

To the study of medicinal plants of Siberia,
used in homeopathy A.N.
Nekratova¹, L.V. Kosmodemyansky²
(1National Research Tomsk State University, Tomsk; 2Federal
state autonomous educational institution of higher education
"Peoples' Friendship University of Russia", Moscow)

To the study of medicinal plants of Siberia, used in homeopathy
AN Nekratova¹, LV Kosmodemyanskiy²
(1National Research Tomsk State University, Tomsk, Russia; 2Federal State Autonomous Educational Institution
of Higher Education "Peoples' Friendship University of Russia", Moscow, Russia)

SUMMARY

Subject of study: medicinal plants of Siberia as a source of homeopathic medicinal plant materials and homeopathic preparations.

Objectives: to compile a list of Siberian medicinal plant species used for the production homeopathic medicines.

Materials and methods: method of regular laying of key sites and a network of expeditionary routes, geobotanical analysis.

Results: An inventory of medicinal plants was carried out. Shown, that 137 species growing in Siberia, in particular the Kuznetsk Alatau, can serve as sources of environmentally friendly raw materials for the manufacture of homeopathic medicines.

Conclusions: We consider it expedient to further study the medicinal plants of Siberia in order to study of the possibility of scientifically based use of homeopathic preparations from them in clinical practice.

Key words: medicinal plants, homeopathy, homeopathic herbal raw materials, application in homeopathy, expeditionary research.

RESUME

Subject: medicinal plants of Siberia, as sources of raw materials for homeopathic medicines.

aim: create list of remedial plants of Siberia which can be used for production of homeopathic remedies.

materials and methods: the method of regular laying of key areas and the network of expedition routes, geobotanical analysis.

results: the accomplished inventory of medicinal plants showed that 137 species growing in Siberia, the Kuznetsky Alatau in particular, can be a source of environmentally safe raw materials for the production of homeopathic medicines.

Conclusions: Further research of Siberian remedial plants is reasonable for scientifically justified use of homeopathic preparations on their base in clinical practice.

keywords: medicinal plants, homeopathy, homeopathic raw materials, application in homeopathy, expeditionary research.

INTRODUCTION

Plants have been indispensable raw materials for the preparation of a number of medicines for thousands of years. In our country, about 3,000 medicinal substances and drugs are used in medical practice. Up to 1/3 of them are obtained from plant materials [18]. In homeopathy, according to various sources, from 65% to 80% of homeopathic medicines are obtained from raw materials of plant origin [8]. Summarizing the publications of specialists in the field of homeopathic pharmacy from different countries, we can say that the world resources of homeopathic medicinal raw materials include 966 species of higher and lower plants belonging to 190 families; 910 substances of chemical and mineral origin, 117 species of animal origin, 380 organs and tissues and 120 nosodes used in the world for homeopathic production.

Over the past 10 years, more than 700 complex homeopathic preparations have appeared on the Russian pharmaceutical market, the components of which are plants, animal products and nosodes [17]. In the monograph N.M. Vavilova described 326 homeopathic preparations, including 213 of plant and 113 of synthetic and mineral origin [3]. Conducted by G.A. Belodubrovskaya et al., analysis of the number of species included in domestic

Pharmacopoeia and used in homeopathy, showed that the share of "homeopathic" plants ranges from 34-45% of the number of species included in each edition [1]. Clinical efficacy, safety and cost-effectiveness of the homeopathic method of treatment are confirmed by scientific research by Russian scientists, doctors, biologists, pharmacists and veterinarians. The reference manual "Nomenclature of producing plants and raw materials for the production of homeopathic medicines in Russia" (2002) lists 1063 types of medicinal plants, of which (in the year of publication of the cited bibliographic source) 709 types of raw materials were allowed for use in Russia [14].

In 1995–2015 more than 200 dissertations for the degree of doctor and candidate of medical, pharmaceutical, biological and veterinary sciences in 30 different specialties were defended in 43 scientific institutions in 29 cities of the Russian Federation [16]. Works on the search and study of herbal homeopathic raw materials were also carried out by other researchers, mainly in the European part of Russia [2; 10]. For Siberia, such studies have no analogues and are new.

The purpose of our work was to identify and study the possibility of expanding the list of Siberian medicinal plants used in homeopathy, based on the authors' own research and literature data. In connection with the adopted amendments and additions to the Federal Law of April 12, 2010 N 61-FZ (as amended on July 13, 2015) "On the Circulation of Medicines" (with amendments and additions that entered into force on July 24, 2015), homeopathic medicines were allocated into a separate drug group.

MATERIALS AND METHODS

Expeditionary studies of medicinal plants were carried out on the territory of Siberia, in particular, the Kuznetsk Alatau. To select the material, we used the method of regular laying of key areas and a network of expedition routes. A systematic, chorological, ecological and geographical analysis of the forest flora of the Kuznetsk Alatau was carried out based on the methods proposed by A.S. Revushkin, V.P. Sedelnikov, N.A. Nekratova and others. Raw material groups of useful, including medicinal plants of the forest flora of the Kuznetsk Alatau have been identified. Based on the analysis of geobotanical descriptions, the occurrence and abundance of medicinal plants of the forest flora of the Kuznetsk Alatau and other regions of Siberia were studied [13]. Together with the Moscow Institute of Homeopathy (in 2007 the rector Kosmodemyansky L.V., at the present time - Professor of the Peoples' Friendship University,

RESULTS OF THE STUDY

Among the Siberian medicinal plants used in homeopathy, there are 137 species of flowering, gymnosperms and higher spore plants belonging to 54 families. The richest in the nomenclature of raw materials for the production of homeopathic preparations are the following families: Asteraceae - Asteraceae (19 kinds), Rosaceae - Rosaceae (9 kinds), Lamiaceae - Lamiaceae (8 species), Apiaceae - Celery (6 kinds), Scrophulariaceae - Norichnaceae (6 kinds), Ericaceae - Heathers (6 kinds), Polygonaceae - Buckwheat (5 kinds), Ranunculaceae - Ranunculaceae (5 types).

