Supplementary material

Table S1. Characteristic of thematic groups on Facebook

Group name	Number of members (in thous.)	Creationdate	Number of posts andcounsels
„Zioła i Leczenie Ziołami” (*Herbs and Herbal Treatment*)	397.0	November 2014	7 (351)
„Wylecz się Ziołami (Zioła, Naturalne metody leczenia, Porady, Natura)” [*Heal Yourself With Herbs* (*Herbs,Natural Healing Methods, Tips, Nature*)]	160.3	July 2017	9 (238)
„Zioła - Leczenie ziołami _ pytania i porady_zioła w kuchni i dla zdrowia” (*Herbs - Treatment with herbs _ questions and tips herbs in the kitchen and for health*)	155.1	June 2012	4 (268)
„Zioła - Leczenie Ziołami i Medycyna Naturalna” (*Herbs - Herbal Treatment and Natural Medicine*)	72.6	April 2017	6 (297)
„Naturalne metody leczenia –zioła-alternatywne metody - Wiedza o zdrowiu” (*Natural healing methods - herbs - alternative methods - Knowledge about health*)	66.0	April 2015	3 (146)
„Zioła i Leczenie Ziołami” (*Herbs and Herbal Treatment*)	69.7	March 2017	No results
„Rozpoznajemy zioła, chwasty i grzyby”	225.7	September 2016	No results

(*We recognize herbs, weeds and mushrooms*)			
„Panaceum Medycyna Naturalna” (*Natural Medicine Panacea*)	67.0	August 2015	Administrator has not provided consent
„Naturalne metody leczenia –zioła-alternatywne metody - Wiedza o zdrowiu” (*Natural healing methods - herbs - alternative methods - Knowledge about health*)	66.2	April 2015	Administrator has not provided consent
„Zioła i ziołolecznictwo” (*Herbs and herbal medicine*)	74.2	March 2013	Administrator has not provided consent
ZIOŁA i Medycyna Naturalna (*HERBS and Natural Medicine*)	51.5	February 2018	Administrator has not provided consent
Zioła, ziołolecznictwo - terapie naturalne (*Herbs, herbal medicine - natural therapies*)	89.0	June 2014	Administrator has not provided consent

Table S2. Inclusion criteria and search strategy

Inclusion criteria	• Written in English • Reports primary research • Concerns analysed CAM treatment in breast cancer • Does not concerns any additional CAM products • Study date (2000–2023)
Keywords considered	**CAM**: Beta Vulgaris, Beetroot, Dandelion, Taraxacum, Cannabidiol, Flax, Flaxseed, Linum Usitatissimum, Common Flax, Linseed, Nettle, Stinger, Urtica Dioica, Urtica, Curcuma, Turmeric, Iodum, Iodine, Vitamin C, Ascorbic Acid, Sodium Ascorbate, Vitamin D, Cholecalciferol, Ergocalciferol, Inonotus Obliquus, Chaga, Amygdalin **Disease**: Breast Cancer, Breast Cancers, Breast Neoplasm, Breast Neoplasms **Treatment:** Tamoxifen, Letrozole, Exemestane, Doxorubicin, Cyclophosphamide, Epirubicin, Paclitaxel, Docetaxel, Carboplatin, Methotrexate, Mitomycin and Vincristine
Participants	Cells, tissues, animals and humans
Study design	Conserns: *in vitro* studies, *ex-vivo* studies, animal studies, non-comparative studies, case reports, case series and prospective/retrospective clinical trials Does not concerns: narrative reviews, systematic reviews with or without meta-analysis, letters to the editors, short communications
Recent search date	5th January 2023

Table S3. Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE#
TITLE			
Title	1	Identify the report as a scoping review	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives	1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach	1–2
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (*e.g.*, population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives	2
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (*e.g.*, a Web address); and if available, provide	n/a

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE#
		registration information, including the registration number	
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (*e.g.*, years considered, language, and publication status), and provide a rationale	2; S2
Information sources*	7	Describe all information sources in the search (*e.g.*, databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed	3; S2
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated	4
Selection of sources of evidence†	9	State the process for selecting sources of evidence (*i.e.*, screening and eligibility) included in the scoping review	4
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (*e.g.*, calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators	4
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made	2

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE#
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate)	n/a
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted	2–3
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram	5–6
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations	S6–S17
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12)	n/a
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives	5–9
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives	7
DISCUSSION			

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE#
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups	9–10
Limitations	20	Discuss the limitations of the scoping review process	10–11
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps	11
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review	11

JBI — Joanna Briggs Institute; PRISMA-ScR — Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (*e.g.*, quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote)

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting

§The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of

"risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (*e.g.*, quantitative and/or qualitative research, expert opinion, and policy document)

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. Ann Intern Med. 2018; 169:467–473. doi: 10.7326/M18-0850

