

Title (en)

MICRONEEDLE ARRAY COMPRISING A HEAT-PRODUCING ELEMENT

Title (de)

MIKRONADELARRAY AUFWEISEND EIN WÄRMEERZEUGENDES ELEMENT

Title (fr)

RÉSEAU DE MICRO-AIGUILLES PRÉSENTANT UN ÉLÉMENT GÉNÉRATEUR DE CHALEUR

Publication

**EP 3934732 A1 20220112 (DE)**

Application

**EP 20713187 A 20200306**

Priority

- DE 102019105694 A 20190306
- US 201962814318 P 20190306
- EP 2020055967 W 20200306

Abstract (en)

[origin: CA3132406A1] The invention relates to a microneedle array which comprises a heat-producing element, and to its use for the intradermal application of active ingredients, in particular pharmaceutically active ingredients (API) and drugs. The microneedle array is suitable for penetrating the skin of humans or animals and the microneedles consist of a water-soluble formulation that contains at least one active ingredient.

IPC 8 full level

**A61M 37/00** (2006.01)

CPC (source: EP US)

**A61K 9/0021** (2013.01 - EP); **A61M 37/0015** (2013.01 - EP US); **A61M 2037/0023** (2013.01 - EP US); **A61M 2037/0046** (2013.01 - EP); **A61M 2037/0061** (2013.01 - EP); **A61M 2205/0233** (2013.01 - US); **A61M 2205/0238** (2013.01 - US); **A61M 2205/0294** (2013.01 - US); **A61M 2205/364** (2013.01 - US); **A61M 2205/3653** (2013.01 - US); **A61M 2205/3693** (2013.01 - US)

Citation (examination)

- KR 20180079728 A 20180711 - UNIV GACHON IND ACAD COOP FOUND [KR]
- US 2008208162 A1 20080828 - JOSHI ASHOK V [US]
- KR 20180002233 A 20180108 - SEOUL NAT UNIV R&DB FOUNDATION [KR], et al
- KR 20100034836 A 20100402 - RURE MEDI CO LTD [KR]
- See also references of WO 2020178416A1

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)

**DE 102019105694 A1 20200910**; BR 112021016072 A2 20211013; CA 3132406 A1 20200910; CN 113543835 A 20211022; EP 3934732 A1 20220112; JP 2022549977 A 20221130; US 2022143375 A1 20220512; WO 2020178416 A1 20200910

DOCDB simple family (application)

**DE 102019105694 A 20190306**; BR 112021016072 A 20200306; CA 3132406 A 20200306; CN 202080018541 A 20200306; EP 2020055967 W 20200306; EP 20713187 A 20200306; JP 2021552564 A 20200306; US 202017436255 A 20200306