Of this number, 35 species are poisonous plants: *Aconitum anthora* L. - Antidote fighter, *Adonis vernalis* L. - spring adonis, *Bryonia alba* L. - White step, *Chelidonium majus* L. - Greater celandine, *Daphne mezereum* L. - common wolfberry, *Glechoma hederacea* L. - Budra ivy, *Hyoscyamus niger* L. - Black henbane, etc.

In the majority (53 species), the whole plant is used (in the terminology of academic medical practice and pharmacognosy, such a terminological unit is absent), in 32 species, only the aerial part is used in homeopathy (in classical pharmacognosy, grass), in 21 species, only the underground part (in pharmacognosy - roots, rhizomes and roots, rhizomes with roots). Fruits, infructescences and seeds are used in 8 species (in classical pharmacognosy the term "infructescence" is not used), flowers and inflorescences (in academic medical practice and classical pharmacognosy - flowers) - in 5 species, bark - in 2 species.

In a number of plants, the homeopathic application is more complex: *Alnus glutinosa* (L. Graeth. - Glutinous alder (bark and seedlings), *Althaea officinalis* L. - Marshmallow officinalis (leaves and underground part), *Artemisia vulgaris* L. - Common wormwood (underground part, tops of above-ground shoots), *Betula pendula* Roth. - Warty birch (juice, young leaves, buds, outer part of the bark of trunks and branches

(birch bark), as well as tar obtained from it and coal from wood), *ledum palustre* L. - marsh rosemary (young leafy shoots), *padus avium* Mill. - Common bird cherry (leaves, bark of young branches, fruits), *Pinus sylvestris* L. - Forest pine (tops of branches, resin-resin, buds), *Populus tremula* L. - Trembling poplar, aspen (female inflorescences - catkins and charcoal from wood), *Rubus idaeus* L. - Common raspberry (leaves, fruits), *Rumex acetosa* L. - Sorrel sour (underground part, leaves).

Next, we describe the characteristics of medicinal plants in Siberia, indicating the Russian and Latin names, the names of medicinal plant materials used in homeopathy, folk, traditional and official medical practice [5-7, 11, 19] - while preserving the terminology of the used bibliographic sources (Table 1).

The study was financially supported by the Russian Foundation for Basic Research/RFBR and the Administration of the Tomsk Region within the framework of the scientific project 16-44-700634.

Table 1

Medicinal plants of Siberia used in homeopathy

View	abbreviated title	homeopathic <small>raw material</small>	Main indications for applications
1. <i>Abies sibirica</i> Ledeb. - Siberian fir (family Pinaceae - Pine)	Abis-s.	Young leaves (needles)	Epilepsy, vomiting, diarrhea, fainting; urinary retention; diseases that are accompanied by a feeling of cold in the body [5].
2. <i>Achillea millefolium</i> L. - Yarrow ordinary (family Asteraceae - Asters)	Mill.	Inflorescences, aerial part and whole plant	Varicose veins of the lower extremities, hemorrhoids; uterine bleeding after an abortion; diseases of the stomach; headaches accompanied by nosebleeds [5].
3. <i>Aconitum anthora</i> L. - Antidote wrestler (family Ranunculaceae - Ranunculaceae)	Acon-a.	underground part and whole plant	Bleeding. Catarrhal diseases of the mucous membranes [11].
4. <i>Acorus calamus</i> L. - marsh calamus (family Araceae - aroid)	Calam.	rhizomes	In homeopathy, they are used very rarely for inflammation of the stomach (gastritis) [7].
5. <i>Adonis vernalis</i> L. - spring adonis (family Ranunculaceae - Ranunculaceae)	Adon.	Above ground and whole plant	Thyrotoxicosis, heart disease, insomnia [6; eleven].
6. <i>Agrostemma githago</i> L. - Sowing puppet (family Caryophyllaceae - clove)	Agro.	seeds	neurological disorders. Gastritis. Painful tenesmus in the rectum [7].
7. <i>Alchemilla vulgaris</i> L. - Cuff ordinary (family Rosaceae - Rosaceae)	Alchem. vg.	Aboveground part	Gastritis, enteritis. Injuries. Menstrual irregularities, menopause. It is rarely used in homeopathy [7].
8. <i>Alnus glutinosa</i> (L.) Graeth. - Glutinous alder (family Betulaceae - birch)	Aln-g.	Bark and fruit	Ulcers of the mucous membranes of the mouth and throat. Digestive disorders. Herpetic eruptions [7].

