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EMBRYOTOXIC, TERATOGENIC AND ABORTIVE EFFECTS CAUSED BY THE CONSUMPTION OF PLANTS FOR FOOD AND MEDICINAL USE

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Abstract

Plants for food and medicine have been used by many civilizations throughout history. However, many of them have toxic substances. The main objective of this review is to identify plants used for food and for medicinal purposes, which may cause toxic effects on the embryo. We found that 405 species of plants have at least one of these characteristics: 14% (n = 58) of them are potentially toxic, 21% (n = 85) potentially teratogenic, and 88% (n = 356) are potentially abortive. Although the World Health Organization has an updated report on traditional medicine which includes the use of herbs and shows concern about toxicity, it does not mention possible embryotoxic or teratogenic effects. Moreover, in many countries the list of plants that may cause toxicity is outdated. In Brazil, the only document that warns of the risk associated with the consumption of plants during pregnancy contains 109 listed plants, a much smaller number than that presented by our work, emphasizing the need for continuous updating. The disclosure of this information may guide future health education strategies so that pregnant women are informed about the risks of ingesting these plants, which may affect their own health and that of their baby.

Keywords: abortive plants. embryotoxic plants. teratogenic plants. toxic plants. teratogenesis.

Introduction

Plants are consumed daily worldwide, due to their flavor, nutritional value, and medicinal properties. However, this consumption should be restricted to known plants, duly identified and in moderate quantity, since several plants for everyday consumption and often used in large volumes, have toxicological properties, such as garlic (*Allium sativum*), andiroba (*Carapa guianensis*), rue (*Ruta graveolens*) and basil (*Ocimum gratissimum*) (FERNANDES, FÉLIX and NOBRE, 2016; MENGUE, MENTZ e SCHENKEL, 2001)

Several species of plants can cause damage to health in humans and other animal species (SINITOX, 2020) when touched, inhaled, or ingested, and can even lead to death

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(VASCONCELOS, VIEIRA e VIEIRA, 2009). Toxicity depends on the species; storage; the form of handling and use; the dose; interaction with other plants; contamination by mycotoxins (RATES, 2001), pesticides, and heavy metals (EFFERTH and KAINA, 2011).

Ignorance of the risk associated with the consumption of some plants related to the spread of the belief that “everything that is natural is safe and healthy” has contributed to the increase in the consumption of herbal medicines (TABACH, 2020), including during pregnancy for mitigate common discomforts during this period (nausea, vomiting, constipation, and heartburn) or even for the treatment of diseases (DE FARIA, AYRES and ALVIM, 2004; PONTES *et al.*, 2012; SILVA, 2014). However, some toxic substances, present in consumed plants, can cross the placental barrier and cause toxic, teratogenic, and abortive effects (TABACH, 2020). In addition, some of these substances can also reach the baby through breastfeeding. The first trimester of pregnancy is the most critical, with a higher incidence of cases of abortions and congenital malformations (BRASIL, 2010). The properties present in medicinal plants can cause several congenital anomalies, through a potent uterotonic action, followed by a deficit in fetal or embryonic blood circulation (MENGUE, MENTZ and SCHENKEL, 2001).

Despite the free distribution of contraceptive methods by the Unified Health System (SUS) in Brazil, there are countless cases of unplanned pregnancy, either due to failure, misuse, or even the non-use of contraceptives. In cases like these, many women resort to abortion (BRASIL, 2011), through clandestine methods (BAKKE *et al.*, 2008), using abortive plants, such as boldo (*Peumus boldus*) and Senna (*Senna alexandrina*).

Although the World Health Organization (WHO) prioritizes the right of women to decide freely and responsibly whether they want to have a child and the right time for that, without restraint, violence or discrimination, in Brazil, abortion induced by the pregnant woman or by third parties, with or without her consent, is considered a crime. Except when the fetus has serious anomalies, such as anencephaly, and also when the pregnancy is the result of rape. However, some of these plants have a toxic capacity and can cause serious complications to the mother's health (SOUZA MARIA *et al.*, 2013).

Abortion is a major cause of mortality for women in the fertile period, mainly due to its complications such as puerperal infection. The profile of women who die by abortion is mainly black or indigenous, single, under 14 or over 40 years old, and with low education. Between 2010 and 2014, there were approximately 55 million abortions in the world, 45% of which were considered unsafe - performed in an inappropriate environment or by a

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disabled person. In Africa, Asia and Latin America 97% of the estimate is unsafe abortion (CARDOSO, VIEIRA and SARACENI, 2020). In the United States, the number of deaths of pregnant women is not counted because they are not 100% reliable, the accounting of the Center for Disease Control and Prevention (CDC) depends on death certificates to have an identification of maternal death (MARMION e SKOP, 2020).

In Brazil, there are no official data on unsafe abortion; estimates are made from data collected through the Mortality Information System (SIM) (MORAIS, ANDRÉ, 2017) and Hospital Information System (SIH), which only accounts for admissions to public units. Between 2006 and 2015, 990 women died from abortion or associated complications. In 2013, there were 687,347 to 865,160 induced abortions in Brazil (CARDOSO, VIEIRA and SARACENI, 2020).

Due to ignorance of the possible effects caused by the consumption of embryotoxic, teratogenic, and abortion plants or by intentional use, to cause abortion, many pregnant women consume them. Despite this, the only official document that aims to warn about these possible effects to support pregnant women, nursing mothers, and health professionals is a state resolution. According to a resolution of the State of Rio de Janeiro (SES / RJ Nº 1757 of February 18, 2002), the use of medicinal plants with toxic, teratogenic, and abortion potential is contraindicated during the first trimester of pregnancy and during the breastfeeding period (BRASIL, 2010). Thus, this work aims to carry out an integrative review to identify plants for food and medicinal use that may cause embryotoxic, teratogenic, and abortion effects, to guide future health education strategies to alert pregnant women, lactating mothers, and health professionals about the risks of consuming these plants.

Methods

The present work consists of an integrative review on food and medicinal plants with embryotoxic, teratogenic, and abortion properties, according to the protocol previously established by Souza *et al*., (2010) and Mendes, Silveira and Galvão (2008). This method is characterized by the synthesis of several scientific publications that allow conclusions on an area of interest (MENDES, SILVEIRA and GALVÃO, 2008).

The data were collected through the consultation of the electronic platforms LILACS (Latin American and Caribbean Literature in Health Sciences (LILACS), PubMed, SciELO (Scientific Electronic Library Online (SciELO), Portal de Periódicos Capes and Google Scholar, using the keywords the descriptors "abortive plants", "embryotoxic plants",

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"teratogenic plants", "toxic plants", "teratogenesis", "abortive plants", embryotoxic plants "," teratogenic plants "," toxic plants "and" teratogenesis " At the same time, we carried out a survey of protocols on the websites of the Brazilian Ministry of Health (MS) and the World Health Organization (WHO), using the same keywords and descriptors, including all articles available in the databases in accordance with the objectives of the study, published between 2000 and 2020, published in Portuguese and English.

Discussion

We selected 124 scientific articles with information on plants for food and medicinal use, according to pre-defined criteria. The plants were registered in a database, where names (scientific and popular) and possible effects (toxic to the embryo and/or fetus, teratogenic and abortive) were included. From this integrative review, it was possible to identify 405 species of plants: 14% (n = 58) potentially toxic to the embryo and/or fetus, 21% (n = 85), potentially teratogenic, 88% (n = 356) potentially abortive and 5% (n = 20) plant species with the three effects investigated. The list with the scientific names or popular names of all the plants found was included as supplementary information (Appendix A - Supplementary Table).

Toxicity is manifested through signs and symptoms, caused by harmful effects on an organism obtained by chemical substances. The use of herbal and food plants eaten by pregnant women should be restricted due to the risk of causing uterine stimulation and causing abortion. Among the plants with high toxicity are: garlic (*Allium sativum*), bitter aloe (*Aloe ferox*), garden angelica (*Angelica archangelica*), mountain arnica (*Arnica montana*), camphor tree (*Cinnamomum camphora*), eucalyptus (*Eucalyptus globulus*), rosemary (*Rosmarinus officinalis*), ginger (*Zingiber officinale*), *Senna alexandrina* (*Cassia angustifolia* and *Cassia acutifolia*), comfrey (*Symphytum officinale*) and sponge cucumber (*Luffa operculata*), which has the substance cucurbitacins responsible for embryotoxic, abortive, hemorrhage or even death. Toxicity inhibits embryonic cell growth (VIEIRA, 2013).

Rhizoma *Atractylodes macrocephala, Radix isatidis, Coptis chinensis* and *Flos Genkwa* are highly consumed as medicinal plants by pregnant women in China. *Coptis chinesis* was among the five most widely used herbal medicines in the country during pregnancy. The embryotoxicity of these plants was evaluated through tests with mouse embryonic stem cells (EST) and 3T3 fibroblasts. The cytotoxic effects on ESCs and 3T3 cells were detected with proliferation assay. The potency of the embryotoxicity of the herbs

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was based in the concentration of the compound that inhibit 50% of the proliferation. The results showed that Rhizoma *Atractylodes macrocephala* and *Radix isatidis* had no embryotoxic effect. Only *Coptis chinensis* demonstrated weak embryotoxicity and *Flos Genkwa* showed the strongest effect (LI *et al.*, 2015).

Zingiber officinale is the scientific name for ginger. It is used worldwide as a spice and also to treat nausea during early pregnancy. A study carried out with sexually mature and provenly fertile female mice had the objective of evaluating the effect of ginger extract on the estrous cycle and on the implantation period of zygote. The group received distilled water while the experimental group received the aqueous extract of ginger at concentrations of 250, 500, 1000 or 2000 mg/kg/day orally. At doses of 1000 and 2000 mg/kg per day there was maternal toxicity, with significant decrease in maternal weight, increased fetal mortality. The mice treated with 2000 mg/ kg/day showed a decrease in the implantation sites and a decrease in the luteal phase. As a result, ginger can impair the normal growth of the corpus luteum because of insufficient progesterone during early pregnancy. The two lowest concentrations had no adverse effects. Although ginger is still widely discussed as to its capacity for teratogenicity, abortion and maternal toxicity, this study did not present teratogenicity. Toxicity of ginger depends on the dose and on the presence of flavonoids, saponins and alkaloids, which can block regulatory gene expressions, thereby causing an uncontrolled angiogenesis, inhibiting cell proliferation and influencing its growth and apoptosis through the activation of p53, impairing embryogenesis, causing mutations and abortions (ELMAZOULDY and ATTIA, 2018).

An experiment with *Cannabis* was carried out with pregnant mice, where the animals were exposed to *Cannabis* smoke five minutes a day. The puppies were born with a reduction in weight and size, and the loss of implantation was twice as large and the number of male puppies per litter was greater, compared to a litter without exposure to *Cannabis*. In the experiment, the mother exposed to burning marijuana cigarettes tested positive for the presence of THC-COOH in the urine (BENEVENUTO *et al.*, 2017).

Gonzales and coworkers (2007) administered an aqueous extract of *Ruta chalepensis* (rue, rue fringe) intraperitoneally to test its effects on pregnancy. Pregnant mice received 10 mg of lyophilized rue/kg body weight intraperitoneally (ip) (treated group, n = 12) during the post-implantation period (day 9 – day 17 post-copulation). The control group (n = 18) received only distilled water in the same period. Rue did not affect the mother's weight, but it reduced the uterus weight during treatment ($p < 0.05$). In the treated group, the

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frequency of fetal reabsorptions was higher ($p < 0.05$) and the fetal weight was significantly lower compared to the control ($p < 0.01$). In addition, in the treated group, the presence of skeletal malformations was evidenced. In conclusion, we found that *R. chalepensis* has embryotoxic effects in mice exposed during the post-implantation period (GONZALES *et al.*, 2007).

The intoxication of animals by plants has a great financial impact on ranchers. In Brazil, about 7.4% to 15.85% of cattle die due to the ingestion of toxic plants, emphasizing the need for studies to identify them and consequent mortality control (PESSOA, MEDEIROS and RIET-CORREA, 2013). Plant intoxication can cause several metabolic disorders, in addition to abortions, teratogenies, various types of diseases and even lead to death. Experimental cases carried out with cattle, sheep, goats, pigs, rodents, horses and ruminants, presented different results. The *Aspidosperma pyrifolium* plant was responsible for causing abortions and/or premature birth in goats, sheep, ruminants and cattle. The same occurs with poisoning by *A. glazioviana, T. acutifolia, T. multiglandulosa, Stryphnodendron* spp. These plants, in addition to causing abortion and perinatal mortality, by passing the active ingredients through the placenta, cause lethargy, spongiosis and chronic cardiomyopathy, leading to death. Ingestion of *S. obovatum, E. contorttisiliquum* occurs mainly by cattle and goats, and can cause digestive system intoxication, photosensitivity and abortion. *Trifolium subterraneum* is a phytoestrogen. The sheep are more sensitive to it, however, the cattle, can present a low percentage of pregnancy, alteration of the reproductive cycle, cysts in the ovaries, hyperemic vaginal mucosa, thick and swollen uterine horns, enlarged udder and with production of milk aspect, dilation of the canal cervical and abundant mucous secretion in the vaginal cavity (RIET-CORREA, 2007).

