# Supplementary material

Assisting PNA transport through cystic fibrosis human airway epithelia with biodegradable hybrid lipid-polymer nanoparticles

# Marika Comegna1,2†, Gemma Conte3,†, Andrea Patrizia Falanga4, Maria Marzano5, Gustavo Cernera1,2, Antonella Miriam Di Lullo6, Felice Amato1,2, Nicola Borbone4, Stefano D’Errico4, Francesca Ungaro4, Ivana d’Angelo3,\*,Giorgia Oliviero1,\* and Giuseppe Castaldo1,2

1University of Naples Federico II, Department of Molecular Medicine and Medical Biotechnologies, Naples, 80131, Italy

2CEINGE- Biotecnologie Avanzate S.c.a.r.l., Naples, 80145, Italy

3University of Campania Luigi Vanvitelli, Di.S.T.A.Bi.F., Caserta, 81100, Italy

4University of Naples Federico II, Department of Pharmacy, Naples, 80131, Italy

5National Research Council, Institute of Crystallography, 70126, Bari, Italy

6University of Naples Federico II, Department of Neuroscience, Reproductive and Odontostomatological Sciences-Ent Section, Naples, 80131, Italy

\*[corresponding.author](mailto:corresponding.author@email.example): ivana.d'angelo@unicampania.it; golivier@unina.it

†these authors contributed equally to this work



**Figure S1**: Expansions of the ESI-MS spectrum of PNA\* recorded in the positive ion mode. Calcd. for PNA\* [M + 2H]+2 1495.49, found 1495.4; calcd. for [M + 3H]3+ 997.33, found 997.3; calcd. for [M + 4H]4+ 748.24, found 748.2.



**Figure S2:** *In vitro* release kinetics of PNA\* from PNA\*-hNPs in PBS pH 7.2 at 37 °C.