9. <i>Althaea officinalis</i> L.-Alth. Marshmallow officinalis (familyMalvaceae- Malvaceae)		Leaves and underground part	cystitis [7].
10. <i>Anthoxanthum odoratum</i> L. - Common fragrant spikelet (familyPoaceae- bluegrass)	Antho.	whole plant	Hay fever; skin rashes [7].
11. <i>Archangelica officinalis</i> Hoffm. - <i>Angelica officinalis</i> (familyApiaceae- Celery)	Ange-ar.	Fresh rhizome with roots	Diseases of the gastrointestinal tract, accompanied by heartburn; gastritis, gastric ulcer, inflammation of the duodenum 12. Bloating, flatulence. Diarrhea [7].
12. <i>Arctium lappa</i> L. - Great burdock (familyAsteraceae- Asters)	Lappa	underground part	Rheumatism, gout, urolithiasis, herpes [5].
13. <i>Arctostaphylos uvaursi</i> (L.) Spreng. - Bearberry ordinary (familyEricaceae- Heather)	Uva.	leaves and leafy tops of shoots	Cystitis, nephritis, urolithiasis; enuresis. Urticaria [5].
14. <i>Armoracia rusticana</i> Gaertn. May. et Scherb. - Russian horseradish (family Brassicaceae- Cabbage)	Coch. - cochlearia armoracia	underground part	Diseases of the gastrointestinal tract and chronic urethritis, accompanied by burning pains of the mucous membranes [7].
15. <i>Arnica chamissonis</i> less. - Arnica Shamisso (family Asteraceae - Asteraceae)	Arn. - arnica Montana	inflorescences or above-ground part	Consequences of acute and chronic injuries. Dizziness; insomnia. Cough with sputum [18].
16. <i>Artemisia absinthium</i> L. - Wormwood (family Asteraceae- Asters)	Absin.	flowering tops aboveground shoots, inflorescences and leaves	Rarely used in homeopathy. Convulsive conditions; alcoholism; insomnia [7].
17. <i>Artemisia vulgaris</i> L. - Wormwood (familyAsteraceae- Asters)	Atr-v.	underground part, the tops of the aboveground shoots	Epilepsy; hysteria; neurasthenia [11].
18. <i>Asarum europaeum</i> L. - Hoof European (family Aristolochiaceae - Kirkazon)	Asar.	underground part, whole plant	Dyspepsia. Alcoholism. Hysteria; neurasthenia [5].
19. <i>Betula pendula</i> Roth. - Warty birch (familyBetulaceae- birch)	betu. - betula alba	Juice, young leaves, kidneys, outer part bark of trunks and branches (birch bark), as well as derived from it tar and coal from wood	It is rarely used in homeopathy. Urolithiasis [7].

20. <i>Borago officinalis</i> L. - Bora-o. Borage officinalis (familyBoraginaceae - Borage)		Leaves	Skin rashes with itching [20].
21. <i>Bryonia alba</i> L. - Step white (family Cucurbitaceae - Pumpkin)	Bry.	underground part	Pneumonia; bronchitis; bronchial asthma. Diseases of the digestive tract; convulsive pains in the stomach. Neuralgia and neuritis [7].
22. <i>Calendula officinalis</i> L. - Marigolds medicinal, calendula (family Asteraceae - Asteraceae)	Calen	Inflorescences, aerial part	Post-traumatic skin lesions; purulent skin diseases. Tonsillitis; angina. Endometritis [5].
23. <i>Calluna vulgaris</i> (L.) Hull - Heather ordinary (familyEricaceae- Heather)	callun.	blooming overground shoots	Consequences of emotional overexcitation. Psychoemotional disorders [7].
24. <i>Caltha palustris</i> L. - Marsh marigold (family Ranunculaceae- Ranunculaceae)	Calth.	whole plant	Uterine cancer. Various skin diseases [5].
25. <i>Capsella bursa- pastoris</i> (L.) Medic. - Shepherd's bag (familyBrassicaceae - Cabbage)	thlaspi bursa pastoris-thlas.	aboveground part, whole plant	Hypertonic disease; atherosclerosis [7]. Pathology of the female genital area [5].
26. <i>Cardamine pratensis</i> L. - Meadow heartwood (familyBrassicaceae - Cabbage)	Cardam.	Aboveground part	Diabetes mellitus [7].
27. <i>Carum carvi</i> L. - Cumin ordinary (familyApiaceae- Celery)	caru.	plant fruits	palpitations; tachypnea. Diarrhea [7].
28. <i>Centaurea cyanus</i> L. - blue cornflower (familyAsteraceae- Asters)	cent-cy.	plant flowers	Dyspepsia [7].
29. <i>Centaureum erythraea</i> Rafn. - Centaury ordinary (familyGentianaceae - Gentian)	Centa-er.	Flowers, aerial part, whole plant	Diseases due to psycho-emotional arousal. Decrease or lack of appetite. Gastritis; heartburn; dyspepsia. Gallstone disease [7].
30. <i>Chamomilla recutita</i> (L.) Rauschert. - Chamomile pharmacy (family Asteraceae - Asteraceae)	Cham.	whole plant, separate inflorescences, roots, essential oil.	Hysteria, neuralgia. Gastritis. Laryngitis, tracheitis; bronchial asthma. Uterine bleeding after abortion [5].
31. <i>Chelidonium majus</i> L. - large celandine (familypapaveraceae - poppy)	Chel.	whole plant, separate roots, above ground and flowers	Cholelithiasis; hepatitis. Pneumonia. Whooping cough. Headaches on the right side of the head. Dermatoses. Arthritis [5].