Pregnant cows were subjected to an experiment in which *Stryphnodendron obovatum* beans were fed at doses of 5g per kg/day for 9 to 26 days. The fava beans caused decreased appetite, decreased rumen activity, drooling, difficulty getting up, unbalanced walking and weight loss. Between 20 to 30 days after the beginning of the administration of the fava beans three cows aborted. A fourth cow eliminated a mummified fetus seven months after the start of the experiment. Three cows gave birth to normal calves. The aborted fetuses and placentas had no macroscopic or microscopic lesions (TOKARNIA *et al.*, 1998).

According to the records, infertility resulting from intoxication can temporarily reduce reproductive function, until the causative agent is suspended, as well as causing permanent reproductive dysfunction. Alkylating agents, xenobiotics can act directly on the destruction

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of oocytes or spermatocytes because they are agonists or antagonists of hormones, as well as plants as putative compounds. The steroidal alkaloids cyclopamine, jervine, cycloposin of *Veratrum californicum* in cattle had the following effects observed: cleft palate, limb defects, tracheal stenosis and embryonic death. Ammodendrina of *L. formosus*, *L. shrubs*, *L. argenteus* caused cleft palate, skeletal contractures and malformations in the spine of cattle and goats. Anabasina of *Nicotiana tabacum* and *Nicotiana glauca* caused cleft palate, malformations in the spine of pigs, cattle, sheep and goats. Conine and g-conicein of *Conium maculatum* causes cleft palate and malformations in the spine of pigs, sheep, goats and cattle. *Prunus serotina* contains cyanogenic compounds suspected of causing cleft palate and contractures in the spine. Possibly alkaloids of *Datura stramonium* causes cleft palate and skeletal contracture in pigs. Cyanogen compounds of *Sorghum bicolor* and *Sorghum* × *drummondii* (Sudan grass) has been related to cases of spinal contracture in horses. Lathyrogens of *Lathyrus* spp.*, Lathyrus cicera, Lathyrus odoratus* skeletal defects in cattle and sheep. Calystegines of *Ipomoea carnea* caused reduced fetal growth in goats, rats and rabbits. Lufaculin, luffin of *Luffa acutangula* caused, reduced fetal growth, cleft palate in rats. *Caulophyllum thalictroides*, cause deformity in the cardiovascular and craniofacial cartilage in Japanese embryos from Medaka. Anthraquinones of *Senna occidentalis* observed delayed behavioral development in goats. *Gutierrezia sarothrae* and *G. microcephala* cause abortion in cattle, sheep and goats. *Oxytropis* sp. and *Astragalus* sp. cause an abortive effect in goats, cattle and sheep. Indolizidine alkaloid of *Vicia villosa*, *Raphanus raphanistrum* (wild radish), cause abortion in all animals. *Leucaena leucocephala* (hairy vetch), cause abortion in cattle. *Tetrapterys* spp.*, Niedenzuella acutifolia, Niedenzuella multiglandulosa* causes abortion in goats. Ethanol extracts of *Artemisia monosperma* causes abortion in rats. Aqueous extracts of *Bambusa vulgaris* causes abortion in rabbits. *Lupinus argenteus*, *Lupinus nootkatensis*, *Lupinus sericeus*, *Lupinus* spp. and *Lupinus sulphureus* cause malformation in the goat's spine. *Lantana camara* (common lantana) causes abortion in cattle and goats. *Iva angustifolia* (narrow-leaf sumpweed) causes abortion in cattle and goats (PANTER and STEGELMEIER, 2011; PUTNAM,1989; CHEEKE, 1998; GARDNER *et al.*, 1994; ROUSSEAUX, 1991; YAKUBU, 2009; HIJAZI, SALHAB, 2010; WU *et al.*, 2010; BARBOSA-FERREIRA *et al.*, 2011; SHEPARD and LEMIRE, 2011).

In humans, the ingestion of herbal and food plants during pregnancy should also be carried out with caution, since many of them have toxic compounds, which can cause liver

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damage, colic, diarrhea, mutagenesis, hemorrhage, changes in the production of breast milk, affect the growth of the embryo, cause congenital malformations and even abortion (BRASIL, 2010; RODRIGUES, 2011; VIEIRA, 2020). Comfrey (*Symphytum officinale*), for example, despite its healing action, is a toxic plant that has already led several individuals to death after severe hepatic impairment, being then prohibited by WHO. In pregnant women, it has already caused teratogeny and abortion (OLIVEIRA, 2018; BRASIL, 2010).

The sponge cucumber, wild loofa (*Luffa operculata*) is one of the ten most used plants for abortion purposes in Brazil (Rodrigues, 2011) due to the presence of cucurbitacin (SIMÕES *et al.*, 1995). Despite being prohibited for sale, it is possible to acquire at the street markets and in clandestine establishments (SOUZA-MARIA *et al.*, 2013). It was reported that some women who used this plant had vaginal hemorrhage and died after eating the fruits in order to cause abortion. The ingestion of this fruit after a more advanced stage of pregnancy can cause malformation to the fetus instead of inducing abortion (LANINI *et al.*, 2009).

Knowledge about the medicinal and abortion properties of plants has been built empirically and is shared across generations among family, friends, and community members (SOUZA-MARIA *et al.*, 2013). However, some plants used on a daily basis, such as garlic (*Allium sativum*), ginger (*Zengiber officinale*), rosemary (*Rosmarinus officinalis*), cumin (*Cuminum cyminum*), turmeric (*Curcuma longa*), chamomile (*Matricaria chamomilla* L. Rauschert), fennel (*Foeniculum vulgare*), nutmeg (*Myristica fragrans*), coffee (*Coffea arabica*), cloves (*Syzygium aromaticum*), lemon grass (*Cymbopogon citratus*) can cause damage to the health of the mother and baby and are often consumed by pregnant women who are unaware of these risks (DO NASCIMENTO and DE ALBUQUERQUE, 2005; DE FARIA, AYRES and ALVIM, 2004; BAKKE *et al.*, 2008; HERAGUICHI, 2010; GORRIL *et al.*, 2016; MONTANARI, 1999; SOUZA, SILVA and CARVALHO, 2010; VIEIRA, 2020).

Therefore, it is necessary to invest in research to investigate the effect of these plants and several others that are consumed daily by the Brazilian population, in addition to carrying out health education actions so that this information can reach the population in clear and objective language in order to preserve the health of pregnant women and their babies.

A study of ethnopharmacology at the Federal University of Pernambuco (UFPE) found that more than 50% of the participants believed that plants could not cause health risks. During pregnancy the herbs most used by them were fennel, boldo (*Peumus boldus*),

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lemon balm *(Melissa officinalis),* cinnamon *(Cinnamomum verum)*, chamomile (*Matricaria chamomilla*), west Indian lemon grass (*Cymbopogon citratus*) and mint *(Mentha* sp.*)* (OLIVEIRA, 2020). However, according to our integrative review, with the exception of lemon grass, all plants consumed by them have teratogenic substances and boldo can also be abortifacient. Several other plants, often consumed by the population, have abortive effects.

Despite the lack of knowledge about the risks associated with different plants during pregnancy, in this same study by UFPE, sponge cucumber (*Luffa operculata*), Lemon balm (*Melissa officinalis*), oleander (*Nerium oleander*) and stonebreaker (*Phyllanthus niruri*) were contraindicated by some pregnant women, as they related the use of these plants to bleeding, complications gastrointestinal and abortion (OLIVEIRA, 2020).

In addition to medicinal use, many women ingest plants to induce the menstruation, but they do not understand that this is a way to induceabortion. Other pregnant women use them intentionally due to the low cost and easy access to abortion plants. The intentional use of abortion plants in Brazil is carried out mainly because abortion is not allowed, except when pregnancy is the result of sexual abuse or when the fetus has a serious malformation. So, in cases of unwanted pregnancy, many pregnant women try to perform abortion illegally, either in clandestine clinics or in their homes, exposing them to the risk of death, and for this reason, abortion in Brazil is considered a public health aggravation (DO NASCIMENTO, DE ALBUQUERQUE, 2005).

The initiation of early sexual life, often without the use of contraceptives, makes adolescents more vulnerable to sexually transmitted infections and unplanned pregnancies and, consequently, the exposure of risks associated with abortion without medical supervision. In a study carried out in a health unit, adolescents reported the use of some substance or medication to induce abortion, including the use of plants such as sponge cucumber (*Luffa operculata*), stonebreaker (*Phyllanthus niruri*), rue (*Ruta graveolens*), *Persicaria punctata*, sabina (*Juniperus sabina*), centeio espigado (*Secale cereale*), jalapa (*Operculina macrocarpa*), sene (*Senna alexandrina*) and the stonebreaker as menstrual regulators. The use of multiple plants, simultaneously, associated with medications as misoprostol, was also reported by them. The most common plants associated with medicine were: rue (*Ruta Graveolens*), stonebreaker (*Phyllanthus niruri*), sponge cucumber *(Luffa operculata)*, *Persicaria punctata* and a mix of plants known as “pill of the bush” composed of Brazilian jalapa resin, extract of sponge cucumber, (*Piper nigrum*) black pepper,

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(*Cenchrus echinatus*) carrapicho verde and aroeira (*Myracrodruon urundeuva*) (BRASIL, 2020; DO NASCIMENTO and DE ALBUQUERQUE, 2005; MOREIRA *et al.*, 2001)

Another problem associated with the consumption of plants with abortive properties is that the dose ingested can be inefficient to achieve the desired effect, and can result in congenital malformations, or even severe damage to health and even put the life of the pregnant woman at risk (DO NASCIMENTO and DE ALBUQUERQUE, 2005). Some pregnant women who used *Mentha pulegium.* (mint), *Cinchona calisaya*, and *Punica granatum* (pomegranate) to induce abortion, had babies with focomelia - approximation or shortening of the fetus limbs (MOREIRA *et al.*, 2001). In our study, 70 abortion plants were identified whose effects have been observed in humans and disseminated from reports and case studies. However, as can be seen, several of these plants when consumed can produce toxic and teratogenic effects, in addition to abortion.

In Brazil, there are few strategies to alert pregnant women about the risks associated with the consumption of plants with embryotoxic / fetotoxic, teratogenic and abortion properties. Therefore, it is necessary to prepare and even update documents that can facilitate access to this information and guide health education strategies. Silva, for example, in addition to interviewing and disseminating knowledge about medicinal plants to pregnant women through his work, produced didactic-educational material for the population (CARDOSO, VIEIRA and SARACENI, 2020).

One of the documents that could be updated, for example, is the National List of Medicinal Plants of Interest to the Unified Health System (RENISUS), which informs a list of plants for therapeutic use, but does not indicate any of their contraindications. However, 14 of these plants have been cataloged with a possible toxic, teratogenic and abortive effect in reports and case studies in humans. The plants present in RENISUS, which merit the highlight of contraindication for pregnant women, are *Dysphania ambrosioides* (LANINI *et al.*, 2009) and *Ruta graveolens* which are toxic to the embryo and / or fetus; *Mentha* sp. (COSTA *et al.*, 2017), *Artemisia absinthium* (EFFERTH and KAINA, 2011), *Matricaria chamomilla* (BARBOSA-FERREIRA *et al.*, 2011), *Dysphania ambrosioides* (SIMÕES *et al.*, 1995) , *Cynara scolymus* (CHEEKE, 1998) , *Mentha* sp. (BARBOSA-FERREIRA *et al.*, 2011) , *Mentha pulegium* (LANINI *et al.*, 2009), *Phyllanthus* sp. (CHEEKE, 1998), *Phyllanthus niruri* (DO NASCIMENTO and DE ALBUQUERQUE, 2005), *Punica granatum* (DO NASCIMENTO and DE ALBUQUERQUE, 2005), *Plectranthus barbatus* (BARBOSA-FERREIRA *et al.*, 2011), *Persicaria punctata* Efferth, Kaina, 2011, *Ruta graveolens* (SOUZA

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et al., 2013), *Schinus terebinthifolia* (BARBOSA-FERREIRA *et al.*, 2011), and *Vernonia condensata* (BARBOSA-FERREIRA *et al.*, 2011) , which have an abortive effects.

