

Overview of the project Center for Development of Original Drugs (CDOD)

TE01020028

A) Annotated publication of the CDOD project

1. **Neuroactive steroids with perfluorobenzoyl group**

Černý, Ivan - Buděšínský, Miloš - Pouzar, Vladimír - Vyklický, Vojtěch - Krausová, Barbora - Vyklický ml., Ladislav

Steroids. 77(12): 1233-41, 2012

Impact factor: 2.803

Permanent Link: <http://hdl.handle.net/11104/0215858>

2. **On the Solubility and Lipophilicity of Metallacarborane Pharmacophores**

Rak, J. - Dejlová, B. - Lampová, H. - Kaplánek, R. - Matějček, P. - Cígler, Petr - Král, V.

Molecular Pharmaceutics 10(5): 1751-1759, 2013

Impact factor: 4.787

Permanent Link: <http://hdl.handle.net/11104/0222446>

3. **alpha-Methoxymethyl ketones via aldol reaction**

Kasal, Alexander - Buděšínský, Miloš

Tetrahedron. 69(46): 9663-9674, 2013

Impact factor: 2.817

Permanent Link: <http://hdl.handle.net/11104/0227843>

4. **Carborane-based carbonic anhydrase inhibitors**

Brynda, Jiří - Mader, Pavel - Šícha, Václav - Fábry, Milan - Poncová, Kristýna - Bakardjiev, Mario - Grüner, Bohumír - Cígler, Petr - Řezáčová, Pavlína

Angewandte Chemie International Edition 52: 13760-13763, 2013

Impact factor: 11.336

Permanent Link: <http://hdl.handle.net/11104/0228887>

5. **Pregnenolone sulfate activates NMDA receptor channels**

Adamusová, Eva - Cais, Ondřej - Vyklický, Vojtěch - Kudová, Eva - Chodounská, Hana - Horák, Martin - Vyklický ml., Ladislav

Physiological Research 62(6): 731-736, 2013

Impact factor: 1.487

Permanent Link: <http://hdl.handle.net/11104/0229360>

6. **Synthesis, Cytostatic, Antimicrobial, and Anti-HCV Activity of 6-Substituted 7-(Het)aryl-7-deazapurine Ribonucleosides**

Nauš, Petr - Caletková, Olga - Konečný, P. - Džubák, P. - Bogdanová, K. - Kolář, M. - Vrbková, J. - Slavětínská, Lenka - Tloušťová, Eva - Perlíková, Pavla - Hajdúch, M. - Hocek, Michal

Journal of Medicinal Chemistry 57(3): 1097-1110, 2014

Impact factor: 5.447

Permanent Link: <http://hdl.handle.net/11104/0233200>

7. **Structure, function, and pharmacology of NMDA receptor channels**

Vyklický, Vojtěch - Kořínek, Miloslav - Smejkalová, Tereza - Balík, Aleš - Krausová, Barbora - Kaniaková,

Martina- Lichnerová, Katarina - Černý, Jiří - Krůšek, Jan - Dittert, Ivan - Horák, Martin - Vyklický ml., Ladislav