32. <i>Chenopodium botrys</i> L. - Mary fragrant (family Chenopodiaceae - Marevy)	Chen.bt.	Aboveground part	Meniere's disease. Memory loss. Hearing disorders. Angina [19].
33. <i>Chenopodium glaucum</i> L. - Mary gray (family Chenopodiaceae - Marevy)	Chen.g.	Aboveground part	Meniere's disease. Memory loss. Hearing disorders, tonsillitis [19].
34. <i>Chenopodium vulvaria</i> L. - Stinking mar (family Chenopodiaceae - Marevy)	Chen v.	whole plant	Meniere's disease. Memory loss. Hearing disorders, tonsillitis [19].
35. <i>Chimaphila umbellata</i> (L.) WPC Barton (familyEricaceae-Heather)	Chim.	whole plant and only elevated part	Cataract. Cystitis; prostatitis. Painful compaction of the mammary glands [19].
36. <i>Cichorium intybus</i> L. - Common chicory (familyAsteraceae-Asters)	cich.	Inflorescences, aerial part and whole flowering plant	It is rarely used in homeopathy. General weakness; drowsiness; headache [7].
37. <i>Cicuta virosa</i> L. - Poisonous milestone (family Apiaceae-Celery)	cic.	underground part	Epilepsy; neurasthenia; dizziness. Gastritis. Dermatitis [5].
38. <i>Conium maculatum</i> L. - spotted hemlock (familyApiaceae-Celery)	con.	Inflorescences, tops above ground and whole plant	Paresis and paralysis. Insomnia. Prostate adenoma. Bronchitis. Fibroma of the uterus [5].
39. <i>Convallaria majalis</i> L. - May lily of the valley (family Convallariaceae - lilies of the valley)	conv.	whole plant, separately elevated part, leaves and flowers	Depression. neurosis of the heart. Headaches [5].
40. <i>Convolvulus arvensis</i> L. - Field bindweed (family Convolvulaceae - bindweed)	Convo a.	Aboveground part	Gastrointestinal disorders, accompanied by belching after eating; diarrhea [7].
41. <i>Daphne mezereum</i> L. - wolfberry ordinary (family Thymelaeaceae - Wolfberry)	Mez.	stem bark and plant branches	Cystitis. Eczema. Rhinitis. Trigeminal neuralgia. Stomatitis [5].
42. <i>Datura stramonium</i> L. - Datura ordinary (familySolanaceae-Nightshade)	Stram.	whole plant, separately underground and above ground parts leaves and seeds	Epilepsy; affective insanity; stuttering; hiccups. trigeminal neuralgia Infectious diseases. Bronchial asthma [5].

43. <i>Dictamnus albus</i> L.- Dittany (familyRutaceae- rue)	Dict.	whole plant	Metrorrhagia [7].
44. <i>Digitalis lanata</i> Erh. – foxglove woolly (family Scrophulariaceae - Norichnikovye)	Dig la.	fresh leaves and tops of shoots budding phase	Rarely used in homeopathy. Heart disease [21].
45. <i>Drosera rotundifolia</i> L. – Rosyanka rotundifolia (familyDroseraceae- Rosyankovye)	Dros.	whole plant	Bronchitis. Polyarthritis. Dizziness. Tracheitis; whooping cough [5].
46. <i>Dryopteris filixmas</i> (L.) Schott. - male fern, male thyroid (familyAspidiaceae- shield)	Fil. (filix mas)	Rhizomes with leaf petioles	Rarely used in homeopathy. Worm infestations [7].
47. <i>Elytrigia repens</i> (L.) Nevski - Creeping couch grass (familyPoaceae- bluegrass)	Tritic.	underground part	Dysuric disorders; cystitis. [7].
48. <i>Epilobium palustre</i> L. - Bog fireweed (familyOnagraceae- Cyprus)	Epil.	underground part	sleep disorders; dullness of consciousness. Hypersalivation [7].
49. <i>Equisetum arvense</i> L. - Field horsetail (familyEquisetaceae - horsetail)	Equis a.	Aboveground part vegetative plants	Cystitis; enuresis [5].
50. <i>Equisetum fluviatile</i> L. – riverine horsetail (familyEquisetaceae - horsetail)	Equisetum fluviatile	Whole plant or above-ground part	Pain in the kidneys; cystitis; painful urination [19].
51. <i>Erodium cicutarium</i> (L.) L'Her. – Cicutus stork (family Geraniaceae- geraniums)	Erod.	whole plant	metrorrhagia; polyps and uterine cancer [7].
52. <i>Euphorbia cyparissias</i> L. - Euphorbia cypress (family Euphorbiaceae- Euphorbia)	Euph-cy.	whole plant	Weakness; headache; dizziness; insomnia [19].
53. <i>Euphrasia officinalis</i> L. sl - Eyebright medicinal (family Scrophulariaceae - Norichnikovye)	Euphr.	whole plant	Conjunctivitis, blepharitis. Laryngitis; rhinitis [5].
54. <i>Filipendula ulmaria</i> (L.) Maxim. – Elm-leaved meadowsweet (family Rosaceae - Rosaceae)	Spirae.	Inflorescences, underground and above-ground parts	It is rarely used in homeopathy. Psychoneurological symptoms [7].

55. <i>Fragaria vesca</i> L. - Wild strawberry (familyRosaceae-Rosaceae)	Frag.	infructescence	General weakness. Heart failure; edema. Helminthiasis; hives. lactation disorders during breastfeeding. Erysipelas [7].
56. <i>Fumaria officinalis</i> L. - Dymyanka medicinal (familyFumariaceae - smoky)	fum.	whole plant and above-ground part	Psoriasis [19].
57. <i>Galinsoga parviflora</i> Cav.- Galinsoga small-flowered (familyAsteraceae-Asters)	Galn.	Aboveground part	Violations of the central nervous system, accompanied by errors in calculations and writing. General weakness. Tides [7].
58. <i>Gentiana cruciata</i> L. - Gentian cruciform (familyGentianaceae - Gentian)	Gent-c.	underground part	Disorders of the stomach [19].
59. <i>Geranium robertianum</i> L. - Robert's Geranium (familyGeraniaceae-geraniums)	Ger-ro.	Aerial part and whole plant	Disorders of the stomach [19].
60. <i>Geum aleppicum</i> Jacq. - Aleppo gravel (familyRosaceae-Rosaceae)	Geum. - geum rivale	underground part	Diseases of the male reproductive system (penis pain). Diarrhea [7].
61. <i>Glechoma hederacea</i> L. - Budra ivy-like (familyLamiaceae-Lamiaceae)	Glech	Aboveground part plants	Itching of anus after stool. Swelling of the submandibular glands [7].
62. <i>Gnaphalium uliginosum</i> L. - marshwort (family Asteraceae - Asteraceae)	Gnaphalium uliginosum	whole plant	Cramps in the calf muscles and feet; sciatica; pain in the lower back and joints [18].
63. <i>Herniaria glabra</i> L. - Smooth hernia (family Caryophyllaceae - clove)	Hern-g.	Aboveground part	Prostate adenoma [7].
64. <i>Hyoscyamus niger</i> L. - Henbane black (familySolanaceae-Nightshade)	Hyos.	Leaves and whole plant with seeds	Affective insanity; night terrors in children. Atherosclerosis of cerebral vessels. Bronchitis; tracheitis. Fever [5].
65. <i>Hypericum maculatum</i> Crantz - St. John's Wort spotted (family Hypericaceae-St. John's wort)	Hyperm.	Aboveground part	Depression; epilepsy; convulsions. Haemorrhoids; constipation [19].
66. <i>Hypericum perforatum</i> L. - St. John's wort (familyHypericaceae - St. John's wort)	Hyper.	Above ground and whole plant	Traumatic brain injury; post-traumatic epilepsy. Sciatica. Burns I-II degree. Gastritis; enteritis [5].

