

**Correctors of the major Cystic Fibrosis mutant interact through membrane spanning domains**

**Onofrio Laselva<sup>1</sup>, Steven Molinski<sup>1</sup>, Valeria Casavola<sup>2</sup>, Christine E. Bear<sup>1,3,4,\*</sup>**

<sup>1</sup>Programme in Molecular Medicine, Hospital for Sick Children, Toronto, Canada

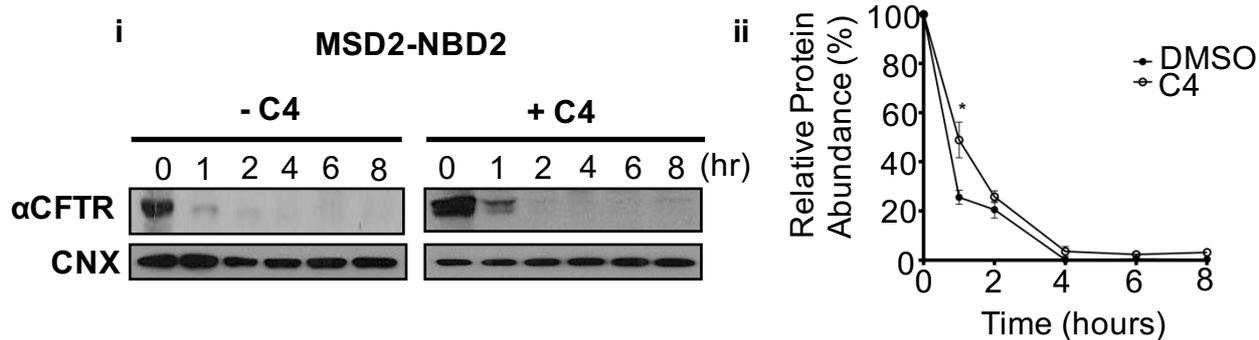
<sup>2</sup>Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari, Italy

<sup>3</sup>Department of Biochemistry, University of Toronto, Canada

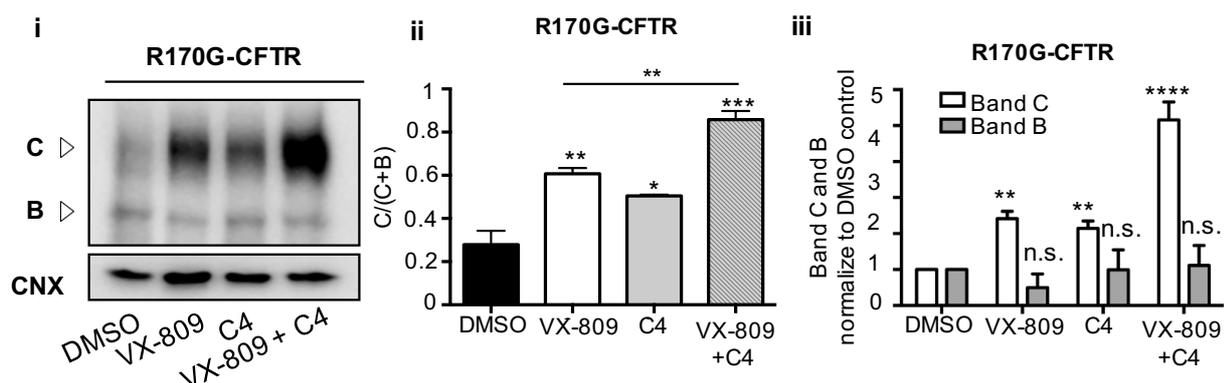
<sup>4</sup>Department of Physiology, University of Toronto, Canada