One of the few government initiatives to guide pregnant women and health professionals about the risk of plant ingestion during pregnancy is SES Resolution No. 1757 of February 18, 2002, produced by the State Program for Medicinal Plants/PROPLAM, from the health department of the Rio de Janeiro, which listed 109 species of plants that can cause different harm to the health of pregnant women, fetuses and infants, in addition to not recommending the use of medicinal plant drugs, which do not have toxicity studies, in the first trimester of pregnancy and lactation (BRASIL, 2002). In this integrative review we included only 67 of them, because the others had no embryotoxicity, teratogenic and abortive effects. When comparing the effects pointed out by the resolution with those identified from this integrative review, it was possible to notice some differences, such as *Mentha pulegium* which was described as an emenagogue (BRASIL, 2002) and also has an abortive effect (DO NASCIMENTO and DE ALBUQUERQUE, 2005; MOREIRA *et al.*, 2001), *Allium sativum*, which produces colic in babies (BRASIL, 2002) can induce abortion (VIEIRA, 2020) and *Artemisia absinthium*, which in addition to emenagogue, neurotoxic, oxytocic (BRASIL, 2002), can cause abortion (OLIVEIRA, 2020; GORRIL *et al.*, 2016). 237 species of plants were also identified that are not included in the resolution and can cause one or more effects studied in this work, among them 62 have their effects observed in humans. Despite the resolution SES No. 1757 addressing the term “fetotoxic” to guide the restriction of the use of plants, in the publications the term “embryotoxic, “toxic to the embryo” or “toxic to the fetus” was used, before that, to group all the terms, we use the term “toxic effect on the embryo and/or fetus” when there are risks to the fetus as well.

Considering the seriousness of the problem, it is necessary to allocate more financial resources to research institutions so that it is possible to investigate the adverse effects caused by the various other plants that we use frequently. In addition, it is necessary to produce and update documents that can facilitate access to this information so that health and education professionals can develop health education strategies to inform the population and raise awareness about the risk associated with indiscriminate consumption of plants, especially during the gestational period, when substances with embryotoxic, fetototoxic, teratogenic and abortion properties can cross the transplacental barrier and reach the baby.

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Conclusion

Plants are consumed and recognized worldwide for their nutritional and medicinal properties. In the search for a healthier life, the consumption of more natural products, such as plant teas, spices, and herbal medicines has increased considerably. The big question is: "How healthy are these natural substances?" In this sense, we conducted a data survey through an integrative analysis in order to identify plants which are potentially toxic to the embryo and/or fetus, teratogenic and abortive, when consumed by pregnant women. From the data survey, we found 405 plants with one or more of the possible effects studied, which may even cause damage to the health of the pregnant woman. Therefore, it is extremely important that the data is released so that the population is aware of the danger of consuming these plants during pregnancy.

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APPENDIX A – SUPPLEMENTARY TABLE

Scientific name	Common name Portuguese / English	Effect	Citation	Observations	Article types
Abrus precatorius *	ervilha-do-rosário, jequiriti. / jequirity bean	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	aqueous extract of seeds between the first and 10th day of gestation at a dose 125 mg/kg	Case report in humans, Review
Acacia nilotica	gum arabic	Abortive	MONTANARI, 1999		Review
Acacia rugata	soap-pod	Abortive	MONTANARI, 1999		Review
Acanthospermum australe	carrapicho-da-prai, carrapicho-de-carneiro, carrapicho-rasteiro, cordão-de-sapo, espinho-de-carneiro, picão-da-praia, carrapicho-do-campo / spiny-bur	Abortive	MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	every plant	Review
Acanthospermum hispidum	amor-de-negro, cabeca-de-boi, carrapicho-de-carneiro, carrapicho-rasteiro, comboeiro, espinho-de-carneiro, espinho-de-retirante, federação, pica-de-minas, picão, retirante; torito. / bristly starbur	Abortive	MONTANARI, 1999	fresh	Review - rats
Achillea millefolium	mil-leaves, milefólio, milefólio-in-rama, nariz-sangrento / common yarrow	Abortive	MONTANARI, 1999; SECRETARIA DE SAÚDE, 2002.		Review, Resolution

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Achyranthes aspera	palha de flowers, flowers joio espinhosa, chicote/ prickly chaff flower	Abortive	SECRETARIA DE SAÚDE, 2002; MONTANARI, 1999	roots; single dose of 50 mg/kg	Review - Mice, rabbits and rats
Achyrocline gardnerii *	marcela	Abortive	GORRIL et al., 2016.		Case report in humans
Aesculus hippocastanum *	castanha-da-índia / horse chestnut	Abortive	GORRIL et al., 2016.		Case report in humans
Ageratum conyzoides	mentrasto, camará-opela, catinga-de-bode / billygoat-weed	Abortive	MONTANARI, 1999	tea from leaves, branches or whole plant	Review
Albizzia lebbeck	coração-de-negro, faveiro / siris tree	Abortive	MONTANARI, 1999	bark and seeds	Review - rabbits
Allium cepa	cebola-de-cabeça / onion	Abortive	MONTANARI, 1999		Review - in vitro
Allium sativum º	alho / garlic	Abortive	VEIGA JR. & PINTO. 2005; VIEIRA et al., 2013		Review , PPH
Aloe ferox	aloe / bitter aloe	Abortive	VIEIRA et al., 2013; VEIGA JR. & PINTO. 2005.		PPH, Review
Aloe spp*	babosa / aloe	Abortive / Teratogenic	ARCANJO et al., 2013; DUARTE et al., 2017; SECRETARIA DE SAÚDE, 2002; BOCHNER et al., 2012; ANHESI et al., 2016; OLIVEIRA, 2018; MONTANARI, 1999	two teaspoons of juice extracted from leaves in half a liter of warm water and half a glass a day for three days	Review , PP-H, Resolution, Review in humans
Aloe vera	babosa, aloe, aloe-de-barbados e aloe-decuraçao / aloe	Abortive	MONTANARI, 1999	high doses	Review
Amorimia exotropica		Abortive / Toxic to the inbryo and/or fetus	ARRUDA et al., 2016; RIET-CORREA et al., 2007		Experimental in cattle

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Amorimia rigida	timbó, tripe breaker and tripe breaker	Abortive / Tóxico para o embrião e/ou fet	ARRUDA et al., 2016; RIET-CORREA et al., 2007; SILVA et al, 2017	dose of 5g of leaves per kg of weight	Experimental in cattle, goats
Amorimia septentrionalis		Abortive / Toxic to the inbryo and/or fetus	ARRUDA et al., 2016; RIET-CORREA et al., 2007; LOPES et al., 2019	10 sheets, the average amount of MF contained in the sheet is 0.00074% ±0.00018.	Experimental in cattle, goats
Amorimia pubiflora	corona	Abortive / Tóxico para o inbrião e/ou fet	ARRUDA, et al., 2016; RIET-CORREA et al., 2007		Experimental in cattle
Ananas comosus	abacaxi / pineapple	Abortive	MONTANARI, 1999		Review - rats
*Aninone coronaria**	aninone / poppy aninone	Abortive	AL- QURA'N, 2005		Review in humans
Aninopaegma sp.	catuaba	Abortive	ANHESI et al., 2016.		Review
*Angelica archangelica**	angélica européia / angelica wild parsnip	Abortive	ANHESI et al., 2016; RODRIGUES et al., 2011; SOUZA et al., 2013; VIEIRA, et al., 2013	leaves	Review , Review , Case report in humans; PPH
*Annona squamosa**	pinha, ata / custard apple	Abortive	SILVA; SILVEIRA; GOMES, 2016		PPH
Angelica archangelica	arcangélica, erva-de-espírito-santo, jacinto-da-índia, polianto, root-do-espírito-santo / wild parsnip	Abortive	MONTANARI, 1999	leaves, fruits	Review - humans
Areca catechu	areca-nut	Toxic to the inbryo and/or fetus / Teratogenic	SECRETARIA DE SAÚDE, 2002.		Resolution

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Arginone mexicana *	cardo-santo, cardo-bento, papoula-do-méxico, erva-de-cardo-amarelo / yellow pricklypoppy	Abortive	MONTANARI, 1999	tea, mate from the roots, before or after the date of menstruation, two or three times a day, the first dose when lifting, fasting, and the last, at bedtime	Review - humans
Aristolochia trilobata *	milomi / three finger bitters	Abortive	BARROS; ALBUQUERQUE, 2005		Case report in humans
Aristolochia cymbifera *	angelicó, papo-de-peru	Abortive	MONTANARI, 1999	tea from the roots	Review - humans
Aristolochia indica	indian birthwort	Abortive	MONTANARI, 2008; MONTANARI, 1999	chloroform extract from the roots;	Review , Review - rats
Aristolochia sp.	mil homens, jarrinha / birthwort	Abortive	SECRETARIA DE SAÚDE, 2002; SECRETARIA DE SAÚDE, 2002.		Review , Resolution
Aristolochia triangularis	cipó mil homens, cipó-jarrinha, angelicó, aristoláquia, calungo, capa-homin, cassaú, cipó-mata-cobras, cipó-milongue, culhão-de-maroto, jarra, jarrinha, jarro, mil-homens, mil-homens-do-rio-grande, papo-de-galo, papo-de-perú, sapato-de-judeu, ypê-mirim.	Abortive	GORRIL et al., 2016; MENDES et al., 2011; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999		Review , Experimental in rats
*Arnica montana**	arnica / mountain arnica	Abortive / Teratogenic	RODRIGUES et al., 2011. ANHESI et al., 2016; SOUZA et al., 2013; MENDES et al., 2011; VIEIRA, et al., 2013	leaves; against indicated also in the breastfeeding period	Review, Review, Case report in humans, Experimental in rats, PPH

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*Artinisia absinthium**	losna, sintro, absinto, artinísia, absinto-comum, absinto-grande, absinto-maior, absíntio, acinto / wermut	Abortive	ANHESI et al., 2016; COSTA et al., 2012; DUARTE et al., 2017; DUARTE et al., 2017; GORRIL et al., 2016; OLIVEIRA, 2011; CAMPOS et al., 2016; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001		Review, Case report in humans, Review - H
Artinisia afra	african wormwood	Abortive	MONTANARI, 1999	330 mg/kg, between the first and 10th day of gestation, 15 g per litre.	Review - rats, in vitro
Artinisia arborescens	shrubby mugwort	Abortive	MONTANARI, 1999		Review
Artinisia kopetdaghensis		Abortive / Toxic to the inbryo and/or fetus	OLIAEE et al., 2014.	hydroalcoholic extract	Experimental In vivo e In vitro
Artinisia maritima		Abortive	MONTANARI, 1999	leaves	Review - rats
Artinisia monosperma		Abortive	PANTER; STEGELMEIER, 2011		Experimental
Artinisia sieversiana	sieversian wormwood	Abortive	MONTANARI, 1999	whole plant	Review
Artinisia spp.		Toxic to the inbryo and/or fetus / Teratogenic/ Abortive	MONTANARI, 1999		Review
*Artinisia verlotorum.**	infalivina	Abortive	MONTANARI, 1999; GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001		Review ; Case report in humans

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Artinisia vulgaris¨*	artinisi / mother of herbs	Toxic to the inbryo and/or fetus / Teratogenic / Abortive	RODRIGUES et al., 2011; SECRETARIA DE SAÚDE, 2002; ARCANJO et al., 2013; SOUZA et al., 2013; MENDES et al., 2011; GORRIL et al., 2016; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	three tablespoons of the leaves and four cups of water and two cups of tea a day	Review , Resolution, Review - humans, Case report in humans, Experimental in rats,
Asclepias asperula subsp. Capricornu *		Abortive	MONTANARI, 1999	decolate of the roots is taken in the morning, for three to four days	Review - in humans
Asparagus officinalis	espargo, melindre, aspargo-hortense; spargel (alinão); esparraguera (espanhol); asperge (francês); asparagus (inglês); asparago (italiano) / asperge	Toxic to the inbryo and/or fetus / Abortive	MONTANARI, 1999		Review
Aspidosperma pyrifolium	perobosa, pereiro, pereiro-de-skirt, peroba-rosa	Teratogenic / Abortive	NETO et al., 2009; RIET-CORREA et al., 2007; ASSIS et al., 2009; NASCIMENTO; MEDEIROS; RIET-CORREA, 2018; NETO; SAKAMOTO; BLANCO, 2013; RIET-CORREA; MEDEIROS; SCHILD, 2011; PANTER; STEGELMEIER, 2011; SILVA et al., 2006	dry and green leaves	Experimental in caprinos, sheep, cattle; Case reportin Ruminants
Aspidosperma quebrancho-blanco *	cacha-cacha, quebracho, quebracho-branco	Abortive	MONTANARI, 1999	Roots	Review - huamanos