67. <i>Hyssopus officinalis</i> L. - Hyssop officinalis (family Lamiaceae - Lamiaceae)	Hyss-o.	Aboveground part	Inflammation of the lungs [7].
68. <i>Humulus lupulus</i> L. - Common hop (family Cannabaceae - Hemp)	Lup.-lupulus humulus	Infructescence ("bumps")	Rarely used in homeopathy. Bradycardia. Insomnia. Painful erection [7].
69. <i>Inula helenium</i> L. - Elecampane high (family Asteraceae - Asters)	Inul.	underground part	Bronchitis. Headaches. Osteochondrosis. Hysteria. As a uterine remedy [5].
70. <i>Juniperus communis</i> L. - Juniper ordinary (family Cupressaceae - cypress)	Juni-c.	cone berries	BPH. Chronic inflammation of the kidneys; edema. Scarlet fever complicated by edema. Bleeding. Painful menses. [7].
71. <i>Juncus effusus</i> L. - Spreading rush (family Juncaceae - Sitnikovye)	Junc.	underground part	Edema. Headache. Sleep disorders. Flatulence. Rheumatic pains; keloid scars [7].
72. <i>Lamium album</i> L. - White lamb, deaf nettle (family Lamiaceae - Lamiaceae)	Lam.	aboveground part, separate flowers and leaves	Sleep disorders. Functional disorders of the female genital area [7].
73. <i>Ledum palustre</i> L. - marsh rosemary (family Ericaceae - Heather)	Led.	Young leafy shoots	Gout; arthritis. Bleeding. bruises. Bronchitis [5].
74. <i>Lemna minor</i> L. - Lesser duckweed (family Lemnaceae - duckweed)	Lem-m.	whole plant	Colds in damp weather and when wet. adenoiditis; smell disorder. Polyyps [7].
75. <i>Leucanthemum vulgare</i> Lam. - Nivyanik ordinary (family Asteraceae - Asters)	Chrysan.-chrysanthemum leucanthemum	Inflorescences-baskets	It is rarely used in homeopathy. Insomnia [7].
76. <i>Linaria vulgaris</i> Mill. - Common flax (family Scrophulariaceae - Norichnikovye)	Lina.	Above ground and whole plant	Rarely used in homeopathy. Fainting [7].
77. <i>Lycopodium clavatum</i> L. - club club moss (family Lycopodiaceae - Lycops)	Lyc.	Spores and aerial part	Diseases of the gastrointestinal tract, accompanied by ulcerative lesions. chronic hepatitis. Urolithiasis disease; cystitis; conjunctivitis. Varicose varicose veins of the lower extremities [5].
78. <i>Lycopus europaeus</i> L. - European chickweed (family Lamiaceae - Lamiaceae)	Lycps-eu.	Aboveground part	Exophthalmic goiter. Cardiac complaints accompanied by complaints from the urinary system [7].

79. <i>Melilotus officinalis</i> (L.) Pall. - Melilot officinalis (family Fabaceae- legumes)	Meli.	flowering tops aboveground shoots, leaves and inflorescences	Headache. Epilepsy. Chronic colitis. Heart failure [5].
80. <i>Mentha piperita</i> L. - Peppermint (family Lamiaceae- Lamiaceae)	Menth.	Leaves, aerial part, whole plant	laryngotracheitis; cough [5].
81. <i>Menyanthes trifoliata</i> L. - Three-leaf watch (family Menyanthaceae- Rotational)	Meny.	Leaves and whole plant	Headache. Gastritis. Trigeminal neuralgia [5].
82. <i>Myosotis arvensis</i> (L.) Hill - Forget-me-not field (family Boraginaceae - Borage)	Myos a.	whole plant	Cachexia. Cough during vomiting and after eating [7].
83. <i>Nuphar lutea</i> (L.) Smith. - Yellow capsule (family Nymphaeaceae - water lilies)	Nuph.	rhizomes	Descent of the uterus. Diarrhea [5].
84. <i>Oenanthe aquatica</i> (L.) Poir. water (family Apiaceae- Celery)	Oena.	Fruit	Convulsive conditions of various etiologies. Epilepsy [7].
85. <i>Ononis arvensis</i> L. - Field steel (family Fabaceae- legumes)	Onon.-ononis spinosa	Whole plant and also underground	Epilepsy. Headache. Nosebleeds. Inflammatory diseases of the kidneys. [7].
86. <i>Onopordum acanthium</i> L. - prickly tartar (family Asteraceae- Asters)	Onop.	Aboveground part	Deforming arthritis. Hypertension. Irritability, restlessness, sleep disturbances. painful menstruation [7].
87. <i>Origanum vulgare</i> L. - Oregano (family Lamiaceae- Lamiaceae)	Orig v.	Aboveground part	Hysteria. Mastopathy; leucorrhoea [5].
88. <i>Padus avium</i> Mill. - Common bird cherry (family Rosaceae- Rosaceae)	Prun-p. - prunus padus	Leaves, bark of young branches, fruits	It is rarely used in homeopathy. Cardiovascular pathology [7].
89. <i>Paeonia anomala</i> L. - Peony evasive, marin root (family Paeoniaceae - Peony)	Paeon-a.	underground part	Headache; noise in ears. Haemorrhoids. Urticaria [19].
90. <i>Paris quadrifolia</i> L. - Crow's eye (family Liliaceae- lily)	Par.	whole plant	Headache; concussion; dizziness; drowsiness. Neuralgia. Bronchitis. Rheumatism. Digestive disorders [5].