**MOLECULAR PHARMACOLOGY**

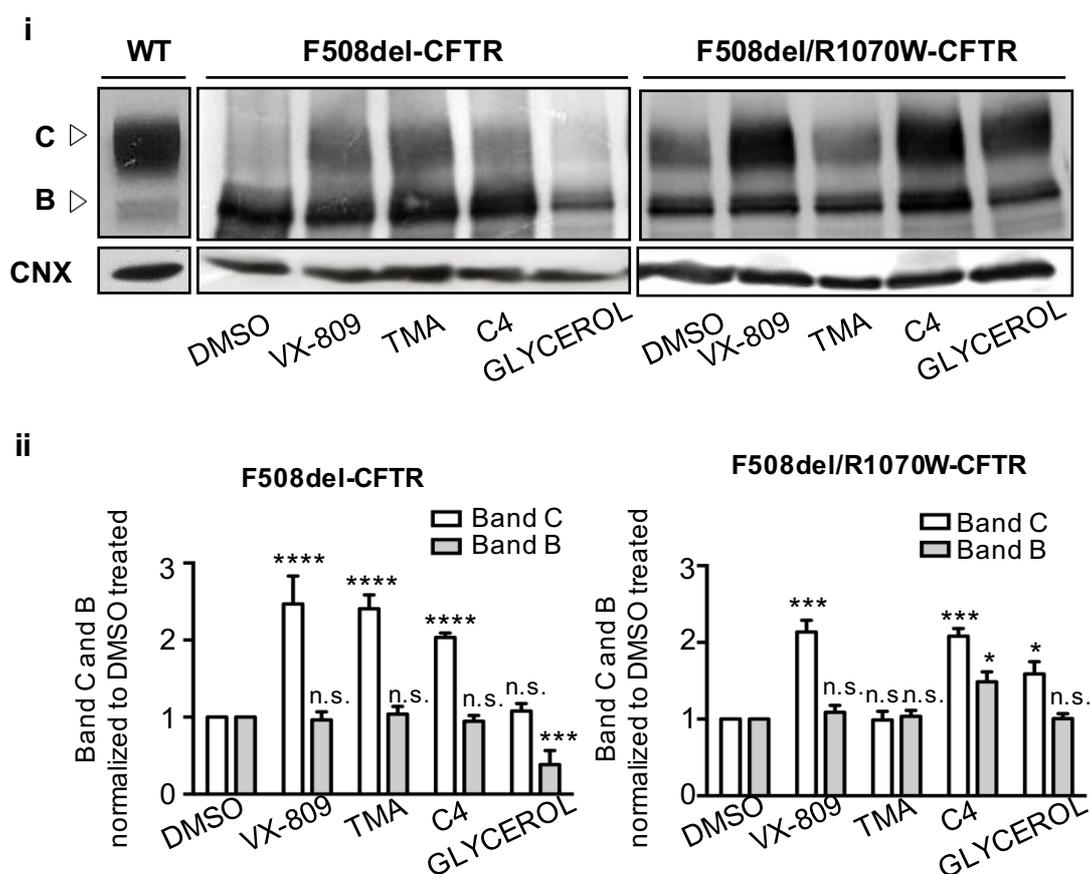
**SUPPLEMENTAL DATA**



**FIGURE S1: C4 stabilizes MSD2-NBD2 of CFTR.** (i) MSD2-NBD2 domains of CFTR were expressed in HEK293 cells in the presence or absence of C4 (10 $\mu$ M) at 27 °C. After 24 h, protein synthesis was inhibited by addition of cycloheximide (0.5 mg/mL) with or without C4 (10 $\mu$ M), and cells collected after the indicated times for Western blot analysis of whole cell extracts. (ii) The amount of CFTR protein at each time point was quantitated and expressed relative to that at time 0 and calnexin loading. Data are representative of 3 biological studies (\*p<0.05).



**FIGURE S2: Additive effect of VX-809 and C4 on processing of R170G-CFTR.** (i) HEK293 cells were transiently transfected with R170G-CFTR mutant and treated for 24 h at 37 °C with: DMSO, VX-809 (3 μM), and/or C4 (10 μM). C: mature, complex-glycosylated CFTR; B: immature, core-glycosylated CFTR. (ii) Bar represent the the mean (±SEM) of the ratio C/(C+B) and are representative of 3 biological replicates (\*p<0.05; \*\*p<0.01; \*\*\*p<0.001). (iii) Bar represent the Band C and band B forms, normalized to DMSO and are representative of 3 biological studies (\*\*p<0.01; \*\*\*\*p<0.0001).



**FIGURE S3: VX-809, C4 and glycerol correction of F508del-CFTR is additive with the R1070W second-site mutation. (i)** HEK293 cells were transiently transfected with either the F508del-CFTR or F508del/R1070W-CFTR mutant, and treated for 24 h at 37 °C with: DMSO, VX-809 (3  $\mu$ M), TMA (500 nM), C4 (10  $\mu$ M), or glycerol (5%). C: mature, complex-glycosylated CFTR; B: immature, core-glycosylated CFTR. **(ii)** Bars represent the mean ( $\pm$ SEM) of band C and B normalized to DMSO control of 4 biological studies (\* $p$ <0.05; \*\*\* $p$ <0.001; \*\*\*\* $p$ <0.0001).