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Astragalus hamosus	yellow milk vetch	Abortive	AL- QURA'N, 2005		Review in humans
Astragalus lentiginosus¨	freckled milk-vetch	Teratogenic / Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Astragalus spp.		Teratogenic	MARCELINO et al., 2017		Experimental in goats
Astronium urundeuva	aroeira	Abortive	GORRIL et al., 2016; ANHESI et al., 2016.		Review , Review
Ateleia glazioveana	maria-preta, cinamono-bravo, timbó	Toxic to the inbryo and/or fetus / Teratogenic / Abortive	RIET-CORREA; MEDEIROS; SCHILD, 2011; RIET-CORREA et al., 2005; RIET-CORREA et al., 2007; PESSOA; MEDEIROS; RIET-CORREA, 2013; RIET-CORREA; MEDEIROS, 2001; PANTER; SANTOS et al., 2004; STEGELMEIER, 2011; STOLF et al., 1994; GARCIA Y SANTOS et al., 2004; RISSI et al., 2007; RAFFI et al., 2004	dry plant at 100ºC, 20g and 35g of plant per kg of live weight / green plant; 1 to 24 daily doses of green or dried plants 22.30 and 35g/kg of green and dry leaves; 21 g/kg dry plant	Review on sheep and goats; Experimental in cattle, sheep; Review
Astragalus sp.	*white astragalus, vetch-white dot*	Teratogenic / Abortive	PANTER; STEGELMEIER, 2011		Experimental
*Baccharis genistelloides**¨	carqueja	Abortive	SECRETARIA DE SAÚDE, 2002; SOUZA et al., 2013; RUIZ et al., 2008.		Resolution, Relato de casos in humans, Review
Baccharis sp.¨		Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
*Baccharis trimera**	carqueja	Abortive	GORRIL et al., 2016; ARAÚJO et al., 2016		Review , Review e humans
Bambusa vulgaris	golden bamboo	Abortive	PANTER; STEGELMEIER, 2011		Experimental

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Bauhinia forficata subsp. pruinosa	bauínia, capa-bode, cascode-burro, casco-de-vaca, ceroula-de-homin, miriró, mororó, pata-de-boi, pata-de-veado, pé-de-boi, unha-de-boi, unhade-boi-de-espinho, unha-de-vaca, unha-de-veado / cow's-foot	Abortive	MONTANARI, 1999		Review
Berberis aristata	indian barberry	Abortive	MONTANARI, 1999		Review - in vitro
Brassica rapa *	mustard / field mustard	Abortive	AL- QURA'N, 2005		Review in humans
Brassica oleracea ¨	mostarda / mustard	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Brassica nigra *	mostarda preta / black mustard	Abortive	AL- QURA'N, 2005		Review in humans
Brunfelsia uniflora	manacá de jardim, primavera, manacá, manacá-de-cheiro, mercúrio-vegetal	Abortive	GORRIL et al., 2016; CAMPOS et al., 2016; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	leaves, roots and splints; tea from the roots	Review
Buchenavia tomentosa	mirindiba, birindiba, tarumarana, cuiarana, pebanheira	Toxic to the inbryo and/or fetus / Abortive	MELLO et al., 2010; NUNES et al., 2010	fruits; 10% of fruits	Case report on animals; Experimental in rats
Buglossoides arvensis	pigeon weed	Abortive	MONTANARI, 1999	plant in powder	Review
Butea monosperma	flor de fogo / bastard teak	Abortive	MONTANARI, 1999	flowers	Review - rats
Byrsonima crassifolia	douradinha-falsa, murici, murici-assú, murici-cascudo, murici-da-praia, muriri-do-campo / craboo	Abortive	MONTANARI, 1999	roots	Review

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Caesalpinia ferrea	pau-ferro, jucá, jucaína / leopard tree	Toxic to the inbryo and/or fetus / Abortive	ASSIS et al., 2009		In ruminant case report
Caesalpinia pyramidalis	catingueira	Toxic to the inbryo and/or fetus / Teratogenic / Abortive	ROCHA, 2018.		Case study in animals - sheep and goats
Caesalpinia sp.	catingueira	Abortive	MELLO et al., 2010	broad beans	Case report on animals
Cajanus cajan	feijão-andu, andu, feijão guandu, guandeiro, guando, pigeonpea, pigeon pea (inglês), pois d'angole, pois cajan (francês), guandul (espanhol), straucherbse (alinão) / red gram	Abortive	MONTANARI, 1999		Review - rats
Calendula officinalis¨	calendula / common marigold	Abortive	SECRETARIA DE SAÚDE, 2002; ARCANJO et al., 2013.		Review , Resolution
*Cannabis sativa**	maconha, cânhamo, erva-de-santa-maria, diamba, pango, haxixe / maryjane	Toxic to the inbryo and/or fetus / Abortive	BENEVENUTO et al., 2017; SILVA; DANTAS; CHAVES, 2010; BAKKE et al.; 2008; OLIVEIRA, 2011; MONTANARI, 1999		Experimental in rats, Case report in humans, PPH, Review - rats
Capsella bursa-pastoris	bolsa-de-pastor, erva-do-bom-pastor / common shepherd's purse	Abortive	MONTANARI, 1999		Review - rats

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Carica papaya	mamoeiro, mamão-do-amazonas, mamãozinho, papaia, papaieira, pinoguaçu, papaya / melon tree	Abortive	MONTANARI, 1999	papain, at a dose of 750 mg/kg, administered to rats between the eighth and 17th day after the same time.	Review - rats
Casearia sylvestris	guaçatonga, erva-de-bugre, tea-de-bugre	Abortive	MENGUE; MENTZ; SCHENKEL, 2001; GORRIL et al., 2016.	leaves	Review
Catharanthus roseus *	vinca, vinca-de-gato, flor-da-boa-noite, pervinca / graveyard plant	Abortive	GORRIL et al., 2016; SILVA; SILVEIRA; GOMES, 2016; MENGUE; MENTZ; SCHENKEL, 2001	every plant	Review ; PPH
Caulophyllum thalictroides	blue cohosh	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Cayaponia martiana	taiuiá, abobrinha-do-mato, azougue-do-brasil, root-de-bugre	Abortive	MONTANARI, 1999	decocto with two tablespoons of the roots dried, peeled and crushed in a mug of water and drink one mug a day until abortion occurs	Review
Celastrus paniculatus	oriental bittersweet	Abortive	MONTANARI, 1999	leaves and the shells are the parts used	Review
Cereus jamacaru *	mandacaru / cactus	Abortive	SILVA; SILVEIRA; GOMES, 2016		PPH
Chenopodium album *	mastruço, ançarinha-branca, erva-formigueira-branca e fedegosa / white goosefoot	Abortive	MONTANARI, 2008; GAIÃO et al., 2017; MONTANARI, 1999	extracted from the leaves; type of extract; anabolic; dosagin: not defined	Review , Review in humans
Chrysanthinum parthenium	artinisia / feverfew	Abortive	MENGUE; MENTZ; SCHENKEL, 2001	every plant	Review
Cichorium intybus	chicória / chicory	Abortive	MONTANARI, 1999	rats between the 12th and 14th day of gestation at a dose of 200 mg/kg	Review - rats

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Cicuta maculata	cicuta/ spotted water hinlock	Abortive	MONTANARI, 1999		Review
Cinchona calisaya *	quina-verdadeira, quinino / yellowbark, quinine	Teratogenic, Abortive	BARROS; ALBUQUERQUE, 2005; MOREIRA et al., 2001.		Case report in humans, Case study H
Cinchona spp.¨	quina verdadeira / yellowbark, quinine	Teratogenic, Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Cinnamomum camphora *	cânfora, canela-canforeira / camphor tree	Abortive	MONTANARI, 1999; RODRIGUES, et al., 2011; SOUZA et al., 2013; VIEIRA, et al., 2013; MENDES et al., 2011; SEIFERT et al., 2016	bark	Review , Case reportH, PPH, Experimental in rats
Cinnamomum verum *	canela, canela-do-ceilão / cinnamon	Abortive	GORRIL et al., 2016; ANHESI et al., 2016; GAIÃO et al., 2017; MENGUE; MENTZ; SCHENKEL, 2001	consumed in tea form; extracted from the Casca; extract type: Hydroalcoholic; dosagin: 1000mg/kg/day; bark	Review , Review - humans
Citrullus colocynthis *	maçã amarga, pepino amargo, cabaça deserto, egusi, vinha de sodoma / bitter apple	Abortive	MONTANARI, 1999	fruit	Review - humans
Cleome spinosa *	beijo fedorento, mussambê / spiny spider flower	Abortive	SILVA; SILVEIRA; GOMES, 2016; BAKKE et al.; 2008		PPH
Centaurea benedicta	cardo-bento ou cardo-santo / blessed thistle	Abortive	MONTANARI, 1999	tea	Review
Coffea sp.	café / coffee	Teratogenic, Abortive	SOUZA; SICHIERI, 2005		Review
Coffea arabica	café / coffee	Abortive	GORRIL et al., 2016; HARAGUCHI; CARVALHO, 2010	leaves; after drying the fruits and grinding (until dusted)	Review ; PPH
Coix lacryma-jobi	lágrimas de nossa senhora / job's-tears	Abortive	ANHESI et al., 2016.		Review

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Colchicum autumnale	açafrão do prado / meadow saffron	Toxic to the inbryo and/or fetus	SECRETARIA DE SAÚDE, 2002.		Resolution
Commiphora myrrha¨	mirra / somali-myrrhe	Abortive	SECRETARIA DE SAÚDE, 2002, ANHESI et al., 2016.		Resolution, Review
Conium sp.	, veneno cicuta / poison hinlock	Teratogenic	WELCH; LEE; PFISTER, 2018		Review
Conium maculatum¨*	cicuta /poison hinlock	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	SECRETARIA DE SAÚDE, 2002; LI et al., 2015; DANTAS, 2010 et al., 2010; MARCELINO., et al., 2017; PANTER et al., 2013; PANTER; STEGELMEIER, 2011; AL-QURA'N, 2005		Resolution; Experimental in vitro, in vivo: goats; Case study in animals; Review - pigs, humans.
Copaifera langsdorffii	copaiba / copaiba balsam	Toxic to the inbryo and/or fetus	COSTA-LOTUFO et al., 2002.		Experimental in vitro
Coptis chinensis	fios dourados chineses / chinese gold thread	Toxic to the inbryo and/or fetus	LI et al., 2015.		Experimental in vitro
Cordia monoica *	tea-de-bugre / snot berry	Abortive	MONTANARI, 1999	pieces of roots chewed	Review – humans
Cheilocostus speciosus	cana-de-macaco / wild ginger	Abortive	MONTANARI, 1999		Review
Coutarea hexandra *	quina quina	Abortive	ANHESI et al., 2016; GORRIL et al., 2016.		Review ; Case reportH
*Crescentia cujete**	coité / common calabash tree	Abortive	ASSIS et al., 2009		Case reportin Ruminants

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Crocus sativus	açafrão verdadeiro; açafreiro; açafroeiro; açafrão espanhol; açafrão oriental; flor de hércules / saffron crocus	Abortive	MONTANARI, 1999	tea	Review
Crotalaria juncea	cânhamo-da-índia / 179ndian-hinp	Abortive	MONTANARI, 1999	leaves and seeds	Review – rats
Crotalaria retusa	matraca / cattle weed	Abortive	NOBRE et al., 2004	100 g seeds	Experimental in horses
Crotalaria spp.	guizo-de-cascavel, feijão-de-guizo, chocalho-de-cobra, gergelim-bravo / indian-hinp	Abortive	MELLO et al., 2010		Case report on animals
Chromolaena odorata	arbusto amargo / bitter bush tea	Abortive	MONTANARI, 1999	leaves and branches	Review
Chrysanthinum vulgare ¨	crisântino / common tansy	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
*Cuminum cyminum**	cominho / cumin	Abortive	SILVA; DANTAS; CHAVES, 2010		Case report in humans
Cunila fasciculata	poejo	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	every plant	Review
Cunila galioides *	poejinho	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001.	Every plant	Case report in humans; Review
Cunila menthoides *	poejo-de-folha-grande, manjericão-do-campo, poejão-de-folha-grande	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999		Case report in humans, Review
Cunila microcephala	poejinho, poejo-do-banhado, poejo-do-rio-grande	Abortive	MENGUE; MENTZ; SCHENKEL, 2001	every plant	Review

