

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 May 2003 (15.05.2003)

PCT

(10) International Publication Number
WO 2003/040144 A3

(51) International Patent Classification⁷: **C07D 473/00**,
A61K 7/00, 31/52, A01N 43/90, A61P 35/00

(74) Agent: **GABRIELOVA, Marta**; Inventia s.r.o., Trída Pol-
itických veynu 7, 110 00 Praha 1 (CZ).

(21) International Application Number:
PCT/CZ2002/000045

(22) International Filing Date: 1 August 2002 (01.08.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PV 2001-2818 2 August 2001 (02.08.2001) CZ

(71) Applicant (for all designated States except US): **USTAV
EXPERIMENTALNI BOTANIKY AKADEMIE VED
CESKE REPUBLIKY [CZ/CZ]**; Rosvojova 35, 165 02
Praha 6 - Lysolaje (CZ).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DOLEZAL, Karel**
[CZ/CZ]; Vidce 401, 756 53 Vidce (CZ). **POPA, Igor**
[CZ/CZ]; Dr. V. Nespóra 11, 772 00 Olomouc (CZ).
HOLUB, Jan [CZ/CZ]; Foerstrova 45, 779 00 Olo-
mouc (CZ). **LENOBEL, René** [CZ/CZ]; Hlavní nám.
12, 785 01 Stemberk (CZ). **WERBROUCK, Stefaan**
[BE/BE]; Beeklaan 34, B-8530 Harelbeke (BE). **STR-
NAD, Miroslav** [CZ/CZ]; Západní 25, 779 00 Olomouc
(CZ). **ZATLOUKAL, Marek** [CZ/CZ]; Revoluční 18a,
787 01 Šumperk (CZ).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
26 February 2004

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: HETEROCYCLIC COMPOUND BASED ON N⁶-SUBSTITUTED ADENINE, METHODS OF THEIR PREPA-
RATION, THEIR USE FOR PREPARATION OF DRUGS, COSMETIC PREPARATIONS AND GROWTH REGULATORS,
PHARMACEUTICAL PREPARATIONS, COSMETIC PREPARATIONS AND GROWTH REGULATORS CONTAINING
THESE COMPOUNDS

(57) Abstract: New heterocyclic derivatives of formula (1) based on N⁶-substituted adenine, having anticancer, mitotic, immu-
nosuppressive and antisenescence properties for plant, animal and human cells and methods of their preparation. Included are also
pharmaceutical compositions, cosmetic preparations and growth regulators, which contain these derivatives as active compound and
the use of these derivatives for the preparation of drugs, cosmetic preparations, in biotechnological processes, in cosmetics and in
agriculture.



WO 2003/040144 A3