

DZHAFAROV M.Kh.

PUBLICATIONS

(Dzhafarov M.Kh.↔ Jafarov M.H.:

Dzhafarov Mamedsalim Khangusein oglu↔Dzhafarov Mamed Khanguseinovich)

e-mail: mxd123@mail.ru



1986

1. **Dzhafarov M. Kh. (Jafarov M.H.)**, Dodonov M. V., Ananchenko S. N., Platonova A. V., Ionov S. P. A study of the crystal structure of steroids: *d*-estra-1,3,5(10)-triene, *d*- and 1-3-methoxy-18-methyl-8 β -9 α ,14 α -estra-1,3,5(10)-triene-17-ones and *d,l*-3-methoxy-18-methyl-8 α ,9 β -estra-1,3,5(10)-triene-14 β -ol-17-one //*Russian J. Bioorganic Chemistry* 1986, **12** (7), 970-980 [*Sov.J.Bioorganic chemistry, 1986 (Engl. Transl.)*]. <http://www.rjbc.ru/arc/12/7/0970-0980.pdf>
2. **Dzhafarov M. Kh. (Jafarov M.H.)**, Dodonov M. V., Ananchenko S. N., Platonova A. V., Ionov S. P. A study of the crystal structure of *d*-3-methoxy-18-methyl-8 β ,9 α -estra-1,3,5-(10)-triene-14 β -ol-17-one //*Russian J. Bioorganic Chemistry* 1986, **12** (7), 981-984 [*Sov.J.Bioorganic chemistry, 1986 (Engl. Transl.)*]. <http://www.rjbc.ru/arc/12/7/0981-0984.pdf>

1987

3. **Dzhafarov M. Kh. (Jafarov M.H.)**, Lindeman S. V. *cis-trans*-Isomerism of 14-hydroxy derivatives of estratriene. The crystal and molecular structures of *d*-3-methoxy-8 β , 9 α -estra-1,3,5 (10)-trien-14 α -ol-17-one //*Russian J. Bioorganic Chemistry* 1987, **13** (5), 679-684 [*Sov.J.Bioorganic chemistry, 1987 (Engl. Transl.)*]. <http://www.rjbc.ru/arc/13/5/0679-0684.pdf>

1988

4. **Dzhafarov M. Kh. (Jafarov M.H.)**, Dodonov M.V., Ananchenko C.N., Ionov S.P., Torgov I.V. Bicentric isomerization of the C/D junction in 14-hydroxy-17-ketosteroids. //*Russian J. Bioorganic Chemistry* 1988, **14** (5), 675-680 [*Sov.J.Bioorganic chemistry, 1988 (Engl. Transl.)*]. <http://www.rjbc.ru/arc/14/5/0675-0680.pdf>
5. **Dzhafarov M. Kh.** X-Ray Diffraction Structural Analysis of the Steroid Isomerization through Two-Centered Inversion. *Chemical Sciences Candidate's Dissertation, Moscow State University, Moscow (1988)*.

1989

6. **Dzhafarov M. Kh.**, Timofeeva T. V., Struchkov Yu. T. Stereochemical aspects of the two-center inversion of the C and D ring fusion in 14-hydroxy-17-ketosteroids and of reductive cyclization of 8,14-secoestra-1,3,5(10),9(11)-tetraen-14,17-diones. Conformational calculations // *Zh. Org. Khim. (Russian J.Org.chem.)*. 1989, 25 (2), 342-348.
7. D'yakov V. A., **Dzhafarov M. Kh.**, Pryalkin V. I., Yakovlev D. V. Synthesis and growing of lithium triborate LiB_3O_5 crystals by the molten solution method // *12th European Crystallographic Meeting: collected abstracts*. Moscow, USSR, August 20-29, 1989, V.3, P. 460.