Physiological Research 63 (Suppl. 1): S191-S203, 2014

Impact factor: 1.293

Permanent Link: <http://hdl.handle.net/11104/0233448>

- 8. Neuroprotective effect of the 3 alpha 5 beta-pregnanolone glutamate treatment in the model of focal cerebral ischemia in immature rats**
Kletečková, Lenka - Tsenov, Grygoriy - Kubová, Hana - Stuchlík, Aleš - Valeš, Karel
Neuroscience Letters 564: 11-15, 2014
Impact factor: 2.030
Permanent Link: <http://hdl.handle.net/11104/0233798>
- 9. Pregnanolone glutamate, a novel use-dependent NMDA receptor inhibitor, exerts antidepressant-like properties in animal models**
Holubová, Kristina - Nekovářová, Tereza - Pistovčáková, J. - Šulcová, A. - Stuchlík, Aleš - Valeš, Karel
Frontiers in Behavioral Neuroscience 8: 130, 2014
Impact factor: 3.270
Permanent Link: <http://hdl.handle.net/11104/0234290>
- 10. Carborane-based carbonic anhydrase inhibitors: insight into CAII/CAIX specificity from a high-resolution crystal structure, modeling, and quantum chemical calculations**
Mader, Pavel - Pecina, Adam - Cígler, Petr - Lepšík, Martin - Šícha, Václav - Hobza, Pavel - Grüner, Bohumír - Fanfrlík, Jindřich - Brynda, Jiří - Řezáčová, Pavlína
BioMed Research International. 2014: 389869/1-389869/9, 2014
Impact factor: 1.579
Permanent Link: <http://hdl.handle.net/11104/0243235>
- 11. New method for recognition of sterol signalling molecules: Methinium salts as receptors for sulphated steroids**
Kejčík, Z. - Bříza, T. - Králová, Jarmila - Mikula, I. - Poučková, P. - Martásek, P. - Král, V.
Steroids. 94: 15-20, 2015
Permanent Link: <http://hdl.handle.net/11104/0245398>
- 12. 2-Substituted 6-(Het)aryl-7-deazapurine Ribonucleosides: Synthesis, Inhibition of Adenosine Kinases, and Antimycobacterial Activity**
Malnuit, Vincent - Poštová Slavětínská, Lenka - Nauš, Petr - Džubák, P. - Hajdúch, M. - Stolaříková, J. - Snášel, Jan - Pichová, Iva - Hocek, Michal
ChemMedChem. 10 (6): 1079-1093, 2015
Impact factor: 2.980
Permanent Link: <http://hdl.handle.net/11104/0247636>
- 13. Novel lipidized analogs of prolactin-releasing peptide have prolonged half-lives and exert anti-obesity effects after peripheral administration**
Maletínská, Lenka - Nagelová, Veronika - Tichá, Anežka - Zemenová, Jana - Pirník, Zdenko - Holubová, Martina - Špolcová, Andrea - Mikulášková, Barbora - Blechová, Miroslava - Sýkora, D. - Lacinová, Z. - Haluzík, M. - Železná, Blanka - Kuneš, Jaroslav
International Journal of Obesity. 39 (6): 986-993, 2015
Impact factor: 5.337
Permanent Link: <http://hdl.handle.net/11104/0250992>
- 14. Cholesterol modulates open probability and desensitization of NMDA receptors**
Kořínek, Miloslav - Vyklický, Vojtěch - Borovská, Jiřina - Lichnerová, Katarina - Kaniaková, Martina - Krausová, Barbora - Krůšek, Jan - Balík, Aleš - Smejkalová, Tereza - Horák, Martin - Vyklický ml., Ladislav
Journal of Physiology. 593 (10): 2279-2293, 2015
Impact factor: 4.731
Permanent Link: <http://hdl.handle.net/11104/0248411>

