

Title (en)

APTAMER-BASED CAR T-CELL SWITCH

Title (de)

AUF APTAMER BASIERENDER CAR-T-ZELL-WECHSEL

Title (fr)

COMMUTATEUR DE CELLULE CAR T À BASE D'APTAMÈRES

Publication

**EP 3827083 A2 20210602 (EN)**

Application

**EP 19798704 A 20190726**

Priority

- US 201862703869 P 20180726
- IB 2019000890 W 20190726

Abstract (en)

[origin: CN112955554A] An aptamer-based switch technology is provided that enhances control of the use of chimeric antigen receptor (CAR)-related immunotherapies. The aptamer-based switch utilizes a synthetic bridge molecule containing a target-binding aptamer bound through a linker to a CAR-binding aptamer. A system containing a CAR and a corresponding aptameric bridge provides an immunotherapy platform that: (i) can be targeted to any desired antigen by choosing the target-binding aptamer of the bridge, (ii) can be redirected from one target to another by changing the target-binding aptamer; (iii) can be dosed according to the changing needs of an individual patient overtime by altering the administration protocol for the bridge; (iv) can be switched on or off quickly or gradually; (v) can be used as a companion diagnostic for a specific CAR therapy; (vi) can be integrated with either in vivo or ex vivo CAR expression; (vii) is non-immunogenic; and (viii) has low production costs.

IPC 8 full level

**C12N 15/115** (2010.01); **A61K 31/7088** (2006.01); **A61K 35/17** (2015.01); **A61P 35/00** (2006.01)

CPC (source: EP)

**A61K 39/4611** (2023.05); **A61K 39/4631** (2023.05); **A61K 39/464406** (2023.05); **A61K 39/464412** (2023.05); **A61K 39/464413** (2023.05); **A61K 39/464424** (2023.05); **A61K 39/464429** (2023.05); **A61K 39/464495** (2023.05); **C07K 14/4748** (2013.01); **C07K 14/7051** (2013.01); **C12N 9/6424** (2013.01); **C12N 15/115** (2013.01); **A61K 2239/58** (2023.05); **C07K 2319/03** (2013.01); **C12N 2310/16** (2013.01); **C12N 2310/318** (2013.01); **C12N 2310/3519** (2013.01); **C12N 2310/51** (2013.01); **C12N 2320/13** (2013.01)

C-Set (source: EP)

**C12N 2310/322** + **C12N 2310/3533**

Citation (search report)

See references of WO 2020021338A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

CN 112955554 A 20210611; EP 3827083 A2 20210602

DOCDB simple family (application)

CN 201980049961 A 20190726; EP 19798704 A 20190726