1991

8. **Dzhafarov M. Kh.**, Lindeman S. V., Struchkov Yu. T., Karamyan S. Kh. and Ananchenko S. N. Isomerization of 14-hydroxy-17-ketosteroids: New examples of two-centered inversion of the C/D ring fusion and X-ray diffraction structural analysis of D,L-3-methoxy-14 β -hydroxy-8 β , 9 α -estra-1,3,5(10)-trien-17-one // *Russian Chem. Bull.* **1991**. V.40, № 12. 2511-2515. doi:10.1007/BF00959735
9. Batsanov A. S., Timofeeva T. V., **Dzhafarov, M. Kh.**, Stuchkov Yu. T., Loim N. M., Ginzburg A. G., Galakhov M. V. Diastereotopism of CH groups of cyclopentadienyl rings in achiral dicymantrenylcarbinols. X-ray structural and conformational study of methyl-, phenyl- and (trifluoromethyl)dicymantrenylcarbinols // *Russian J.Metalloorg. Chem.* 1991, 4 (5), 976-83.
10. Khodyakov A. A., **Dzhafarov M. Kh.**, Kurilenko L. N., Saunin E.I., D'yakov V.A. Growing of LBO monocrystals and its thermic properties // *Russian J. Phys.Chem.* 1991, No. 9, 2561-2563.
11. D'yakov V. A, **Dzhafarov M. Kh.**, Lukashev A. A., Podshivalov A.A. and Pryalkin V.I. Conversion of the frequency of laser radiation in lithium triborate LiB_3O_5 crystals // *Sov. J. Quantum Electron.*-1991.- v.21.-№ 3.-p. 307-308.
doi: 10.1070/QE1991v021n03ABEH003790

1992

12. **Dzhafarov M. Kh.** Retroaldol processes in steroid chemistry (**Review**) // *Russ. Chem. Reviews*.**1992**. V. 61., №3, P. 363–372. doi:10.1070/RC1992v061n03ABEH000950. http://www.turpion.org/php/paper.phtml?journal_id=rc&paper_id=950
13. Orlova T. Yu., Setkina V. N., Batsanov A. S., **Dzhafarov M. Kh.**, Struchkov Yu. T., and Petrovskii P. V. Heterometallic trinuclear transition metal complexes with the bridging $\eta^1:\eta^5$ -cyclopentadienyl ligands. Crystal structure of $(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_3\text{Mo}(\eta^1:\eta^5\text{-C}_5\text{H}_4)(\text{CO})_2\text{Fe}(\eta^1:\eta^5\text{-C}_5\text{H}_4)\text{Mn}(\text{CO})_3$ // *Metalloorg. Khim.*- 1992.-5.-3. 1102-1106 [*Organomet. Chem. USSR, 1992,5 (Engl. Transl.)*].

1993.

14. Karamyan S. Kh., Ananchenko S. N. and **Dzhafarov M. Kh.** New variants in the total synthesis of 14 β -hydroxy-17 α ,R-8 α ,9 β -estradiol derivatives // *Russian Chem. Bull.*, 1993, V. 42, № 1, P. 189-193.
15. Khanamiryan A. Kh., Gyulbudagyan A.L., Vartanyan p. S., **Dzhafarov M. Kh.**, Struchkov Yu. Synthesis of 1,2,4-Substituted Hexahydropyridazines and X-Ray Structure Analysis of 4-Hydroxyimino-2-methyl-1-(2-phenylethyl) hexahydropyridazine // *Russian Chem. bull.* **1993**. V.42, №3, pp. 496-499.

1994

16. Abramov M.A., Petrov M.L., **Dzhafarov M.Kh.**, Batsanov A.C., Potekhin K.A., Struchkov Yu.T. Crystal and molecular structure of the 2-acetyl-5-benzyl-5-piperidyno-

4-phenyl-1,3,4-thiadiazoline //Zh.Obsh.khim. (Russian J. General chemistry), 1994, 64(12), pp. 2018-2020.

1995

17. Snegur L. V., Boev V. I., Babin, V. N. , **Dzhafarov M Kh.**, Batsanov, A S., Nekrasov, Yu.S., Struchkov, Yu. T. The synthesis and structure of ferrocenylalkyl onium derivatives of nitrogen-containing heterocyclic compounds // *Russ. Chem. Bull.* **1995**. V. 44. №3. P.537-541.