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Cunila platyphylla	poejo	Abortive	MENGUE; MENTZ; SCHENKEL, 2001	every plant	Review
Cunila spicata	poejo, poejo-do-banhado	Abortive	MENGUE; MENTZ; SCHENKEL, 2001	every plant	Review
Cupressus macrocarpa	cipreste-de-monterei / monterey cypress	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Curcuma longa¨	açafrão falso, açafrão, açafrão da terra, gengibre amarela, root de sol / turmeric	Abortive	SECRETARIA DE SAÚDE, 2002; MONTANARI, 1999		Resolution; Review - rats
Curcuma zedoaria¨	zedoária / white turmeric	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
*Cymbopogon citratus**	capim-limão / linongrass	Abortive	FARIA; AYRES; ALVIM, 2004; BAKKE et al., 2008		PPH
*Cynara scolymus *º*	alcachofra / globe artichoke	Abortive	OLIVEIRA, 2011		Case report in humans
Pergularia dainia	trellis-vine / timboeiro	Abortive	MONTANARI, 1999		Review - in vitro
Dalbergia stipulacea	east himalayan dalbergia	Abortive	MONTANARI, 1999	bark	Review
Daphne genkwa	dafne / chinese daphne	Abortive Toxic to the inbryo and/or fetus	MONTANARI, 1999; LI et al., 2015.	roots	Review - rats Experimental in vitro
Datura stramonium¨	trombeteira / dino fig, devil fig, hell fig	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	SECRETARIA DE SAÚDE, 2002; PANTER et al., 2013; PANTER; STEGELMEIER, 2011		Resolution, Review - cavalos, Experimental
Dianthus superbus	cravo de jardim / fringed pink flower	Abortive	ANHESI et al., 2016.		Review
Dieffenbachia seguine	comigo-ninguém-pode / dumb cane	Abortive	MENGUE; MENTZ; SCHENKEL, 2001	leaves in decoction	Review

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Dimorphandra mollis	faveira, fava-d'anta / greater yam	Abortive	MELLO et al., 1999; SANT'ANA et al., 2014		Experimental in rats; Case report on animals
Dioscorea alata	inhame / yam	Abortive	CAMPOS et al., 2016	tubers	Review
Dioscorea floribunda	inhame, cara / yam	Abortive	CAMPOS et al., 2016	tubers	Review
Dittrichia viscosa ¨	énula-peganhosa / false yellowhead	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Dorstenia brasiliensis *	carapiá, figueirinha	Abortive	GORRIL et al., 2016; MENGUE; MENTZ SCHENKEL, 2001; MONTANARI, 1999	root	Case report in humans; Review
*Dryopteris filix-mas**	dentebrura, fento-macho, fentenha-macha / male fern	Abortive	MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	rhizome	Review , Review - humans
*Dysphania ambrosioides**º	mastruz / mexican-tea	Toxic to the inbryo and/or fetus / Abortive	CASSAS et al., 2016; MONTANARI, 2008; SECRETARIA DE SAÚDE, 2002; GORRIL et al., 2016; ANHESI et al., 2016; LANINI et al., 2009; ARCANJO et al., 2013; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	decoction of leaves or whole plant; contraindicated during breast-feeding.	PP; Review , Resolution, Case report in humans, Review - humans
Echinodorus macrophyllus	chapéu-de-couro / leather hat	Abortive	RODRIGUES, et al., 2011.	leaves - 1mL per day	Review
Egletes viscosa *	marcela, macela / erect tropical daisy	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	SILVA; SILVEIRA; GOMES, 2016; ANHESI et al., 2016.		PPH; Review
Elephantopus scaber	erva grossa / elephant's foot	Abortive	ANHESI et al., 2016.		Review

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Eleutherine bulbosa	lagrimas de virgin / tears of the virgin	Abortive	MONTANARI, 1999		Review - rats
Enterolobium contortisiliquum	orelha de negro, orelha de macaco, timburí, timbaúba, tamboril, tambori, pau-de-sabão, timbaíba, timbó, tambaré, pacará, tamburé, tamboril / monkfish, black ear, timbaúva, monkey ear	Teratogenic, Abortive	MELLO et al., 1999; ASSIS et al., 2009; SANT'ANA et al., 2014; SCHONS et al., 2012; RIET-CORREA; MEDEIROS; SCHILD, 2011; BEZERRA et al., 2012; MELLO et al., 2010; SILVA et al., 2006; BONEL-RAPOSO et al., 2008		Experimental in rats, cattle, caprinos, sheep; Case report on animals
Enterolobium gummiferum	angico-de-minas, timburi-do-cerrad, , vinhático-do-campo, favela-branca, angico-vermelho-do-campo, brincos-de-saguim, sene / monkey ear	Abortive	RIET-CORREA; MEDEIROS SCHILD, 2011		Review on sheep and goats
Enterolobium spp.	tamboril / monkey ear	Abortive	RIET-CORREA., et al., 2007		Experimental in cattle
Equisetum giganteum	cavalinha, cola-de-cavalo / giant horsetail	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	whole plant	Review
*Eucalyptus globulus**	eucalipto / bluegum eucalyptus	Abortive	RODRIGUES, et al., 2011; SOUZA et al., 2013; VIEIRA, et al., 2013	leaves	Review ; Case report in humans; PPH
Eucaliptus globulus *	eucalipto da tasmâmia, eucalipto / bluegum eucalyptus	Abortive	SEIFERT et al., 2016; MONTANARI, 1999	Leaf tea	Case report in humans; Review - humans
Eupatorium cannabinum¨	eupatório / st john's herb	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Eupatorium perfoliatum¨	erva daninha / common boneset	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution

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Euphorbia parviflora	erva andorinha	Abortive	ANHESI et al., 2016.		Review
Foeniculum vulgare¨*	funcho, erva doce / fennel	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	GORRIL et al., 2016; SECRETARIA DE SAÚDE, 2002; ARCANJO et al., 2013; GAIÃO et al., 2017; DUARTE et al., 2017; FARIA AYRES; ALVIM, 2004; ARAÚJO et al., 2016		Review , Resolution, Review in humans, PPH
Frangula alnus	frangula / european alder buckthorn	Abortive	DUARTE et al., 2017		Review
Frangula purshiana ¨	cáscara-sagrada / european alder buckthorn	Abortive	ANHESI et al., 2016; SECRETARIA DE SAÚDE, 2002; DUARTE et al., 2017	against indicated also in the breastfeeding period	Review ; Resolution
Fridericia japurensis		Toxic to the inbryo and/or fetus	ARRUDA., et al., 2016		Experimental in cattle
Fridericia elegans		Toxic to the inbryo and/or fetus	ARRUDA., et al., 2016		Experimental in cattle
Ginkgo biloba	ginko / common ginkgo	Toxic to the inbryo and/or fetus	BARON-RUPPERT & LUEPKE, 2001.		Experimental
Gossypium barbadense	algodoeiro / cotton	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	Root	Review
Gossypium herbaceum	algodão, algodão-do-méxico, algodoeiro, algodão-bonito, algodão-de-malta, algodão-herbáceo / mexican cotton	Teratogenic, Abortive	ALVARENGA et al., 2006; MENGUE; MENTZ; SCHENKEL, 2001	Root	Experimental in rats; Review

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Gossypium sp.*	algodão, algodão-do-méxico, algodoeiro, algodão-bonito, algodão-de-malta, algodão-herbáceo / cotton	Abortive	MONTANARI, 1999	two tablespoons of root peel tea shaved to about half a liter of water and take about 300 ml per day	Review - humans
Guarea trichilioides *	carrapeta-verdadeira / black cedar	Abortive	MONTANARI, 1999	one tablespoon of the root or two tablespoons of the crushed peel and half a liter of water taken two cups a day	Review - humans
Gutierrezia sarothrae	vassoura / broom snakeweed	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Gymnosporia senegalensis	erva de lagarto / red spike-thorn	Abortive	MONTANARI, 1999	leaves, roots	Review
Handroanthus heptaphyllus *	ipê, ipê-roxo	Abortive	MENGUE; MENTZ; SCHENKEL, 2001; GORRIL et al., 2016.	wood	Review ; Case report in humans
Handroanthus impetiginosus ¨	ipê roxo, quina verdadeira / silver trumpet tree	Teratogenic, Abortive	SECRETARIA DE SAÚDE, 2002; RODRIGUES, et al., 2011.	leaves	Resolution, Review
Hamelia patens	mato de oração / redhead	Abortive	MONTANARI, 1999		Review
Hedera helix¨	hera / english ivy	Abortive	ANHESI et al., 2016; SECRETARIA DE SAÚDE, 2002.	against indicated also in the breastfeeding period	Review , Resolution
*Heliotropium indicum**	cravo de urubu erva-de-são-fiacre / indian heliotrope	Abortive	SILVA; SILVEIRA; GOMES, 2016		PPH
*Hibiscus rosa - sinensis**¨	hibisco, mimo-de-vênus / hibiscus	Abortive	SECRETARIA DE SAÚDE, 2002; SEIFERT et al., 2016; GAIÃO et al., 2017.	extracted from leaves and roots; type of extract: ethanolic; dosagin: 400mg/kg	Resolution; Case report in humans; Review - humans

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Himatanthus drasticus	Carapanaúba	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001; MONTANARI, 1999	peel, leaves	Review
Himatanthus lancifolius	Agoniada	Abortive	MENGUE; MENTZ; SCHENKEL, 2001; GORRIL et al., 2016	peel, leaves	Review
Himatanthus sucuuba	Sucuúba	Abortive	RODRIGUES, et al., 2011.	leaves	Review
Hybanthus calceolaria	papaconha, falsa ipecacuanha	Abortive	MELLO et al., 2010		Case report on animals
Hypericum perforatum¨	hiperico / common st. john's wort	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Hyssopus officinalis¨	erva-sagrada, sambaicaitá / common hyssop	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Ipomoea batatoides		Abortive	JUNIOR et al., 2013		Review
Ipomoea carnea	algodão-bravo, canudo-de-lagoa, algodão-do-pantanal, campainha-de-canudo / swamp cotton, wild cotton, pito straw, buzzer, woodpecker, majorana, parsley, celery, snake killer	Teratogenic , Abortive	GOTARDO et al., 2016; PANTER; STEGELMEIER, 2011; HENRIQUE, 2005; JUNIOR RIET-CORREA, 2013; JUNIOR et al., 2013		Experimental in goats, caprinos; Review
Ipomea sericophyla		Abortive	JUNIOR et al., 2013		Review
Indigofera spicata	indigo / creeping indigo	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Indigofera suffruticosa	anil / creeping indigo	Abortive	NETO; SAKAMOTO; BLANCO, 2013		Case report on animals

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Iva angustifolia	narrowleaf marsh elder	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Ixora finlaysoniana	ixora, icsória / bridal bouquet	Abortive	ALVARENGA et al., 2006		Experimental in rats
*Jatropha curcas**	pinhão manso, pinhão paraguaio, pinhão-de-purga, pinhão-bravo, pião / white pinion	Abortive	GORRIL et al., 2016; MENGUE MENTZ; SCHENKEL, 2001; MONTANARI, 1999; MONTANARI, 1999	seeds, latex, leaf tea	Review , Review - humans
Jatropha gossypiifolia	pinhão roxo, jatrofa, erva purgante / black physicnut	Abortive	MENGUE; MENTZ; SCHENKEL, 2001; GORRIL et al., 2016.	seeds, latex	Review - animals, Review
Juniperus communis	ruto-de-jenebra, junípero, junipo / common juniper	Abortive	MONTANARI, 1999		Review - rats
Juniperus occidentalis	, agulha de pinheiro / western juniper, pine needle	Abortive	WELCH; LEE; PFISTER, 2018		Review
Juniperus oxycedrus *	oxicedro / spanish cedar, cade	Abortive	AL- QURA'N, 2005		Review in humans
Juniperus phoenicea *	sabina da praia / phoenician juniper	Abortive	AL- QURA'N, 2005		Review in humans
*Juniperus sabina**	sabina, sabina-rasteira / jungfernpalme	Abortive	BARROS; ALBUQUERQUE, 2005; MONTANARI, 1999	high doses preached for this effect canin be fatal.	Case report in humans; Review - rats
Juniperus osteosperma	agulha de pinheiro / pine needle	Abortive	WELCH; LEE; PFISTER, 2018		Review
Justicia adhatoda.	malabar nut	Abortive	MONTANARI, 1999	10th day of gestation, at a dose of 175 mg/kg	Review - rats
Justicia sp.*	anador	Abortive	OLIVEIRA, 2011	leaves for the preparation of tea	Case report on animals