- 15. Block of NMDA receptor channels by endogenous neurosteroids: implications for the agonist induced conformational states of the channel vestibule**
Vyklický, Vojtěch - Krausová, Barbora - Černý, Jiří - Balík, Aleš - Zápotocký, Martin - Novotný, M. - Lichnerová, Katarina - Smejkalová, Tereza - Kaniaková, Martina - Kořínek, Miloslav - Petrovič, Miloš - Kačer, P. - Horák, Martin - Chodounská, Hana - Vyklický ml., Ladislav
Scientific Reports. 5: 10935, 2015
Impact factor: 5.228
Permanent Link: <http://hdl.handle.net/11104/0248414>
- 16. A New Class of Potent N-Methyl-D-Aspartate Receptor Inhibitors: Sulfated Neuroactive Steroids with Lipophilic D-Ring Modifications**
Kudová, Eva - Chodounská, Hana - Slavíková, Barbora - Buděšínský, Miloš - Nekardová, Michaela - Vyklický, Vojtěch - Krausová, Barbora - Švehla, Pavel - Vyklický ml., Ladislav
Journal of Medicinal Chemistry. 58 (15): 5950-5966, 2015
Impact factor: 5.589
Permanent Link: <http://hdl.handle.net/11104/0249424>
- 17. Novel lipidized analogs of prolactin-releasing peptide have prolonged half-lives and exert anti-obesity effects after peripheral administration**
Maletínská, L. - Nagelová, V. - Tichá, A. - Zemenová, J. - Pirník, Z. - Holubová, M. - Špolcová, A. - Mikulášková, Barbora - Blechová, M. - Sýkora, D. - Lacinová, Z. - Haluzík, M. - Železná, B. - Kuneš, Jaroslav
International Journal of Obesity. 39 (6): 986-993, 2015
Impact factor: 5.337
Permanent Link: <http://hdl.handle.net/11104/0251228>
- 18. Non-Catalyzed Click Reactions of ADIBO Derivatives with 5-Methyluridine Azides and Conformational Study of the Resulting Triazoles**
Smyslová, P. - Popa, I. - Lyčka, A. - Tejral, Gracian - Havlač, J.
PLoS ONE. 10 (2): e0144613, 2015
Impact factor: 3.057
Permanent Link: <http://hdl.handle.net/11104/0257146>
- 19. Preferential Inhibition of Tonic over Phasically Activated NMDA Receptors by Pregnane Derivatives**
Vyklický, Vojtěch - Smejkalová, Tereza - Krausová, Barbora - Balík, Aleš - Kořínek, Miloslav - Borovská, Jiřina - Horák, Martin - Chvojková, Markéta - Kletečková, Lenka - Valeš, Karel - Černý, Jiří - Nekardová, Michaela - Chodounská, Hana - Kudová, Eva - Vyklický ml., Ladislav
Journal of Neuroscience. 36 (7): 2161-2175, 2016
Impact factor: 5.924
Permanent Link: <http://hdl.handle.net/11104/0259572>
- 20. 7-(2-Thienyl)-7-Deazaadenosine (AB61), a New Potent Nucleoside Cytostatic with a Complex Mode of Action**
Perlíková, Pavla - Rylová, G. - Nauš, Petr - Elbert, Tomáš - Tloušťová, Eva - Bourderioux, Aurelie - Poštová Slavětínská, Lenka - Motyka, K. - Doležal, D. - Znojek, P. - Nová, A. - Harvanová, M. - Džubák, P. - Šiller, M. - Hlaváč, J. - Hajdúch, M. - Hocek, Michal
Molecular Cancer Therapeutics. 15 (5): 922-937, 2016
Impact factor: 5.579
Permanent Link: <http://hdl.handle.net/11104/0260969>
- 21. In Vitro and In Vivo Comparison of Selected Ga-68 and Zr-89 Labelled Siderophores**
Petřík, M. - Zhai, C. - Nový, Z. - Urbánek, Lubor - Haas, H. - Decristoforo, C.
Molecular Imaging and Biology. 18 (3): 344-352, 2016
Impact factor: 2.569
Permanent Link: <http://hdl.handle.net/11104/0261241>

22. Neurosteroid-like Inhibitors of N-Methyl-D-aspartate Receptor: Substituted 2-Sulfates and 2-Hemisuccinates of Perhydrophenanthrene

Slavíková, Barbora - Chodounská, Hana - Nekardová, Michaela - Vyklický, Vojtěch - Ladislav, Marek - Hubálková, Pavla - Krausová, Barbora - Vyklický ml., Ladislav - Kudová, Eva

Journal of Medicinal Chemistry. 59 (10): 4724-4739, 2016

Impact factor: 5.589

Permanent Link: <http://hdl.handle.net/11104/0261365>

23. Palmitoylated PrRP analog decreases body weight in DIO rats but not in ZDF rats

Holubová, Martina - Zemenová, Jana - Mikulášková, Barbora - Panajotová, V. - Stöhr, J. - Haluzík, M. - Kuneš, Jaroslav - Železná, Blanka - Maletínská, Lenka