2008

18. **Dzhafarov M.Kh.**, Maximov V.I., Mirzaev M.N., Melnitskaya T.I., Kamerniskii A.V., Zavarzin I.V. et.al. Synthesis and biological activity of steroidal dihydropyrazoles // *Ros.immun.zh. (Russian J. immunology)*. 2008, 2(11), No 2-3, p.192.
19. **Dzhafarov M.Kh.**, Mirzaev M.N., Melnitskaya T.I., Kamernitskii A.V., Chertkova V.V., Zavarzin I.V., Chernoburova E. I. Synthesis and antiparasitic activity of some steroid pyrazolins. *The international conference «Achievements of supra-molecular chemistry and biochemistry in veterinary medicine and zootechnology»*. 22-25 September Moscow, 2008. Abstracts book, p.65.
20. **Dzhafarov M.Kh.**, Torgov I.V. New variants in the total synthesis of 14 β -hydroxy-17 α ,R-8 α ,9 β -estradiol derivatives. X-Ray analysis and biological activity of the D,L-17 α -hexin-1-yl-14 β -estra-1,3,5(10),8(9)-tetraen-3,17 β -diol. *The international conference «Achievements of supra-molecular chemistry and biochemistry in veterinary medicine and zootechnology»*. 22-25 September Moscow, 2008. Abstracts book, p.66.

2009

21. **Dzhafarov M.Kh.**, Mirzaev M.N., Melnitskaya T.I., Maximov V.I., Shchetinina M.A., Chertkova V.V., Kamernitskii A.V., Zavarzin I.V., Chernoburova E. I., Yarovenko V.N., Krayushkin M.M. Synthesis and antiparasitic activity of some new organic compounds. *The actual problems of veterinary biology. Collection of scientific papers. -Moscow: Moscow SAVMB, 2009, p. 3-6 (in Russian)*.
22. Vasilevich F.I., Zaitsev S.Yu., Frolova L.A., Karmoliev R.Kh., **Dzhafarov M.Kh.**, Tsarkova M.S., Yermeev N.L. Importance of the scientific-educational complex for training specialists at the department of organic and biological chemistry named after professors S.I. Afonskii and A.G. Malakhov // *Rus. Vet. J. Food-producing animals.*-2009.-No 3.-p.47-49 (in Russian).
23. **Dzhafarov M.Kh.**, Mirzaeva K.M., Melnitskaya T.I., Mirzaev M.N., Kamernitskii A.V., Zavarzin I.V., Chernoburova E. I., Chertkova V.V., Shchetinina M.A., Krayushkin M.M. Synthesis and antiparasitic activity of some new heterocyclic compounds. *Questions of physicochemical biology in veterinary. Collection of scientific papers. -Moscow: Moscow SAVMB, 2009, p. 62-65 (in Russian)*.
24. Mirzaeva K.M., Melnitskaya T.I., Mirzaev M.N., **Dzhafarov M.Kh.** Some aspects of biochemical mode of action of antiparasitic drugs into invasion agents. *Questions of physicochemical biology in veterinary. Collection of scientific papers.-Moscow: Moscow SAVMB, 2009, p. 65-66 (in Russian)*.

2010

25. **Dzhafarov M.Kh.** et al. Steroids. Structure, Preparation, Properties and Biological Role, and Medical and Veterinarian Applications. **Textbook**. St. Petersburg: Publishing House "Lan".- 2010.- 288 p. [in Russian]. http://e.lanbook.com/books/element.php?pl1_id=127
26. **Dzhafarov M. Kh.**, Mirzaev M. N., D. N.Urazaev, and V. I. Maksimov. Antiparasitic Activity of Adermectin and Compounds of a Steroid Nature // *Russian Agricultural Sciences*, 2010, Vol. 36, No. 2, pp. 130–132.
27. Zavarzin I.V., Chertkova V. V., Chernoburova E. I., **Dzhafarov M.Kh.**, Yarovenko V. N., Krayushkin M. M. Synthesis of N-(arylthiocarbonyl)pyrazoles from steroid NH-

pyrazoles.- 24th International Symposium on the Organic Chemistry of Sulfur, Florence, Italy, July 25-30. 2010. P. 138.

28. **Dzhafarov M.Kh.** Retroaldolization and approaches to the synthesis of cardio-active steroids. *Problematic lecture*. Moscow: Moscow State Academy of Veterinary Medicine and Biotechnology by K.I.Skryabin, 2010, 35 pp. (in Russian).