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Kalanchoe laciniata	saião, corama, coirama / christmastree plant	Abortive	GORRIL et al., 2016; MENGUE MENTZ; SCHENKEL, 2001	aerial parts	Review
Lupinus arbustus		Teratogenic	PANTER et al., 2013; PANTER; STEGELMEIER, 2011		Review in pigs, cattle, sheep, goats; Experimental
Lupinus argenteus		Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Lupinus caudatus		Teratogenic	PANTER et al., 2013		Review in cattle
Lupinus formosus		Teratogenic	PANTER et al., 2013; PANTER; STEGELMEIER, 2011		Review in goats, sheep and cattle; Experimental
Lagenaria breviflora *		Abortive	MONTANARI, 1999	fruit juice	Review - humanse rats
Lantana camara	cambará / common lantana	Teratogenic, Abortive	RODRIGUES, et al., 2011; PANTER; STEGELMEIER, 2011	leaf - 3000 to 7000 mg/kg/day	Review ; Experimental
Lathyrus cicero		Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Lathyrus odoratus	ervilha doce / sweet pea	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Lathyrus spp.		Teratogenic	SOUZA et al., 2018; PANTER et al., 2013; PANTER; STEGELMEIER, 2011		Case study in animals; Review in goats, sheep e cattle; Experimental

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*Laurus nobilis**	louro,loureiro, arbusto perenifólio / bay laurel	Abortive	GORRIL et al., 2016; HARAGUCHI; CARVALHO, 2010; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	Leaves	Review , PPH
*Leonotis nepetifolia**	cordão-de-frade / klip dagga	Abortive	MONTANARI, 1999	Fruit	Review - humans
Leonurus japonicus¨	erva macaé / chinese motherwort	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Lepidium sativum	agrião-de-jardim, agrião, agrião-da-índia, agrião-mouro, mastruço ou mastruço-ordinário / garden peppergrass	Teratogenic	MONTANARI, 1999		Review - rats
Leucaena leucocephala	acacia palida / horse-tamarind	Abortive	MONTANARI, 1999; PANTER; STEGELMEIER, 2011	roots and bark decoto	Review ; experimental
Licuala sp.	palmeira leque de espinho ou licuala de mangler / palme	Abortive	MONTANARI, 1999		Review
Ligusticum striatum¨	lovage	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Lippia alba *	pau-mocó, cidreira brava / white lippia	Abortive	OLIVEIRA, 2011	leaf for tea preparation	Case report in humans
Luetzelburgia sp.	pau-mocó	Toxic to the inbryo and/or fetus, Abortive	MELLO et al., 2010	broad bean	Case report on animals
Luffa acutangula	cabacinha, bucha/ angled luffa	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	PANTER; STEGELMEIER, 2011; MENGUE; MENTZ; SCHENKEL, 2001; SILVA et al., 2006	Fruit	Experimental; Review - animals; Case report on animals

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Luffa cylindrica	bucha / angled luffa	Toxic to the inbryo and/or fetus, abortive	MENGUE; MENTZ; SCHENKEL, 2001	fruit	Review - animals
*Luffa operculata**	bucha paulista, buchinha do norte, cabacinha, buchinha, cabacinho / angled luffa	Teratogenic, Abortive	RODRIGUES, et al., 2011; OLIVEIRA, 2018; MONTANARI, 2008; MEDEIROS, 2016; DUARTE et al., 2017; LANINI et al., 2009; ARCANJO et al., 2013; SILVA; DANTAS; CHAVES, 2010; BARROS; ALBUQUERQUE, 2005; DUARTE et al., 2017; OLIVEIRA, 2011; MONTANARI, 1999; CAMPOS et al., 2016GORRIL et al., 2016.BAKKE et al., 2008; MENGUE; MENTZ; SCHENKEL, 2001; BAKKE et al., 2008	fruits; Inhalation of fruits; concentrated dried fruit decocoction; "tea" of dry fruit, sin bark	Review , Case report in humans, Review - H; PPH
Lupinus argenteus	trinoço / silvery lupine	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Lupinus nootkatensis	trinoço / silvery lupine	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Lupinus sericeus	trinoço / silvery lupine	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Lupinus spp.	trinoço / lupine	Teratogenic	DANTAS et al., 2010; SOUZA et al., 2018; MARCELINO et al., 2017; WELCH; LEE; PFISTER, 2018		Case study in animals; Experimental in goats; Review
Lupinus sulphureus	trinoço / lupine	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental

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Marsdenia tinctoria	paininha / climbing-indigo	Abortive	NETO; MELO; SOTO-BLANCO, 2016;	ethanolextract from roots	Review
Marsypianthes chamaedrys		Abortive	BEZERRA et al., 2012		Experimental in Goats
Amorimia rigida		Abortive	VASCONCELOS et al., 2008		Experimental in sheep
Matricaria chamomilla°*	camomila / german chamomile	Teratogenic, Abortive	ANHESI et al., 2016; BOCHNER et al., 2012; SILVA, 2014; FARIA; AYRES; ALVIM, 2004; GORRIL et al., 2016.	flowers	Review , PPH; Case report in humans
*Maytenus ilicifolia**	espinheira santa	Abortive	MENDES et al., 2011; RODRIGUES et al., 2011; GAIÃO et al., 2017.	leaves; Leaves extract: hydroalcoholic; dosagin: 1g/kg/dayleaves; Leaves extract: hydroalcoholic; dosagin: 1g/kg/day	Experimental in rats, Review , Review - humans
*Melia azedarach**	azedaraque; cinamomo, cinamão ou amargoseira / syringa berrytree	Abortive	ANHESI et al., 2016; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	roots, leaves	Review , Review - humans
*Melissa officinalis**	erva-cidreira, melissa / linon balm	Abortive	BARROS; ALBUQUERQUE, 2005; FARIA; AYRES; ALVIM, 2004		Case report in humans, PPH
Mentha arvensis¨*	hortelã japonesa, hortelã / european corn mint	Abortive	SECRETARIA DE SAÚDE, 2002; MENGUE; MENTZ; SCHENKEL, 2001	aerial parts	Resolution, Review
Mentha piperita¨*	hortelã, hortelã pimento / pipermint	Teratogenic, Abortive	RODRIGUES et al., 2011; SECRETARIA DE SAÚDE, 2002; GORRIL et al., 2016; ANHESI et al., 2016; ARAÚJO et al, 2016; MENGUE; MENTZ; SCHENKEL, 2001	leaves, aerial parts	Review , Resolution, Review in humans

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*Mentha pulegium**º	hortelã, hortelã, poejo / mint	Abortive	BARROS; ALBUQUERQUE, 2005; MOREIRA et al., 2001; HARAGUCHI; CARVALHO, 2010; MENGUE; MENTZ; SCHENKEL, 2001	every plant	Case report in humans; Case study in humans; PPH; Review
Mentha sp.*º	hortelã e mentas	Teratogenic, Abortive	GORRIL et al., 2016; RODRIGUES et al., 2017; HARAGUCHI; CARVALHO, 2010	essential oil	Case report in humans; PPH
Microcephala sp.		Abortive	PANTER; STEGELMEIER, 2011		Experimental
Mikania glomerata	guaco	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	BOCHNER et al., 2012.		Review
Mimosa sp.	mimosa / touch-me-not	Teratogenic	PANTER et al., 2013		Review in goats, sheep e cattle

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Mimosa tenuiflora	jurina preta, jurina, calumbi; jurina / black jurina	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	NETO; SAKAMOTO; BLANCO, 2013;PIMENTEL et al., 2007 ROCHA, 2018; SANTOS; DANTAS; RIET-CORREA, 2012AGUIAR-FILHO et al., 201; 3; ASSIS et al., 2010 MEDEIROS et al., 2014; DANTAS et al., 2010; SOUZA et al., 2018; LOPES., et al., 2009; ASSIS et al, 2009; RADMÁCYO et al, 2009; NASCIMENTO;PANTER; STEGELMEIER, 2011 RIET-CORREA; MEDEIROS; SCHILD, 2011PE; SSOA; MEDEIROS; RIET-CORREA, 2013MEDEIROS; RIET-CORREA, 2018	1% of live weight	Case report on animals-Ruminants; Experimental in sheep, rats, goats, ruminant; Case study in animals; Review , Review - sheep, goats
*Mirabilis jalapa**	jalapa, maravilha / common four-o'clock	Teratogenic, Abortive	BARROS; ALBUQUERQUE, 2005		Case report in humans
Momordica angustisepala	melão-de-são-caetano / são caetano melon	Abortive	MONTANARI, 1999	aqueous extract from your roots	Review

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Momordica charantia¨*	melão do campo, melão de são caetano, caramelo, fruta de cobra, momórdica, erva de são vicente, maravilha, melãozinho / little melon	Teratogenic, Abortive	MENDES et al, 2011; GORRIL et al., 2016; MONTANARI, 1999 SECRETARIA DE SAÚDE, 2002; DUARTE et al., 2017; ARCANJO et al., 2013; DUARTE et al., 2017; SILVA; SILVEIRA; GOMES, 2016; GAIÃO et al., 2017; DUARTE et al., 2017; MENGUE; MENTZ; SCHENKEL, 2001	extract of leaves, fruits, sinentes; type of extract: aqueous; Dosagin: Over 80mg/kg/day	Review , Resolution; PPH; Review - humans, animals; Experimental in rats
Moringa oleifera	acácia-branca, árvore-rabanete-de-cavalo, cedro, moringueiro, quiabo-de-quina / ben-oil-tree	Abortive	MONTANARI, 1999	aqueous extract of its leaves, administered to rats between the first and 10th day of gestation, at a dose of 175 mg/kg,	Review - rats
Moringa pterygosperma	acácia-branca, árvore-dos-milagres, morango, guilandina / horse radish tree	Abortive	MONTANARI, 1999	rats between the 12th and 14th day of gestation at a dose of 200 mg/kg	Review
Myristica fragrans¨	noz moscada / nutmeg	Abortive	SECRETARIA DE SAÚDE, 2002; ANHESI et al., 2016.		Resolution, Review
*Nerium oleander**	espirradeira, cevadilha / oleander	Abortive	OLIVEIRA, 2011; BAKKE et al.; 2008; SILVA; SILVEIRA; GOMES, 2016	leaves used for tea	Case report in humans; PPH
Newbouldia laevis	capim de oxalá / boundary tree	Abortive	GORRIL *et al.,* 2016.		Review
Nicotiana glauca	anabasina tabaco, fumo / garden smoke, charuteira, holy herb, smoke, tobacco,	Teratogenic	PANTER et al., 2014; PANTER et al., 2013; DANTAS, 2010 et al., 2010; MARCELINO et al., 2017; PANTER; STEGELMEIER, 2011;		Experimental animals - goats; Case study in animals

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Nicotiana tabacum	tabaco, fumo / garden smoke, charuteira, holy herb, smoke, tobacco,	Teratogenic	MARCELINO et al., 2017; PANTER et al., 2013; PANTER; STEGELMEIER, 2011		Experimental in goats; Review in pigs, cattle, sheep, goats; Experimental
Niedenzuella acutifolia	cipó-preto, cipó-ruão	Abortive	NASCIMENTO et al., 2018; RIET-CORREA; MEDEIROS; SCHILD, 2011, CALDAS et al., 2011	2.5g/kg/day, 5.0g/kg/day and 10g/kg/day, until abortion occurs	Case report on animals, Review on sheep and goats, Experimental in cattle
Niedenzuella multiglandulosa	cipó-preto, cipó-ruão / black vine, red vine	Abortive, Toxic to the inbryo and/or fetus, Abortive	NASCIMENTO; MEDEIROS; RIET-CORREA, 2018; CARDINAL et al., 2010; CARVALHO et al., 2006; MELO et al., 2001; RIET-CORREA et al., 2005; ALMEIDA, et al., 2008; MELO et al., 2001	110g/kg dry plant with daily dose 10g/kg; 10g/kg body weight of fresh green leaves 5g/kg or 10g/kg green leaves	Case report on animals, Experimental in sheep Review, Experimental in sheep, goats, cattle
Ocimum basilicum *	alfavaca doce; manjericão doce, rinédio de vaqueiro; erva-real; manjericão da folha grande / basil	Abortive	MONTANARI, 1999		Review - humans
Ocimum tenuiflorum	manjericão da folha grande / basil	Abortive	MONTANARI, 1999		Review - rats
Origanum vulgare	oregano / oregano	Abortive	MONTANARI, 1999		Review - in vivo e in vitro
Oxytropis spp.		Teratogenic	MARCELINO et al., 2017; PANTER; STEGELMEIER, 2011; PANTER et al., 2013		Review, Experimental in goats, Review in sheep, cattle and goats
Paeonia sp.	peonia		ANHESI et al., 2016.		Review

