Knoch: Improving aerosol drug delivery in CF therapy. European Cystic Fibrosis Society, 28th European Cystic Fibrosis Conference, Crete, Greece, June 22-25, 2005.

Reduces Nebulisation Time by 50% *(in vitro).*



The Variation of Droplet Size is significantly lower with the eFlow® *rapid*.

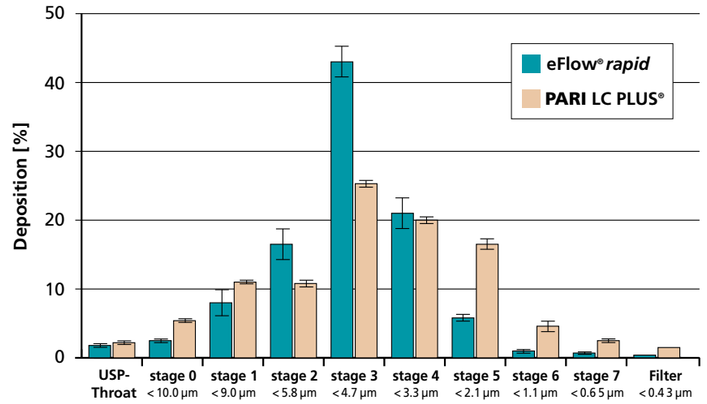


Device	eFlow® rapid	LC PLUS®
MMAD [µm]	3.95 ± 0.07	3.5 ± 0.06
GSD	1.47 ± 0.02	2.10 ± 0.01
RF [%]	71.3 ± 2.84	70.1 ± 1.10

Results obtained by ACI (Andersen Cascade Impactor) for Tobramycin 300 mg/5 ml

MMAD: Mass Median Aerodynamic Diameter
GSD: Geometric Standard Deviation
RF: Respirable Fraction [% Drug Mass < 4.7 µm]

Deposition in the Andersen Cascade Impactor: Tobramycin 300 mg/5 ml*

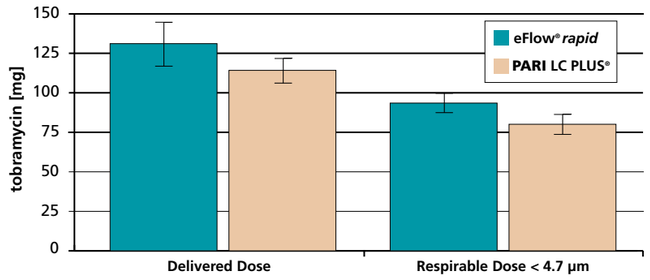


Targeted drug deposition

The drug mass is significantly larger in the therapeutical relevant range between 3.3 and 4.7 µm.
The drug mass below 2.1 µm is reduced.

*data on file (n=6)

Administered Dose of Tobramycin 300 mg/5 ml*

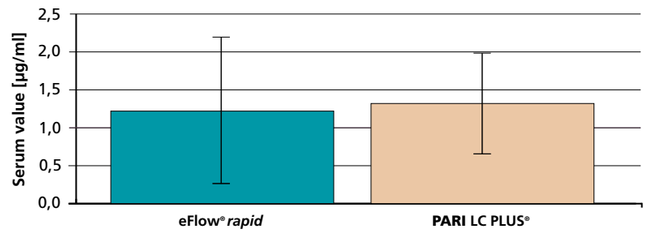


Comparable dose

The delivered and the respirable dose are only slightly increased with the eFlow® *rapid*.

*data on file (n=6)

Serum Level (Mean Values) after Administration of Tobramycin 300 mg/5 ml (60 min after Inhalation)*