2011

29. **Dzhafarov M.Kh.**, Myrzaev M.N., Zavarzin I.V. Antiparasitic activity of famectin and some compounds of different chemical nature // *Russian J. Agrobiology. Animal biology series 2011, No 2, pp.108-111*; <http://www.agrobiology.ru/2-2011dzhafarov-eng.html>
30. Bobova T.A., Kolobov A.V., Zavarzin I.V., **Dzhafarov M.X.**, Plakhtinskiy V.V., Kuleshova E.S. New antiparasitic products on the basis of avermectin. *XIX Mendeleev congress on general and applied chemistry. 25–30 September 2011, Volgograd, Russia. Abstracts book, v. 1, p.126*. <http://ru.scribd.com/doc/188910409/Abstracts-1-Ru>

2012

31. **Dzhafarov M.Kh.** Macrolides. *Lecture*. Moscow. *K.I.Skryabin Moscow State Academy of Veterinary Medicine and Biotechnology, 2012, 49 pp. (in Russian)*
32. **Dzhafarov M.Kh.**, Dzhafarova A.Ya. Macrolides: perspective trend for new drug developments. 2nd All-Russia scientific conference "Progress in the synthesis and complex forming reactions". Moscow: RUDN, 23-27 April 2012. *Abstracts book, p.211*. http://conferencerudn.com/wp-content/uploads/2013/04/Final_2.pdf
33. **Dzhafarov M.Kh.**, Zavarzin I.V., Mirzaev M.N., Devrishova Z.A., Yusupov Yu.A. Investigation of the gemacs drug efficiency under the gastrointestinal strongylatosis in sheep // *Russian J. Agrobiology. Animal biology series 2012, No 2, pp. 96-101*; <http://www.agrobiology.ru/2-2012dzhafarov-eng.html>
34. Mirzaeva K.M., **Dzhafarov M.Kh.**, Devrishova Z.A., Melnitskaya T.I., Yusupov Yu.A., Mirzaev M.N. Gemaks influence on a immunological rates of laboratory animals // *Russian J. Vet. Med. 2012, No 1, pp. 19-21*. <http://vm.agrovet.ru/num1-2012.pdf>
35. **Dzhafarov M.Kh.**, Mirzaeva K.M., Zavarzin I.V., Devrishova Z.A., Mirzaev M.N. Nematocidic activity of the avermectin B1 derivatives and some compounds of steroidal nature // *Russian J. Vet. Med. 2012, No 1, pp. 37-39*. <http://vm.agrovet.ru/num1-2012.pdf>
36. **Dzhafarov M.Kh.** Retroaldolization and approaches to the synthesis of cardio-active steroids. 2nd Ed. *Problematic lecture*. Moscow: Moscow State Academy of Veterinary Medicine and Biotechnology by K.I.Skryabin, 2010, 35 pp. (in Russian)
37. Devrishova Z.A., Mirzaev M.N., **Dzhafarov M.Kh.**, Karsacov N.T., Yusupov Yu.A., Melnitskaya T.I. Investigation of the gemacs drug efficiency at the nematodoses of sheep // *Russian J. Vet. Med. 2012, No 2, pp. 25-26*. <http://vm.agrovet.ru/num2-2012.pdf>
38. **Dzhafarov M.Kh.** et al. Steroids. Structure, Preparation, Properties and Biological Role, and Medical and Veterinarian Applications. St. Petersburg: Publishing House "Lan".- 2010.- 288 p. [in Russian]; [**Engl. Abstract in:** *Russian J. Agrobiology. Animal biology series. 2012.-№4. p.30*]; <http://www.agrobiology.ru/maksimovbook-eng.html>
39. Zavarzin I.V., **Dzhafarov M.Kh.**, Mirzaev M.N., Kolobov A.V., Chernoburova E.I., Bobova T.A. A method for synthesis of 5-O-Succinylavermectin and drug on its basis. *RU Patent Number 2453553, 11.05.2011*.