Table S4. A summary of the included studies

Authors (Year)	CAM product	Mechanism	Drug	Impact of treatment
Wang et al. [26] (2022)	Black seed	CYP2C9	TAM	Thymoquinone or thymoquinone-containing herbs may induce unexpected potential herb-drug interactions via the inhibition of CYP2C9
Fararh et al. [27] (2004) Massadeh et al. [28] (2007) Islam et al. [29] (2004) Boskabady et al. [30] (2011)	Black seed	IMM	CPH	Black seed might interfere with immunosuppressive therapy. The effect of black seed is unclear. Some animal studies suggest that it might stimulate immune function when others suggest that it may supress
Nasrin et al. [31] (2021)	Cannabidiol	CYP2C9, CYP3A4, CYP2C19	TAM LET EXE	Data suggest the possibility of pharmacokinetic interactions between cannabinoids extensively metabolized by CYP2B6, CYP2C9, and CYP2D6

			DOX CPH PTX DOC VIN	
Parihar et al. [33] (2022)	Cannabidiol	CYP3A4 CYP2D6	TAM	Patients receiving CBD and interacting chemotherapeutic drugs, such as tamoxifen, require monitoring to identify possible subtherapeutic response to treatment
Kim et al. [34] (2005)	Chaga	IMM	CPH	Certain constituents of chaga (polysaccharides) stimulate immune function
Maliakal et al [35] (2001)	Dandelion	UGP	TAM DOX	Dandelion intake may increase the clearance of drugs that are UGP substrates
Zou et al. [36] (2002)	Evening primrose	CYP2C29	TAM	Evening primrose may increase the level and clinical effects of CYP2C29 substrates
Liu et al. [37] (2019)	Greater celandine	CYP2D6	TAM	Greater celandine inhibits CYP2D6 enzyme activity and may increase levels of drugs metabolized by CYP2D6
Teschke et al. [38] (2011)	Greater celandine	HEP	TAM	Co-treatment with greater celandine and hepatoxic drugs might, therefore, increase the risk of liver damage

Stickel et al. [39] (2003) Moro et al. [40] (2009)			CPH MTX	
Nowicky et al. [41] (1991)	Greater celandine	IMM	CPH	Greater celandine might stimulate immune responses and might decrease the effects of immunosuppressive therapy
Damkier et al. [42] (2019) Chayasirisobhon et al. [43] (2020)	Delta-9-tetrahydrocannabinol	CYP2C9 CYP3A4	TAM LET DOX CPH PTX VIN	THC moderately increase levels and adverse effects of CYP2C9 and CYP3A4 substrates
Zhu et al. [44] (2006) Tournier et al. [45] (2010)	Delta-9-tetrahydrocannabinol	P-gp	TAM DOX PAC VIN	THC intake may also alter levels of drugs that are substrates of P-glycoprotein (P-gp)
Peretz et al. [46] (1991)	Selenium	IMM	CPH	Selenium may stimulate the immune system and may reduce the effectiveness of immunosuppressant therapy

Hou et al. [47] (2007) Valentine et al. [48] (2006)	Turmeric	CYP3A4	TAM LET EXE DOX CPH PTX DOC VIN	Turmeric might increase levels metabolized by CYP3A4
Yue et al. [49] (2012) Zhang et al. [50] (2007)	Turmeric	P-gp	TAM DOX PTX VIN	Turmeric intake might also increase the absorption of P-glycoprotein substrates
Somasundaram et al. [51] (2002) Hussarts et al. [52] (2019)	Turmeric	AE	DOX CPH EPI CPT	Turmeric has antioxidant effects. Theoretically, this may reduce the activity of chemotherapy drugs that generate free radicals, but the research is conflicting

			MMC	
Arzallus et al. [53] (2023) Halegoua-DeMarzio et al. [54] (2023)	Turmeric	HEP	TAM CPH MTX	A few case reports shows that turmeric consumption may increase the risk of liver damage when hepatotoxic drugs
Yasueda et al. [55] (2016)	Vitamin C	AE	DOX CPH EPI CPT MMC	The antioxidant effects of vitamin C might reduce the effectiveness of antitumor antibiotics
Robien et al. [56] (2013)	Vitamin D	CYP3A4	TAM LET EXE DOX CPH PTX DOC	Vitamin D induces CYP3A4 transcription

			VIN	

CPH — cyclophosphamide; CPT — carboplatin; DOC — docetaxel; DOX — doxorubicin; EXE — exemestane; EPI — epirubicin; HEP — might increase the risk of hepatoxity; IMM — interfere with immunosuppressive therapy; LET — letrozole; MMC — mitomycin C; MTX — methotrexate; PTX — paclitaxel; TAM — tamoxifen; UGT — uridine diphosphoglucuronosyl transferase; VIN — vinor