



(43) International Publication Date
5 December 2013 (05.12.2013)

(10) International Publication Number
WO 2013/181270 A1

(51) International Patent Classification:
C07K 14/175 (2006.01) *A61K 39/12* (2006.01)

(21) International Application Number:
PCT/US2013/043146

(22) International Filing Date:
29 May 2013 (29.05.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12170631.1 1 June 2012 (01.06.2012) EP
13157875.9 5 March 2013 (05.03.2013) EP

(71) Applicant (for all designated States except US):
BOEHRINGER INGELHEIM VETMEDICA GMBH
[DE/DE]; Binger Strasse 173, 55216 Ingelheim am Rhein
(DE).

(72) Inventors; and

(71) Applicants (for US only): **NIKOLIN, Veljko** [RS/DE];
Boehringer Ingelheim GmbH, Corporate Patents, Binger
Strasse 173, 55216 Ingelheim am Rhein (DE). **STADLER,
Konrad** [AT/DE]; Boehringer Ingelheim GmbH, Corpor-
ate Patents, Binger Strasse 173, 55216 Ingelheim am Rhein
(DE). **LISCHEWSKI, Axel** [DE/DE]; Boehringer Ingle-
him GmbH, Corporate Patents, Binger Strasse 173, 55216
Ingelheim am Rhein (DE). **BRIX, Alexander** [DE/US];
c/o VP, IP, Legal, Boehringer Ingelheim USA Corp., 900
Ridgebury Road, P.O. Box 368, Ridgefield, CT 06877-
0368 (US). **KNITTEL, Jeffrey P.** [US/US]; c/o VP, IP,
Legal, Boehringer Ingelheim USA Corp., 900 Ridgebury
Rd., P.O. Box 368, Ridgefield, Connecticut 06877-0368

(US). **TOEPFER, Katharina Hedwig** [DE/DE];
Boehringer Ingelheim GmbH, Corporate Patents, Binger
Strasse 173, 55216 Ingelheim am Rhein (DE).

(74) Agents: **MORRIS, Michael P.** et al.; Boehringer Ingel-
heim Pharmaceuticals, Inc., 900 Ridgebury Road, P.O. Box
368, Ridgefield, CT 06877-0368 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC,
SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: SCHMALLENBERG VIRUS (SBV) VACCINE, METHODS OF PRODUCTION, AND USES THEREOF

(57) Abstract: The present invention relates to the field of vaccines and medicaments for the prophylaxis and treatment of infectious diseases in ruminants. In particular, it relates to inactivated Schmallenberg virus (SBV) useful as vaccine or medicament for preventing or treating viremia, the transmission and clinical symptoms, in particular malformations in newborn ruminants such as cattle, sheep and goats, induced by SBV.



WO 2013/181270 A1