91. <i>Persicaria hydropiper</i> (L.) Spach - Water pepper (family Polygonaceae - Buckwheat)	<i>Persicaria hydropiper</i>	Above ground and whole plant	Rarely used in homeopathy. Inflammatory processes genitourinary system [7].
92. <i>Pilosella officinarum</i> FW Schultz & Sch. Bip. - hawk ordinary (family Asteraceae - Asters)	Hier-p. - <i>hieracium pilosella</i>	Above ground and whole plant	In homeopathy, they are used for Meniere's disease, chronic inflammatory diseases of the kidneys, eclampsia, edema, scarlet fever complicated by edema, exophthalmic goiter, mumps, diseases of the pancreas, hereditary syphilis, hypermetropia, myopia, retinal detachment, hearing loss, hair loss, sleep disturbances (difficulty falling asleep), heart damage accompanied by cyanosis, general weakness [7].
93. <i>Pimpinella saxifraga</i> L. - Thigh saxifrageous (family Apiaceae - Celery)	Pimp.	underground part plants	Headache. Noise in ears. Bleeding from the nose [11].
94. <i>Pinus sylvestris</i> L. - Forest pine (family Pinaceae - Pine)	Pins.	branch tops, gum resin, buds	Neurasthenia. Headache; dizziness [5].
95. <i>Plantago lanceolata</i> L. - Plantain lanceolate (family Plantaginaceae - Plantain)	Plan l.	Aboveground part	Headache. Toothache. Rigidity of the muscles of the neck. Dryness in the throat. Enuresis [19].
96. <i>Plantago major</i> L. - Great plantain (family Plantaginaceae - Plantain)	plan.	Whole plant and also only leaves, above-ground part	Tracheitis; rhinitis. Toothache. Gastritis. Cystitis. Osteochondrosis. Burns [5].
97. <i>Polygonum aviculare</i> L. - Highlander bird (family Polygonaceae - Buckwheat)	Polyg-a.	Aboveground part	It is rarely used in homeopathy. Atherosclerosis [7].
98. <i>Populus tremula</i> L. - Trembling poplar, aspen (family Salicaceae - willow)	Pop.	Female inflorescences - earrings and charcoal wood	Cystitis. Prostate adenoma [5].
99. <i>Potentilla anserina</i> L. - Potentilla goose (family Rosaceae - Rosaceae)	Pot a.	whole plant	Glaucoma [7].
100. <i>Potentilla erecta</i> (L.) Raeusch. - Potentilla upright (family Rosaceae - Rosaceae)	Pot-e.	underground part and whole plant	It is rarely used in homeopathy. Diarrhea [7].
101. <i>Pulsatilla flavescens</i> (Zucc.) Juz. - Backache	Puls. - <i>pulsatilla pratensis</i>	Above ground and whole plant	Diseases of the nervous system and gastric diseases. Inflammation

yellowish, sleep-grass (family Ranunculaceae- Ranunculaceae)			inner ear. Measles [11].
102. Ranunculus acrisL. - Buttercup is caustic (family Ranunculaceae- Ranunculaceae)	Ran-a.	Above ground and whole plant	Rarely used in homeopathy. Articular pains of various etiologies [7].
103. Rhamnus cathartica L. - Joster laxative (family Rhamnaceae- Buckthorn)	Rham-cath.	Fruit	Inflammatory bowel processes; appendicitis; flatulence; diarrhea. Myalgia [7].
104. Rheum palmatum var. tanguticumMax. ex Balf. - Tangut rhubarb (familyPolygonaceae - Buckwheat)	Rheum	underground part	Gastritis; enteritis. Eczema [5].
105. Rhodiola roseaL. - Golden root, Rhodiola rosea (family Crassulaceae- Crassula)	Rho.	underground part	Fainting with mental overstrain. Palpitation. Decreased libido in women; weakening of erectile function in men [7].
106. Rhododendron aureumGeorge - Rhododendron golden (family Ericaceae - Heather)	Rhod. - rhododendron	Branches with leaves and flowers	Arthritis; osteochondrosis. Herpes. Eczema. Headache [5].
107. Rubus idaeusL. - Common raspberry (familyRosaceae- Rosaceae)	Rubu-i.	Leaves, fruits	Male and female infertility [7].
108. Rumex acetosaL. - Sour sorrel (familyPolygonaceae - Buckwheat)	Rumx-act.	underground part, leaves.	Depression. General weakness. Irritability. Headache. Cough; pleurisy. Urticaria [19].
109. Rumex crispusL. - curly sorrel (familyPolygonaceae - Buckwheat)	Rumx.	Underground and above-ground parts (whole plant)	Rhinitis; tracheitis. Dermatitis. Enteritis [5].
110. Salix albaL. - White willow (family Salicaceae - willow)	Sal-al.	Inflorescences-earrings	It is rarely used in homeopathy. Intermittent fever [7].
111. Sanguisorba officinalisL.- Burnet medicinal (familyRosaceae- Rosaceae)	Sanguiso.	underground part	It is rarely used in homeopathy. Bleeding. Metrorrhagia [7].
112. Saponaria officinalis L. - Mylnyanka medicinal (family Caryophyllaceae - clove)	Sapo.	whole plant and separately aboveground and underground part	Infectious mononucleosis. Apathy. Numbness of the fingers [7].