2013

40. **Dzhafarov M.Kh.** Evolution in chemotherapy of the helminthiasis of human and animals (**Review**) // *Russian J. Agrobiology. Animal biology series. 2013, №4, p.26-44*. <http://www.agrobiology.ru/articles/4-2013dzhafarov.pdf>
41. Zavarzin I.V., **Dzhafarov M.Kh.**, Mirzaev M.N., Kolobov A.V., Chernoburova E.I., Bobova T.A. 5-O-Avermectin derivatives, method for their production and the

- antiparasitic drugs. *RU Patent Number 2472801, 11.05.2011. Pub. 20.01.2013, Bull. №2.*
42. **Dzhafarov M. Kh.**, Mirzaev M.N., Devrishov D.A., Melnitskaya T.I. Chemotherapy of the animal helminthiasis // *Vestnik RASKHN (RAAS Bulletin). 2013 - No 2. - p.68-71.*
 43. Olekhnovich E.I., Roslavl'tseva S.A., Mirzaeva K.M., Dzhafarov M. Kh., Kolobov A.V., Sapozhnikova A.I., Zavarzin I. V., Insecticidal activity of a novel derivative of avermectin family – the avermectin hemisuccinate. B1a against some insect species // *Russian J.Vet.Med. 2013, No 4, pp. 28-30*
 44. Olekhnovich E.I., Roslavl'tseva S.A., Mirzaev M.N, Sapozhnikova A.I., Dzhafarov M. Kh., Melnitskaya T.I., Devrishov D.A., Zavarzin I. V Comparative insecticidal activity of avermectins against adult house flies (*Musca domestica* L.) // *Russian J.Vet.Med. 2013, No 4, pp. 318-35*
 45. **Dzhafarov M. Kh.**, Zavarzin I.V., Mirzaev M.N., Devrishov D.A., Melnitskaya T.I. Technological aspects of the synthesis of the novel drug Gemax. Proceedings of the VII Moscow International Congress «*Biotechnology: State of the Art and Prospects of Development*» (march 19-22, 2013, Moscow, Russia), Moscow: JSC “*Expo-biochem-technologies*”, *D.I.Mendeleyev University of Chemistry and Technology of Russia, 2013, part 1, p.127.* <http://www.spsl.nsc.ru/FullText/konfe/%D0%91%D0%B8%D0%BE%D1%82%D0%B5%D1%85%D0%BD%D0%BE%D0%BB-2013.pdf>
 46. **Dzhafarov M. Kh.**, Zavarzin I.V. Anthelmintic substances: problems, tendencies, and prospects. Proceedings of the VII Moscow International Congress «*Biotechnology: State of the Art and Prospects of Development*» (march 19-22, 2013, Moscow, Russia), Moscow: JSC “*Expo-biochem-technologies*”, *D.I.Mendeleyev University of Chemistry and Technology of Russia, 2013, part 1, p.217.* <http://www.spsl.nsc.ru/FullText/konfe/%D0%91%D0%B8%D0%BE%D1%82%D0%B5%D1%85%D0%BD%D0%BE%D0%BB-2013.pdf>
 47. **Dzhafarov M. Kh.**, Mirzaev M.N., Vasilevich F.I., Zavarzin I.V., Melnitskaya T.I. Screening of nematocide activity of the new derivatives of avermectins B₁ and some compounds of steroid nature. Proceedings of the VII Moscow International Congress «*Biotechnology: State of the Art and Prospects of Development*» (march 19-22, 2013, Moscow, Russia), Moscow: JSC “*Expo-biochem-technologies*”, *D.I.Mendeleyev University of Chemistry and Technology of Russia, 2013, part 1, p.234.* <http://www.spsl.nsc.ru/FullText/konfe/%D0%91%D0%B8%D0%BE%D1%82%D0%B5%D1%85%D0%BD%D0%BE%D0%BB-2013.pdf>
 48. **Dzhafarov M. Kh.** New anthelmintic substances - Advances of Biotechnology and Chemistry. *The IV conference of veterinary pharmacologists and toxicologists of Russia (may 15-17, 2013, Moscow). Voronezh.: "Istoki", 2013. -p. 204-207.*
 49. Kuleshova E.S., Zavarzin I.V., **Dzhafarov M.X.**, Plakhtinsky V.V. Preparation of 5-O-avermectin derivatives. *4th Int. Interdisciplinary Scientific Conference «Biologically active substances and materials: Fundamental and Applied Problems». May 27 – June 1, 2013, Novy Svet, AR Crimea, Ukraine, Part .1, p. 75-76.*
 50. Kuleshova E.S., Zavarzin I.V., **Dzhafarov M.X.**, Plakhtinskiy V.V. Acylation of avermectin with the anhydrides of cholenic acids. *66th All-Russia scientific and technical conference for post-graduate students and students of High Schools with int. participants. (April 23, 2013, Yaroslavl, Russia). Proceedings. Yaroslavl: YSTU, 2013. -p. 59.*