Palicourea aeneofusca		Toxic to the inbryo and/or fetus	ARRUDA., et al., 2016		Experimental in cattle
Palicourea grandiflora		Toxic to the inbryo and/or fetus	ARRUDA., et al., 2016		Experimental in cattle
Palicourea juruana		Toxic to the inbryo and/or fetus	ARRUDA., et al., 2016		Experimental in cattle
Palicourea marcgravii	erva de rato	Toxic to the inbryo and/or fetus	ARRUDA., et al., 2016		Experimental in cattle
Passiflora alata	maracujá / passion fruit	Abortive	MONTANARI, 1999		Review
Passiflora foetida	maracujá-de-estalo / passion fruit	Abortive	ASSIS et al., 2009		Case reportin Ruminants
Passiflora sp.	canapú-fedorento / passion fruit	Abortive	ASSIS et al., 2009; SILVA et al., 2006		Case report on animals - Ruminants
Persea americana *	abacate / avocado	Abortive	HARAGUCHI; CARVALHO, 2010		PPH
*Petiveria alliacea**	guiné, mucura-caá, erva-pipi, tipí, pipi / congo root	Abortive	GORRIL et al., 2016; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	leaves e roots	Review , Review - humans
Petroselinum crispum *	salsa / garden parsley	Abortive	MONTANARI, 1999		Review - humans

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*Peumus boldus**	boldo / bold	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	OLIVEIRA, 2011; SILVA, 2014; DUARTE et al., 2017; ARAÚJO et al., 2016; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001; SEIFERT et al., 2016; GORRIL et al., 2016; HARAGUCHI; CARVALHO, 2010; BAKKE et al., 2008	tea, stem and leaves infusion with 10 g of leaves in half a liter of water, sing and mix a glass of liquor; take fasting; aerial parts	Case report in humans, aniamis; Review , Review – humansPPH
Pfaffia glomerata	ginseng brasileiro	Teratogenic	RODRIGUES, et al., 2011.	root - 1mL/dia	Review
Physalis angulata	canapum, canapú / lanceleaf groundcherry	Abortive	MELLO et al., 2010		Case report on animals
Phoradendron leucarpum *	visco americano / american mistletoe	Abortive	MONTANARI, 1999	tea made with the leaves	Review - humans
Phyllanthus amarus	quebra pedra / carry me seed	Abortive	RODRIGUES, et al., 2011.	leaves, flowers and fruit.	Review
*Phyllanthus niruri*º*¨	quebra - pedra, erva-pombinha, quebra-pedras-de-arvorezinha, quebra-pedra, quebra-pedra legítimo, quebra-pedra / carry me seed	Abortive	SILVA; DANTAS; CHAVES, 2010; BARROS; ALBUQUERQUE, 2005; MONTANARI, 1999; BAKKE et al.; 2008; RODRIGUES et al., 2017; SECRETARIA DE SAÚDE, 2002; ANHESI et al., 2016.	the aerial part with flower, roots and bells are used; against indicated also in the breastfeeding period	Case report in humans, Review , PPH, Resolution
Phyllanthus sp.*	quebra pedra / carry me seed	Abortive	OLIVEIRA, 2011	Leaves for tea preparation	Case report in humans
Phytolacca sp¨	caruru de cacho	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Picralima nitida	akuamma plant	Abortive	AWODELE et al, 2019	100, 200, 400 µmg/kg body weight extract	Experimental in rats

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*Pilocarpus jaborandi**	jaborandi	Abortive	SECRETARIA DE SAÚDE, 2002; ANHESI et al., 2016.		Resolution, Review
Pilocarpus microphyllus	arruda, arruda-brava, jaborandi / rue	Abortive	MONTANARI, 1999	tea das roots e das leaves	Review
Pimpinella anisum *	erva-doce / sweet-cumin	Abortive	GORRIL et al., 2016.		Case report in humans
Pinus ponderosa	agulha de pinheiro / pine needle	Teratogenic, Abortive	WELCH; LEE; PFISTER, 2018	isocupressive acid and related labdane acids, >0.5% dry weight of the needles, conifer and juniper species	Review
Piper betle	pimento betel / betel pepper	Teratogenic	MONTANARI, 1999		Review
Piper mikanianum	pariparoba	Abortive	MONTANARI, 2008; MENGUE; MENTZ; SCHENKEL, 2001	aerial parts	Review
Anadenanthera colubrina		Abortive	MELLO et al, 2010		Case report on animals
Plantago major¨	lantana-maior / large plantain	Abortive	SECRETARIA DE SAÚDE, 2002; MONTANARI, 1999	root of the plant is used as a vaginal suppository	Resolution; Review
*Plectranthus amboinicus**	tapete, capim de oxalá, ou malvariço orégano de cartagena / mexican mint	Abortive	BARROS; ALBUQUERQUE, 2005		Case report in humans
*Plectranthus barbatus **¨	boldo-da-terra / bold	Abortive/Teratogenic	GORRIL et al., 2016; SECRETARIA DE SAÚDE, 2002; ANHESI et al., 2016; RODRIGUES, et al., 2011; ANHESI et al., 2016; MEDEIROS, 2016; GAIÃO et al., 2017; MENGUE; MENTZ; SCHENKEL, 2001	leaves 880 mg/kg/dia; Extraido das Leaves; tipo de extrato: hidroalcoólico; dosagin: 880mg/kg/dia	Resolution, Review , Case report in humans

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Pluchea sagittalis *	quitoco, macela / wing-stin	Abortive	MONTANARI, 1999; GORRIL et al., 2016; BARROS; ALBUQUERQUE, 2005;		Case report in humans
Plumbago zeylanica	plumbago / white plumbago	Abortive	MONTANARI, 1999	Decocto of roots	Review - rats
Caesalpinia pyramidalis	catingueira, pau-de-rato, catinga-de-porco, pau de rato, catinga-de-pig	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	CÂMARA et al., 2017; PEDROSO et al., 2018; SOUZA et al., 2018; MARCELINO et al., 2017; SOUZA, 2017; SANTOS et al., 2018	Tree leaves	Experimental in goats, caprinos; Review ; Case study in animals - caprinos.
Persicaria punctata *¨	erva de bicho / dotted water	Abortive	ANHESI et al., 2016; BARROS; ALBUQUERQUE, 2005; SECRETARIA DE SAÚDE, 2002.		Review ; Case report in humans
Portulaca oleracea	beldroega / common purslane	Abortive	ANHESI et al., 2016.		Review
Piper umbellatum	pariparoba / cow foot, cowheel bush	Abortive	MONTANARI, 2008; MENGUE; MENTZ; SCHENKEL, 2001	aerial parts	Review
Prosopis juliflora	cara-torta, algaroba / algarroba-bean	Toxic to the inbryo and/or fetus, Teratogenic	MEDEIROS et al, 2014	ration containing 70% pods	Experimental in rats
Prunus persica¨	pessegueiro, pêssego / peach	Abortive	ANHESI et al., 2016; SECRETARIA DE SAÚDE, 2002.		Review ; Resolution
Prunus serotina	cerejeira negra / american cherry, wildblackcherry,	Teratogenic	PANTER et al., 2013; PANTER; STEGELMEIER, 2011		Review in porcos; Experimental
Larix kainpferi	delarício dourado lariço-japonês / japanese larch	Abortive	MONTANARI, 1999		Review - rats, rabbits and dogs

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Pterocarpus officinalis	mututi, tinteira / dragon blood	Abortive	MONTANARI, 1999		Review
*Punica granatum*º*	romã / pomegranate	Abortive	SILVA; DANTAS; CHAVES, 2010; BARROS; ALBUQUERQUE, 2005; OLIVEIRA, 2011; GAIÃO et al., 2017; ANHESI et al., 2016; SOUZA et al., 2013.		Case report in humans, Review - humans
Raphanus raphanistrum	rabanete-de-cavalo / jointed wild radish	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Rauvolfia serpentina ¨	madeira serpentina / serpentine wood	Teratogenic, Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Rhamnus cathartica ¨	cáscara-sagrada espinheiro cerval / common buckthorn	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Rhazya stricta		Toxic to the inbryo and/or fetus, Teratogenic	RODRIGUES et al., 2011; MENDES et al, 2011	leaves - 500 a 2000 mg/kg/dia	Review ; Experimental in rats
Rheum sp.	ruibarbo / chinese rhubarb	Abortive	DUARTE et al., 2017		Review
Rheum palmatum *¨	ruibarbo / chinese rhubarb	Abortive	SECRETARIA DE SAÚDE, 2002; ANHESI et al., 2016; ARCANJO et al., 2013; BARROS; ALBUQUERQUE, 2005	altas doses.	Resolution, Review ;Case report in humans
Ricinus communis *	mamoneira, rícino, carrapateira, bafureira, baga e palma-criste / castor bean	Abortive	MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001; SEIFERT et al, 2016; GORRIL et al., 2016; HARAGUCHI; CARVALHO, 2010; BAKKE et al.; 2008		Review - rats, in vitro, humans

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Rivea hypocrateriformis¨		Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Roscoe sp.*		Abortive	SEIFERT et al., 2016		Case report in humans
Rosmarinus officinalis *¨	alecrim, alecrim-de-jardim, alecrim-rosmarinho, libanotis, rosmarino, labinotis, alecrinzeiro, alecrim-comum, alecrim-de-cheiro, alecrim-de-horta, erva-coada, flor-do-olimpo / rosinary	Abortive	MONTANARI, 1999MENDES et al., 2011; SEIFERT et al, 2016; VIEIRA, et al., 2013; ALVARENGA et al., 2006; SECRETARIA DE SAÚDE, 2002.GAIÃO et al., 2017; HARAGUCHI; CARVALHO, 2010; GORRIL et al., 2016; SOUZA et al., 2013; RODRIGUES, et al., 2011.	decocto with two tablespoons of fresh and chopped leaves and flowers and three cups of water and taken two cups a day, until it causes the abortion; rats pregnancy from 1 to 4 days of gestation at a dose of 52 mg/kg/day; Extract of leaves: aqueous; dosagin: 26mg/kg; Leaves and twigs	Experimental in rats, rats ;Case report in humans; PPH; Review in humans; Resolution
Ruta chalepensis	arruda, arruda-fétida, arruda-dos-calcários, erva-da-inveja / rue	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	GONZALES et al., 2007; MENGUE; MENTZ; SCHENKEL, 2001	aerial parts	Experimental in caprinos; Review

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Ruta graveolens[o*¨]	arruda, arruda-doméstica, arruda-dos-jardins, ruta-de-cheiro-forte, ruda arruda-comum, arruda-dos-jardins, arruda-fedorenta, ruta, ruta-de-cheiro-forte, arruda-doméstica, erva-arruda, arruda-comum, arruda-dos-jardins, arruda-fedorenta, ruta, ruta-de-cheiro-forte, arruda-doméstica, erva-arruda / rue	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	RODRIGUES, et al., 2011; MONTANARI, 2008; SECRETARIA DE SAÚDE, 2002; OLIVEIRA, 2018; GORRIL et al., 2016; SILVA, 2014; MOREIRA et al., 2001; BOCHNER et al., 2012; ARCANJO et al., 2013; DUARTE et al., 2017; SOUZA et al., 2013; SILVA; DANTAS; CHAVES, 2010; SEIFERT et al, 2016; ALVARENGA et al., 2006; GAIÃO et al., 2017; BARROS; ALBUQUERQUE, 2005; SILVA, 2014; RATES, 2001; CAMPOS et al., 2016; HARAGUCHI; CARVALHO, 2010; MENGUE; MENTZ; SCHENKEL, 2001MONTANARI, 1999;	leaves - 10mg/kg/day; extract from leaves; type of extract: aqueous; dosagin: 10mg/kg/day; aerial parts; branches and leaves, in the form of infusion, decocto, macerated in water or in cane, which are taken before or after the date of menstruation, once, two or three times a day. The first dose is taken when getting up, fasting, and the last at bedtime.	Review , Resolution, PPH, Case study in humans, Case report in humans; Experimantal in rats; Review - humanse rats
Salvia fruticosa¨	salvia / sage	Toxic to the inbryo and/or fetus, abortibo	SECRETARIA DE SAÚDE, 2002.		Resolution
*Salvia officinalis L**¨	salvia / sage	Abortive	SEIFERT et al., 2016; SECRETARIA DE SAÚDE, 2002; MENGUE; MENTZ; SCHENKEL, 2001	indicated also in the breastfeeding period; every plant	Case report in humans; Resolution; Review
Samanea tubulosa	bordão-de-velho / seven shell	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	SALES et al., 2015	Pod extract	Experimental in rats Wistar