113. Scrophularia nodosa L. - Norichnik gnarled (family Scrophulariaceae - Norichnikovye)	Scroph-n.	Above ground and whole plant	Hepatitis. Headache. Keratitis. Mastopathy [5].
114. Sedum acre L. - Stonecrop, creaker (family Crassulaceae - Fatty)	Sed-ac.	whole plant	Haemorrhoids; pain in the rectum [19].
115. Sinapis alba L. - White mustard (family Brassicaceae - Cabbage)	Sin-a.	seeds	Allergic rhinitis [9].
116. Solanum dulcamara L. - bitterweet nightshade (family Solanaceae - Nightshade)	Dulc.	Young leafy shoots with flowers	Radiculitis. Paralysis. Rhinitis; tracheitis. Gastritis. Urticaria [5].
117. Solanum nigrum L. - Black nightshade (family Solanaceae - Nightshade)	Sol-ni.	whole plant	Ergot poisoning. Eye pressure. Itching in the extremities [11; nineteen].
118. Solidago virgaurea L. - goldenrod ordinary (family Asteraceae - Asters)	solid.	Inflorescences and tops flowering plants	Urolithiasis disease. Prostate adenoma. Skin diseases [5].
119. Stachys officinalis (L.) Trevir. - Medicinal cleaner (family Lamiaceae - Lamiaceae)	Stach. - betonica officinalis	Fresh above ground part	Colds in cold weather. Dizziness with imbalance; headache. Diaphragm lesions (paralysis) [7].
120. Symphytum officinale L. - Comfrey (family Boraginaceae - Borage)	Symph.	whole plant and separately aboveground and underground part	peptic ulcer; gastritis. Haemorrhoids. Bone fractures [5].
121. Tanacetum vulgare subsp. vulgare L. - Common tansy (family Asteraceae - Asters)	Tanac.	aboveground part, separate inflorescences and leaves	Depletion of the nervous system. Dizziness. Headache. Epilepsy. Pain in the stomach [5].
122. Taraxacum officinale Wigg. - Dandelion drug (family Asteraceae - Asters)	Tarax.	whole plant and separately underground part	Hepatitis. Gastritis. Cystitis. Headache [5].
123. Thymus serpyllum L. - Creeping thyme, Bogorodskaya grass, thyme (family Lamiaceae - Lamiaceae)	Thymu.	Aboveground part	It is rarely used in homeopathy. Bronchial asthma. Inflammation of the larynx [7].

124. <i>Tilia cordata</i> Mill. – Linden Linden heart-shaped (family Tiliaceae - Linden)	Til-c.	inflorescences bracts leaves	With It is rarely used in homeopathy. Skin rashes of various localization with burning and itching [7].
125. <i>Tribulus terrestris</i> L. - Tribulus creeping (family Zygophyllaceae - Parnolistnikovye)	Trib.	Above ground and whole plant	It is rarely used in homeopathy. Prostatitis; adenoma prostate gland [7].
126. <i>Trifolium arvense</i> L. - Clover plowed (family Fabaceae - legumes)	Trif-ar.	fresh plant, collected in July.	Pneumonia [19].
127. <i>Trifolium pratense</i> L. - Red clover (family Fabaceae - legumes)	Trif-p.	Above ground and inflorescences	Pneumonia [19].
128. <i>Trifolium repens</i> L. - Creeping clover (family Fabaceae - legumes)	Trif-r.	Above ground or inflorescences	Pneumonia [19].
129. <i>Tussilago farfara</i> L. - coltsfoot ordinary (family Asteraceae - Asters)	Tus-fa.	underground part, inflorescences and leaves plants	It is rarely used in homeopathy. Sensation of a coma in the region of the cardiac opening of the esophagus [7].
130. <i>Typha latifolia</i> L. - Broad-leaved cattail (family Typhaceae - cattail)	Typh.	underground part	Diarrhea [7].
131. <i>Urtica dioica</i> L. - Stinging nettle (family Urticaceae - Nettles)	Urt-d.	Leaves and whole plant	Bleeding. Disorders of the stomach. Urolithiasis [19].
132. <i>Vaccinium myrtillus</i> L. - Bilberry (family Ericaceae - Heather)	vac.	Fruits, leaves, whole above-ground part	It is rarely used in homeopathy. Diarrhea; dysentery [7].
133. <i>Valeriana officinalis</i> L. sl - Valerian officinalis (family Valerianaceae - Valerian)	Valer.	underground part	Depression; hysteria. Bronchial asthma. Urolithiasis disease. Gastritis [5].
134. <i>Verbascum thapsus</i> L. - Common mullein (family Scrophulariaceae - Norichnikovye)	Verb.	Aboveground part	Tracheitis; rhinitis. Enuresis; cystitis. [5].
135. <i>Veronica beccabunga</i> L. - Veronica stream (family Scrophulariaceae - Norichnikovye)	Vero b.	whole plant	Tuberculosis. Cystitis. Rheumatism. Mycosis. Scrofulosis [19].
136. <i>Veronica officinalis</i> L. - Veronica medicinal (family	Vero-o.	Above ground or whole plant	Tuberculosis. Cystitis. Rheumatism. Mycosis. Scrofulosis [19].

Scrophulariaceae - Norichnikovye)			
137. Viburnum opulus L. - Viburnum vulgare (familyCaprifoliaceae - honeysuckle)	Vib	bark of young trunks, branches and roots	Hysteria; dizziness; insomnia. Angina pectoris [5].

Note: Poisonous plants used in homeopathy are in bold type.