2014

51. **Dzhafarov M.Kh.**, Vasilevich F.I. Ecological, Physiological and Biochemical Adaptation in Helminth: Trends in Evolution of Anthelmintic Chemical Agents. (Review) // *Advances in Pharmacology and Pharmacy. 2014, 2: 30-45. doi: 10.13189/app.2014.020203. http://www.hrpub.org/download/20140105/APP3-17302011.pdf*
52. **Dzhafarov M.Kh.**, Mirzaev M.N., Zavarzin I.V., Kolobov A.V. Synthesis and pharmacotoxicological properties of avermectin B₁ hemisuccinate. *3rd All-Russia scientific conference "Progress in the synthesis and complex forming reactions". Moscow: RUDN, 21-25 April 2014. Abstracts book. Part 1, p. 155.*

53. **Dzhafarov M.Kh.**, Zavarzin I.V. Novel derivatives of macrocyclic lactones - an important class of insectoacaricides and anthelmintics. *3rd All-Russia scientific conference "Progress in the synthesis and complex forming reactions". Moscow: RUDN, 21-25 April 2014. Abstracts book. Part 1, p. 156.*
54. **Dzhafarov M.Kh.**, Vasilevich F.I. Evolution in chemotherapy of the parasitic diseases of animals. *3rd All-Russia scientific conference "Progress in the synthesis and complex forming reactions". Moscow: RUDN, 21-25 April 2014. Abstracts book. Part 1, p. 157.*
55. Zavarzin I.V., Kuleshova E.S., Chernoburova E.I., Shchetina M.A., Kolobov A.V., Plakhtinsky V.V. **Dzhafarov M.X.** Synthesis of 5-O- and 4"-O-acyl derivatives of avermectin // *Izv. RAN. Series Chemistry. -2014. №2.- C. 538-542.*
56. Zavarzin I. V., Kuleshova E. S., Chernoburova E. I., Shchetina M. A., Kolobov A. V., Plakhtinskii V. V., **Dzhafarov M. Kh.** Synthesis and biological activity of new avermectin 5-O- and 4"-O-acyl derivatives. *Russian Chemical Bulletin. 2014, V. 63, № 2, p. 538-542.*
57. Zavarzin I.V., **Dzhafarov M.Kh.**, Chernoburova E.I. Antiparasitic agent. *Russian Patent Application №2014115464 om18.04.2014 z.*
58. Zavarzin I.V., **Dzhafarov M.Kh.**, Chernoburova E.I. Insecticidal agent. *Russian Patent Application №2014115467 om18.04.2014 z.*
59. Zavarzin I.V., **Dzhafarov M.Kh.**, Krukovskaya N.V. Synthesis and antihelmintic activity of 5-O-derivatives of ivermectin. *International Conference "Molecular Complexity in Modern Chemistry" (September 13-19, 2014, Moscow, Russia). Book of Abstracts, p. 144.*
60. **Dzhafarov M.Kh.** Trends in evolution of antiparasitic chemical agents. *International Conference "Molecular Complexity in Modern Chemistry" (September 13-19, 2014, Moscow, Russia). Book of Abstracts, p. 145.*
61. **Dzhafarov M.Kh.**, Zavarzin I.V., Vasilevych F.I., Mamedov Z.M. Antiparasitic properties of semisynthetic arthropod and plant growth bioregulators. *International Scientific Conference "Climate change and its influence on sustainable and safe agriculture development" (October 2-3-4, 2014, Tbilisi, Georgia). P.109-111.*