Journal of Endocrinology. 229 (2): 85-96, 2016

Impact factor: 4.498

Permanent Link: <http://hdl.handle.net/11104/0261942>

24. Monography Chapter - Analysis of Whole-Cell NMDA Receptor Currents

Vyklický, Vojtěch - Kořínek, Miloslav - Balík, Aleš - Smejkalová, Tereza - Krausová, Barbora - Vyklický ml., Ladislav

Ionotropic Glutamate Receptor Technologies. Totowa: Humana Press Inc., 2016, p. 205-219. Neuromethods, 106

Permanent Link: <http://hdl.handle.net/11104/0259730>


B) Annotated patents of the CDOD project

1. Pregnanolone derivatives substituted in position 3alpha with cationic group, process of their preparation, their use and composition containing them

Chodounská, Hana - Kapras, Vojtěch - Vyklický ml., Ladislav - Borovská, Jiřina - Vyklický, Vojtěch - Valeš, Karel - Stuchlík, Aleš - Rambousek, Lukáš

Date of the patent acceptance: 2. 8. 2012

Patent Number: 303443

 <http://spisy.upv.cz/Patents/FullDocuments/303/303443.pdf>

Permanent Link: <http://hdl.handle.net/11104/0215195>

2. Anionic pregnane compounds, method for their producing and use of them

Šťastná, Eva - Chodounská, Hana - Pouzar, Vladimír - Kapras, Vojtěch - Cais, Ondřej - Vyklický ml., Ladislav - Kohout, Ladislav

Date of the patent acceptance: 23. 4. 2014

Patent Number: EP2313424

http://worldwide.espacenet.com/publicationDetails/biblio?CC=EP&NR=2313424B1&KC=B1&FT=D&ND=5&date=20140423&DB=EPODOC&locale=en_EP

Permanent Link: <http://hdl.handle.net/11104/0239749>

3. Novel cytostatic 7-deazapurine nucleosides

Hocek, Michal - Nauš, Petr

Date of the patent acceptance: 16. 1. 2014

Patent Number: AU2009204568

http://worldwide.espacenet.com/publicationDetails/biblio?CC=AU&NR=2009204568B2&KC=B2&FT=D&ND=4&date=20131003&DB=EPODOC&locale=en_EP

Permanent Link: <http://hdl.handle.net/11104/0239860>

4. Novel cytostatic 7-deazapurine nucleosides

Hocek, Michal - Nauš, Petr

Date of the patent acceptance: 28. 2. 2014

Patent Number: JP5485172

http://worldwide.espacenet.com/publicationDetails/biblio?CC=JP&NR=5485172B2&KC=B2&FT=D&ND=4&date=20140507&DB=EPODOC&locale=en_EP


Permanent Link: <http://hdl.handle.net/11104/0239873>

5. Substituted 7-deazapurine ribonucleosides for therapeutic use

Hocek, Michal - Nauš, Petr - Caletková, Olga - Hajdúch, M. - Džubák, P.

Date of the patent acceptance: 7. 9. 2015

Patent Number: 305466

 <http://spisy.upv.cz/Patents/FullDocuments/305/305466.pdf>


Permanent Link: <http://hdl.handle.net/11104/0256462>

6. Amphiphilic compounds exhibiting neuroprotecting activity

Kudová, Eva - Chodounská, Hana - Kapras, Vojtěch - Vyklický ml., Ladislav - Valeš, Karel - Jahn, Ullrich

Date of the patent acceptance: 13. 1. 2016

Patent Number: 305733

 <http://spisy.upv.cz/Patents/FullDocuments/305/305733.pdf>

Permanent Link: <http://hdl.handle.net/11104/0268068>

7. Novel substituted 7-deazapurine ribonucleosides for therapeutic uses

Hocek, Michal - Nauš, Petr - Caletková, Olga - Hajdúch, M. - Džubák, P.

Date of the patent acceptance: 25. 2. 2016

Patent Number: AU2014277740

https://worldwide.espacenet.com/publicationDetails/biblio?II=0&ND=3&adjacent=true&locale=en_EP&FT=D&date=20160225&CC=AU&NR=2014277740B1&KC=B1#

Permanent Link: <http://hdl.handle.net/11104/0269481>