The study was financially supported by the Russian Foundation for Basic Research/RFBR and the Administration of the Tomsk Region within the framework of the scientific project 16-44-700634.

CONCLUSIONS

1. The inventory of medicinal plants made it possible to establish that 137 species, growing in Siberia, in particular the Kuznetsk Alatau, can serve as sources of environmentally friendly raw materials for the production of homeopathic medicines.
2. We consider it expedient to further study the medicinal plants of Siberia in order to study of the possibility of scientifically based use of homeopathic preparations from them in clinical practice.

LITERATURE

1. Belodubrovskaya G.A., Zhokhova E.V. Nomenclature of medicinal plants used in homeopathy. Toolkit. - St. Petersburg: SPbKhFA, 1998. - 59 p.
2. Bubenchikova V.N., Kondratova Yu.A. Veronica oak - a promising plant for use in homeopathy // III Russian homeopathic congress: Collection of scientific papers. - M.: Publishing house of the Federal Scientific Clinical and Experimental Center for Traditional Methods of Diagnosis and Treatment of Roszdrav, 2007. - P. 166 - 168.
3. Vavilova N.M. Homeopathic pharmacodynamics. - "Homeopathic Center", Smolensk. - M.: Everest. - 1994. - Part 1. - 507 p., Part 2. - 475 p.
4. Patudin A.V., Mishchenko V.S., Ilyenko L.I., Kosmodemyansky L.V. homeopathic medicines approved in the Russian Federation for use in public health and veterinary medicine. - M.: "Sign", 2011. - 352 p.
5. Homeopathy. Complete Encyclopedia / Comp. A.N. Alefirov. - St. Petersburg: Publishing House "Ves", 2001. - 384 p.
6. State Register of Medicines of the Russian Federation. Official publication: in 2 vols. M.: Medicine, 2004.
7. Diagnostic analytical repertory / Comp. L.V. Kosmodemyansky (computer program "DAR" version 5.0 - 2015).
8. Kiseleva T.L., Smirnova Yu.A., Blinkov I.L. Brief encyclopedia of modern herbal medicine with the basics of homeopathy. - M.: Publishing house of the Professional Association of Naturotherapists, 2010. - 570 p.
9. Kosmodemyansky L.V., Nekratova A.N. The use of Ivan-tea in homeopathy / III Russian homeopathic congress: Collection of scientific papers. - M.: Publishing house of the Federal Scientific Clinical Experimental Center for Traditional Methods of Diagnosis and Treatment of Roszdrav, 2007. - P. 91.
10. Ladygina E.Ya., Frolova L.N., Kiseleva T.L. etc. Morphological and anatomical study freshly harvested raw materials of pharmaceutical aconite. Publication 1. Aboveground part // III Russian Homeopathic Congress: Collection of scientific papers. - M.: Publishing House of the Federal Scientific Clinical Experimental Center for Traditional Methods of Diagnosis and Treatment of Roszdrav, 2007. - P. 200-203.
11. Minaeva V.G. Medicinal plants of Siberia. 5th ed., revised. and additional - Novosibirsk: Science, Sib. department, 1991. - 431 p.
12. Melnikova N.N., Kiseleva T.L., Tsvetaeva E.V. Morphological and anatomical study of raw materials some representatives of the Pinaceae family used in homeopathy // III Russian Homeopathic Congress: Collection of Scientific Papers. - M.: Publishing House of the Federal Scientific

Clinical and Experimental Center for Traditional Methods of Diagnosis and Treatment of Roszdrav, 2007. - P. 204–207.

13. Nekratova A.N. Forest flora of the Kuznetsk Alatau: Ph.D. dis. ... cand. biol. Sciences. Novosibirsk, 2005. 20 p.

14. Kiseleva T.L., Tsvetaeva E.V. Nomenclature of producing plants and raw materials for production homeopathic medicines in Russia / Reference manual. - M.: Scientific and Practical Center for Traditional Medicine and Homeopathy of the Ministry of Health of the Russian Federation, 2002. - 124 p.

15. Kiseleva TL, Tsvetaeva EV The Nomenclature of producing plants and raw materials for the production of homeopathic remedies in Russia / Reference Book. - Moscow: Scientific and Practical Center of Traditional Medicine and Homeopathy of the Ministry of Health of the Russian Federation, 2002. - 96 p.

16. Patudin A.V., Mishchenko V.S. Chronicle of Russian homeopathy (1824-1995) M., 2015. - 304 p.

17. Patudin A.V., Tereshina N.S., Mishchenko V.S., Gubanov I.A. Worldwide Homeopathic Resources medicinal raw materials. - Kirov: JSC "House of Printing - Vyatka", 2006. - 560 p.

18. Samylina I.A., Sorokina A.A. Atlas of medicinal plants and raw materials. - M.: KMK, 2008. - 400 p.

19. Sinelnikov V.V. Homeopathy of Dr. Sinelnikov: Complete pathogenesis of drugs.

MATERIA MEDICA. REPERTORIUM. - M.: ZAO Tsentropoligraf, 2007. - 639 p.

20. Olsen S. Trees and plants that heal, 1997. ISBN: 978-18-9699-200-6. - 200p.

21. Madaus G. Lehrbuch der biologischen Heilmittel Hildesheim.-New York: Georg Olms Verlag, 1979. - B-d. I - 1880s., Bd. II - 1884 s., Bd. III - 1990s.

Author's address

Candidate of Biological Sciences, Associate Professor Nekratova A.N., Researcher, Siberian Botanical Garden, National Research Tomsk State University

aqulegia@gmail.com

Nekratova, A.N. To the study of medicinal plants of Siberia used in homeopathy / A.N. Nekratova, L.V. Kosmodemyansky // Traditional medicine. - 2017. - No. 4 (51). - P.17-25.

[To favorites](#)