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Sassafras albidum¨¨	sasafrás / white sassafras	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Schinus sp.*	aroeira / brazilian pepper tree	Toxic to the inbryo and/or fetus	OLIVEIRA, 2018.		PPH
Schinus terebinthifolia *º	aroeira / brazilian pepper tree	Abortive	GORRIL et al., 2016.		Case report in humans
Scolochloa festucacea	grama de rio comum / common rive grass sheep	Abortive	DANIELS; NELSOM; BEASLEY, 1981	fresh	Experimental in rats
Scoparia dulcis *.	vassourinha / sweet-broom	Abortive	BAKKE et al., 2008		PPH
*Secale cereale**	centeio espigado / common rye	Abortive	BARROS; ALBUQUERQUE, 2005		Case report in humans
Senecio latifolius	senecio / dead thistle	Teratogenic	RODRIGUES et al., 2011.	stems and leaves - 330mg/day	Review
Senecio vernali	senecio / dead thistle. groundsel	Abortive	AL- QURA'N, 2005		Review H
Senecio vulgaris	senecio / dead thistle	Abortive	AL- QURA'N, 2005		Review H
Senna occidentalis .	sene / foetid cassia	Teratogenic, Abortive	SILVA, 2014; SILVA; SILVEIRA; GOMES, 2016; PANTER; STEGELMEIER, 2011	leaves and fruits	Review ; PPH; Experimental

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*Senna alexandrina**	sena, sene / alexandrian senna	Abortive	BARROS; ALBUQUERQUE, 2005; BAKKE et al.; 2008; GORRIL et al., 2016; ANHESI et al., 2016; LANINI et al., 2009; SILVA; SILVEIRA; GOMES, 2016; MONTANARI, 1999; DUARTE et al., 2017; OLIVEIRA, 2011; CASSAS et al., 2016; SECRETARIA DE SAÚDE, 2002; ARCANJO et al., 2013; RODRIGUES et al., 2011; VIEIRA et al., 2013	indicated also in the breastfeeding period; leaf used for tea preparation Leaves; against indicated also in the breastfeeding period	Case report in humans; PPH; Review , Relato de caso;
Senna corymbosa	sena-do-campo, sena-do-mato, folha-de-sene / argentine senna	Abortive	MONTANARI, 1999	tea with the leaves or decocto with four spoonfuls of tea from the root peel crushed and a cup of water. Of the latter prepared they take one cup a day for four days.	Review
Senna sp.*	sene	Abortive	SEIFERT et al., 2016		Case report in humans
Senna tora	mata pasto / sickle senna	Abortive	ANHESI et al., 2016.		Review
Sida cordata ¨		Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Sida spinosa		Teratogenic, Abortive	JUNIOR et al., 2013		Review
Smlax campetris¨	salsaparrilha	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Smlax sp.	salsaparrilha	Abortive	ANHESI et al., 2016.		Review
Solanum crinitum .	jurubeba, fruta-de-lobo, lobeira / nightshade	Abortive	CAMPOS et al, 2016	Fruits	Review

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Solanum lycocarpum	lobeira / nightshade	Toxic to the inbryo and/or fetus, Abortive	MARUO et al., 2003; MELLO et al., 1999.		Experimento in rats
Sorghum spp.	hybrid sudan	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Sorghum × *drummondii*		Teratogenic	RADOSTITS et al., 2000; PANTER; STEGELMEIER, 2011		Experimental - cattle
Sorghum bicolor	sorgo	Teratogenic, Abortive	PANTER et al., 2013; SANT'ANA et al., 2014; PANTER; STEGELMEIER, 2011		Review in cattle, sheep; Case report on animals; Experimental
*Spermacoce verticillata**	vassorinha de botão / shrubby false buttonweed	Abortive	SILVA; DANTAS; CHAVES, 2010; OLIVEIRA, 2011; MONTANARI, 1999	root for tea	Case report in humans, Review
Spondias mombin¨	cajazeira / yellow mombin	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Stinodia maritima	melosa / seaside twintip	Abortive	SILVA et al, 2006		Case report on animals
Strychnos pseudoquina	quina verdadeira / fruiting branches	Abortive	GORRIL et al., 2016.		Review
Stryphnodendron coriaceum	tasneirinha, flor-das-almas, maria-mole, barbatimão, barbatimão-do-norte / soul's flower	Abortive	RIET-CORREA; MEDEIROS; SCHILD, 2011; MAGALHÃES;CARNEIRO;SALES, 2013	pods/broad beans; saponins that are blamed for toxicity	Review - sheep e Goats
Stryphnodendron fissuratum	rosquinha / vine-roan	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	AGUIAR-FILHO et al., 2013; RIET-CORREA; MEDEIROS; SCHILD, 2011; MACEDO et al., 2015	concentrations of 10, 20 and 40 g / kg /, respectively, during the organogenesis period, 81 from the 12th to the 20th day of gestation.	Experimental in Ruminants, porquinho-da-índia; Review on sheep and goats

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Stryphnodendron obovatum	barbatimão / vine roan	Abortive	TOKARNIA et al, 1998; RIET-CORREA; MEDEIROS; SCHILD, 2011; SANT'ANA et al, 2014	5 g/kg/day of ripe beans	Experimental in sheep; Review on sheep and goats; Case report on animals
Stryphnodendron polyphyllum	barbatimão / vine roan	Toxic to the inbryo and/or fetus, Abortive	RODRIGUES, et al., 2011; MONTANARI, 1999	seeds	Review ; Review - rats
Stryphnodendron spp.		Abortive	RIET-CORREA et al., 2007		Experimental in cattle
Symphytum officinale *	confrei / common comfrey	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	RODRIGUES, et al., 2011; BOCHNER et al., 2012; OLIVEIRA, 2018; VIEIRA, et al., 2013; DUARTE et al, 2017; MENGUE; MENTZ; SCHENKEL, 2001; GORRIL et al., 2016.	leaves	Review , PPH
Syzygium aromaticum	cravo / clove	Abortive	GORRIL et al., 2016; ANHESI et al., 2016; BARROS; ALBUQUERQUE, 2005		Review, Case report in humans
Turbina cordata	capoteira, batata de peba, moita de calango	Abortive	JUNIOR et al., 2013		Review
Tabebuia sp.	ipê / silver trumpet tree	Teratogenic	ANHESI et al., 2016.		Review
Tanacetum vulgare¨*	tanacetum / rainfarn	Abortive	SECRETARIA DE SAÚDE, 2002; MONTANARI, 1999; MENGUE; MENTZ; SCHENKEL, 2001	every plant; against indicated also in the breastfeeding period	Resolution; Review - humans
Tanaecium sp.		Toxic to the inbryo and/or fetus	ARRUDA et al., 2016		Experimental in cattle

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Terminalia arjuna	amendoeira-da-india, guarda-sol / tropical almond	Abortive	MONTANARI, 1999	hydroalcoholic extract from the branches, at a dose of 200 mg/kg,	Review - rats
*Terminalia catappa**	teapeu-de-céu, amendoeira / tropical almond	Abortive	SILVA; SILVEIRA; GOMES, 2016		PPH
Tetrapterys spp.	cicuta	Abortive	PANTER; STEGELMEIER, 2011; RIET-CORREA et al., 2007		Experimental - cattle
Thuja occidentalis ¨	tuia / eastern white cedar	Abortive	SECRETARIA DE SAÚDE, 2002; MONTANARI, 1999		Resolution; Review
Trachymene sp.	flor de lenda	Teratogenic	MARCELINO et al., 2017		Experimental in goats
Tradescantia spathacea	abacaxi roxo / boat plant	Abortive	MONTANARI, 1999		Review - in vitro
Trichosanthes tricuspidata		Abortive	MONTANARI, 1999		Review
Trichosanthes cucumerina	quiabo-de-metro, quiabo-de-rama, quiabão, cabaça-cobra, abóbora-jibóia, abóbora-serpent / snake gourd	Abortive	MONTANARI, 1999		Review
Trichosanthes kirilowii	cabaça de cobra chinesa / chinese snake gourd	Abortive	MONTANARI, 1999		Review - rats and rabbits
Trifolium subterraneum	trevo vermelho / subterranean clover	Abortive	RIET-CORREA et al., 2007		Experimental in cattle
*Trigonella foenum-graecum**¨	feno grego / fenugreek seeds	Teratogenic, Abortive	GAIÃO et al., 2017; DUARTE et al, 2017; SECRETARIA DE SAÚDE, 2002.	extracted from the sinentes; type of extract: aqueous; dosagin:Above 500mg/kg/day	Review - humans; Resolution
Tripterygium wilfordii	vidreira / thunder god vine	Toxic to the inbryo and/or fetus, Teratogenic	RODRIGUES et al., 2011; MENDES et al, 2011	dried roots - 50 to 100 mg/kg/day.	Review ; Experimental in rats

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Tropaeolum majus *	videira deus do trovão / thunder god vine	Abortive	GORRIL et al., 2016.		Case report in humans
Tussilago farfara¨	unha-de-cavalo / horsefoot	Toxic to the inbryo and/or fetus, Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Uncaria tomentosa	unha-de-gato uncaria tomentosa / cat nail	Toxic to the inbryo and/or fetus	MONTANARI, 1999	roots extract, free of tannin, at a dose of 6.25 mg/kg,	Review - rats
Urena lobata *	carrapicho de lavadeira / urena-weed	Abortive	MONTANARI, 1999	the leaves are chewed	Review - humanse in vitro
Urtica spp.¨	urtiga / nettle	Abortive	SECRETARIA DE SAÚDE, 2002.		Resolution
Veratrum album	veratro-branco / white false hellebore	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Veratrum californicum	verato / skunkcabbage, falsehellebore	Teratogenic, Abortive	SOUZA et al., 2018; MARCELINO., et al., 2017; PANTER et al., 2013; PANTER; STEGELMEIER, 2011; PANTER; STEGELMEIER, 2011		Case study in animals; Experimental - goats, sheep e cattle.
Veratrum viride var. eschscholtzianum	california veratrum / california false hellebore, corn lily	Teratogenic	PANTER; STEGELMEIER, 2011		Experimental
Verbena bonariensis	jarvão, urgebão / purpletop vervain	Abortive	MONTANARI, 1999		Review
Vernonanthura condensata *	alumã / alumã bold	Abortive	BARROS; ALBUQUERQUE, 2005		Case report in humans
*Vernonia condensata**	boldo, boldo-alumã / alumã bold	Teratogenic, Abortive	OLIVEIRA, 2011; GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001	leaves	Case report in humans; Review

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Vicia villosa	ervilha peluda / hairy vetch	Abortive	PANTER; STEGELMEIER, 2011		Experimental
Vinca erecta	flor-de-todo-ano / year-round flower	Abortive	MONTANARI, 1999		Review
Vinca major	congoça, congonha, congossa, congossa-maior, congoxa, pervinca ou pervinca-maio flor-de-todo-ano / year-round flower	Abortive	MONTANARI, 1999	roots	Review - in vitro
Vitex negundo	anho casto, agno puro / chinese chaste tree, five-leaved chaste tree	Abortive	MONTANARI, 1999		
Vitex trifolia	anho casto, agno puro / chinese chaste tree, five-leaved chaste tree, black vitex	Abortive	MONTANARI, 1999		Review
Wilbrandia sp.*		Abortive	SILVA; SILVEIRA; GOMES, 2016		PPH
Xanthium cavanillesii *	carrapixo / burr	Abortive	GORRIL et al., 2016; MENGUE; MENTZ; SCHENKEL, 2001	aerial parts	Case report in humans; Review
Zanthoxylum rhoifolium *	espinho-cheiroso, mamica de cadela, tambataru / prickly ash	Abortive	BARROS; ALBUQUERQUE, 2005		Case report in humans
Zanthoxilum sp.	tinguaciba, mamica de cadela, tambataru / prickly ash	Abortive	ANHESI et al., 2016.		Review
Zanthoxylum caribaeum *	espinho-cheiroso mamica de cadela, tambataru / prickly ash	Abortive	GORRIL et al., 2016.		Case report in humans

Zingiber officinale *	gengibre / ginger	Toxic to the inbryo and/or fetus, Teratogenic, Abortive	ELMAZOUDY; ATTIA, 2018; VIEIRA et al., 2013; RODRIGUES et al., 2011.	root - 1000 mg/kg/day	Experimental in rats; PPH; Review
Ziziphus joazeiro	juazeiro / jua	Toxic to the inbryo and/or fetus, Abortive	ASSIS et al., 2009		Case reportin Ruminants

Appendix table: Data collection was performed from the consultation of electronic platforms LILACS, PubMed, SciELO, Portal de Periódicos Capes and Google Acadêmico, using the keywords "abortive plants",*"embryotoxic plants",* "teratogenic plants", "toxic plants", "teratogenesis", *"teratogenesis", "abortive plants", "embryotoxics plants","toxic*plants" and "*teratogenesis".* Because our study is of integrative value, some plants were highlighted and by reporting/studying cases in humans represented by " * " and resolution by "¨"

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