Comparable serum level

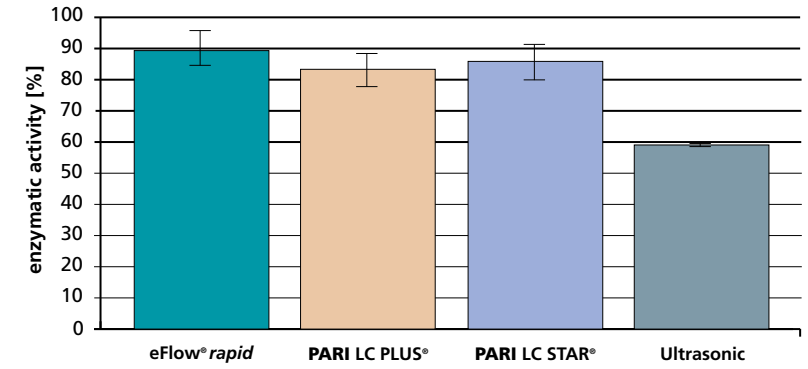
The serum level after inhalation with the eFlow® *rapid* is comparable to standard therapy using the **PARI** LC PLUS®.

*Hubert et al: Pharmacokinetic comparison of inhaled tobramycin (TOBI®) via PARI eFlow® *rapid* or PARI LC® Plus nebulizers in cystic fibrosis patients. European Cystic Fibrosis Conference 2007

Results using Dornase alfa 2.5 mg / 2.5 ml and Salbutamol 2.5 mg / 2.5 ml

S. Seemann, A. Schmitt, R. Waldner, M. Hug, M.Knoch: Improving aerosol drug delivery in CF therapy. European Cystic Fibrosis Society, 28th European Cystic Fibrosis Conference, Crete, Greece, June 22-25, 2005.

Enzymatic Activity in Dornase alfa after Nebulization*

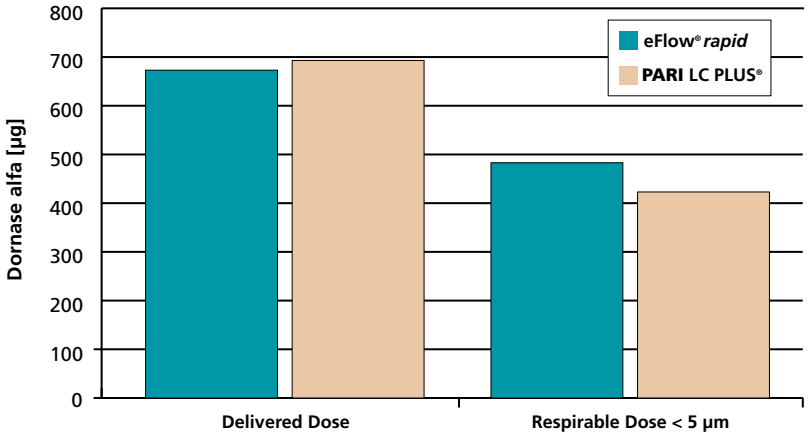


Highest activity

The structure of proteins remain largely stable during nebulization using the **eFlow®*rapid***.

*Lichtinghagen (2004), MHH

Administered Dose of Dornase alfa 2.5 mg / 2.5 ml*

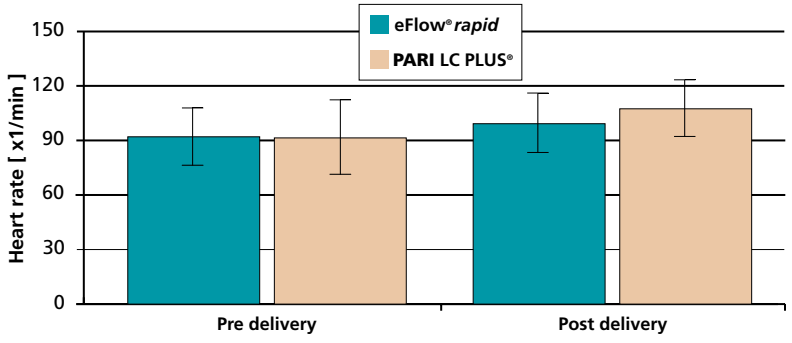


Comparable dose

The delivered and respirable dose using the **eFlow®*rapid*** are comparable to therapy using the PARI LC PLUS® .

*Lichtinghagen (2005), MHH

Heart Rate pre and post Delivery of Salbutamol 2.5 mg / 2.5 ml (10 min after inhalation)*



Comparable treatment safety

The measured heart rates indicate a comparatively safe therapy.

*data on file (n=10)

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Additional Information

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