2015

62. **Dzhafarov M. Kh.**, Vasilevich F.I., Imamkuliev K.D. Acaricidal substances: problems, tendencies and prospects. *Proceedings of the VIII Moscow International Congress «Biotechnology: State of the Art and Prospects of Development» (march 17-20, 2015, Moscow, Russia), Moscow: JSC "Expo-biochem-technologies", D.I.Mendeleev University of Chemistry and Technology of Russia. 2015. -Part 2, p. 432*
63. **Dzhafarov M. Kh.** 16-membered macrocyclic lactones: structural and biochemical aspects of diversity and prospects for development of new substances. / XIth international scientific-applied conference. Theory, practice and perspectives of the application of biologically active compounds in agriculture. 17th–19th June 2015, Syktyvkar, Russia. *Proceedings da Rostim 2015. – p.55-58.*
64. Olekhovich E.I., Roslavtseva S.A., Alekseev M.A., Mirzaev M.N., Zavarzin I.V., **Dzhafarov M.Kh.** Insecticidal activity of avermectin substances and formulations based on avermectins against different cockroach species // *Dezinfektsionnoe delo [Disinfection affairs], 2015, no. 2, pp. 47-57.*
65. **Dzhafarov M.Kh.**, Mirzaev M.N., Vasilevich F.I. Avermectin-like compounds: biochemical aspects of structural diversity, and the prospects for development of new substances *MobiChem-2015. Proceedings of theses. P. 111.*
66. Zavarzin I.V., **Dzhafarov M.Kh.**, Chernoburova E. I. Antiparasitic agent. *RU Patent Number 2554074, 18.04.2014. Pub. 27.06.2015, Bull. №18.*

67. Zavarzin I.V., **Dzhafarov M.Kh.**, Chernoburova E. I. Insecticidal agent. RU Patent Number 2554350, 18.04.2014. Pub. 27.06.2015, Bull. №18.

2016

68. **Dzhafarov M.Kh.**, Vasilevich F.I., Kovalev G.I., Krivonos K.S., Tsepilova I.I., Zavarzin I.V., Vasil'eva E.V. Derivatives of 16-membered macrocyclic lactones: antiparasitic properties and interaction with GABA_A receptors. // Sel'skokhozyaistvennaya biologiya [Agricultural Biology], 2016, V. 51, ¹ 6, pp. 875-882.
69. **Dzhafarov M. Kh.**, Vasilevich F.I., Dovgalev A.S., Imamkuliev K.D., Pautova E.A. Anthelmintic substances: main classes, problems, trends in development and prospects // Med Parazitol (Mosk) - 2016, N 2., p. 47-53.
70. Chertkova V. V., Chernoburova E. I., **Dzhafarov M. Kh.**, Tyurin A. Yu., Volkova Yu. A., Vasilevich F. I., Zavarzin I. V. Functionalization of NH-unsubstituted androstano[17,16-d]pyrazoles. Synthesis of 2-arylamino-2-thioxoacetylandrostano[17,16-d]pyrazoles // Russ. Chem. Bull. 2016, N 3, p. 819-821.
71. Chernoburova E.I., Danchenko K.V., Shchetinina M.A., Zharov A.A., Kolobov A.V., **Dzhafarov M.Kh.**, Vasilevich F.I., and Zavarzin I.V. Synthesis of 5-O- and 4''-O-acyl derivatives of avermectin B1 // *Russ. Chem. Bull.*, 2016. №12, c. 2956-2964.
72. Chernoburova E.I., Polyukhova E.S., Shchetinina M.A., Kolobov A.V., **Dzhafarov M.Kh.**, Vasilevich, F.I., and Zavarzin I.V. Synthesis of steroid esters of avermectin B1 // *Russ. Chem. Bull.*, 2016. №12, c. 2956-2964.
73. Chernoburova E.I., Lishshuk V.A., Ovchinnikov K.L., Kolobov A.V., **Dzhafarov M.Kh.**, Vasilevich F.I. , and Zavarzin I.V. Synthesis of avermectin B1 5-O-hemisuccinate esters // *Russ. Chem. Bull.*, 2016, №12, 2965-2969.

2017

74. Blinnikov A.N., Shchetinina M.A., Chernoburova E.I., Kolotirina N.G., Shchetinina M.A., Lishshuk V.A., Ovchinnikov K.L., Kolobov A.V., **Dzhafarov M.Kh.**, Vasilevich F.I., Zavarzin I.V. Synthesis of ivermectin 4''-O,5-O-di(methylcarbamate) // *Russ. Chem. Bull.* (2017 г.). In press.
75. Shchetinina M.A., Chernoburova E.I., Kolotirina N.G., **Dzhafarov M.Kh.**, Vasilevich F.I., Zavarzin I.V.) Syntheses of ivermectin 5-O- hydrosulfate sodium salt and ivermectin 5-O-,4''-O-dihydrosulfate disodium salt // *Russ. Chem. Bull.* (2017 г.). In press.