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Ethnobotanical study of medicinal plants in urban home gardens in the city of Abaetetuba, Pará state, Brazil

[Estudio etnobotánico de las plantas medicinales en los jardines de patios urbanos de Abaetetuba, Pará, Brasil]

Ivanete Cardoso Palheta[1], Ana Cláudia Caldeira Tavares-Martins[1], Flávia Cristina Araújo Lucas[1] & Mário Augusto Gonçalves Jardim[2]

[1]*Programa de Pós Graduação em Ciências Ambientais, Universidade do Estado do Pará, Marco, Belém, PA, Brasil*
[2]*Coordenação de Botânica, Museu Paraense Emílio Goeldi, Belém, PA, Brasil*
Contactos | Contacts: **Ivanete Cardoso PALHETA -** ***E-mail address:*** **ivah1@hotmail.com**

Abstract: This was an ethnobotanical study of medicinal plants occurring in home gardens in the northern Brazilian Pará state. We conducted semi-structured interviews with the owners of 233 home gardens selected by probability sampling. We analyzed the data qualitatively, complemented by indices Total Species Diversity and Total Species Equitability (SDtot and SEtot, respectively); Use Value (UVs); Importance Value (IVs); and Informant Consensus Factor (ICF). We identified 124 species within 107 genera and 55 families. Of the medicinal species identified, 17.6% were considered effective in the treatment of Infectious and Parasitic Diseases. The home gardens evaluated harbored a great diversity of medicinal species (SDtot-47.43), although knowledge of the plants was not distributed evenly (SEtot-0.383). *Kalanchoe pinnata* (Lam.) Pers. showed the highest UVs (0.462) and *Lippia alba* (Mill.) N.E.Br. ex Britton & P.Wilson showed the highest IVs (0.104). The highest ICF value (0.94) was for the treatment of Behavioural Disorders.

Keywords: Amazon, folk medicine, urban flora, traditional knowledge.

Resumen: La investigación tuvo como objetivo hacer un estudio etnobotánico de las plantas medicinales en los jardines de patios urbanos de Abaetetuba, Pará, Brasil. Fueron realizadas entrevistas semiestructuradas aplicando 233 formularios a los propietarios de los jardines, seleccionados por muestreo probabilístico. Los datos fueron analizados en un enfoque cualitativo, complementado por los índices Diversidad Total (SDtot) y la Equidad Total de especies (SEtot), el Valor de Uso (UVS), Valor de Importancia (IVS) y el Factor de Consenso del Informante (ICF). Se identificaron 124 especies en 107 géneros y 55 familias. Las indicaciones más frecuentes fueron por enfermedades infecciosas y parasitarias (17,6%). Los jardines de los patios son el hogar de una gran diversidad de especies medicinales (SDtot – 47,43), sin embargo, se observó que el conocimiento acerca de las plantas no se distribuye de manera uniforme (SEtot – 0,383). *Kalanchoe pinnata* (Lam.) Pers. mostró mayor UVS (0.462) y *Lippia alba* (Mill.) N.E.Br. ex Britton & P.Wilson mayor IVS (0,104). El ICF mostró mayor acuerdo para el uso de las plantas en los trastornos de comportamiento (0,94).

Palabras clave: Amazonía, medicina popular, flora urbana, conocimientos tradicionales.

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INTRODUCTION

Since time immemorial, humans have looked to nature for ways to improve their living conditions and increase their chances of survival. One example is the way in which humans have interacted with plants, developing various uses for them (Giraldi & Hanazaki, 2010). The close relationship between humans and plants has promoted the accumulation of botanical knowledge that is transmitted through the sharing of family narratives and community experiences, that has resulted in a valuable genetic heritage, each society maintaining a knowledge base of edible and therapeutic plants (Siviero *et al*., 2012).

Ethnobotany is the study of the relationships between human populations and plants, addressing the ideas conceptualized by a given society regarding plant life. Ethnobotanists attempt to salvage and preserve traditional botanical knowledge related to the various uses of local flora (Posey, 1985).

The use of medicinal plants as a way of maintaining or recuperating a good health status is considered valuable by various communities in Brazil, such as that comprising urban dwellers (Carniello *et al*., 2010). Such plants, which are typically grown in home gardens, are viewed as the first-line treatment for most diseases, because they represent a low-cost alternative to pharmaceutical drugs (Almeida *et al*., 2012).

Home gardens are defined as spaces, adjacent to residences, within which humans engage in cultivation practices that contribute to the selection of species considered useful to the community, as occurs in the communities of the Amazon region (Martins *et al*., 2012). Such gardens create environments for the cultivation, multiplication, and preservation of the germplasm all of which are fundamental to the conservation of genetic resources and of the associated knowledge (Eichemberg *et al*., 2009).

The continuity of practices related to the use of medicinal plants grown in home gardens is threatened by the urbanization and destruction of green spaces. In Brazil, the process of urban expansion has impeded the preservation of such spaces (Trotta *et al*., 2012). In addition, that process can lead to a loss of biodiversity, threatening not only the conservation of the genetic heritage but also that of the local knowledge base (Pereira & Diegues, 2010). The objective of this study was to evaluate, from an ethnobotanical perspective, the medicinal plants occurring in urban home gardens in north Brazil.

MATERIAL AND METHODS

Study area

The study was conducted in the São Sebastião neighborhood of the city of Abaetetuba (01°44'03.4"S; 048°52'30.1"W), on the right (east) bank of the Tocantins river in Pará state, within the Cametá microregion and the mesoregion of northeastern Pará (Figure 1). The city encompasses an area of 1.610,408 km^2 and has a population of 141.100, the main sources of income being commerce, agriculture, livestock production, and the extraction of plant life (IBGE, 2010).

Abaetetuba has an equatorial climate, categorized as super-humid, with a rainy season (January-June) and a dry season (July-December). The mean annual temperature is approximately 27° C, monthly mean temperatures ranging from 20° C to 35°C. The total annual rainfall in the region hovers around 2000 mm, and the mean relative humidity is 85% (SEPOF, 2011). The urban zone of Abaetetuba comprises 14 neighborhoods. The São Sebastião neighborhood is 35 years old and has a great number of home gardens.

Sampling and selection of the home gardens

Fieldwork was carried out between June 2013 and September 2014. The neighborhood to be studied was selected on the basis of the following: time since establishment (preference for longer); geographic origin of the residents (preference for rural); and the number of home gardens (preference for more). The first phase of the study consisted in making informal visits in order to establish rapport with the residents prior to conducting interviews. Data obtained from community leaders in the neighborhood indicated that there were 1.425 home gardens distributed among 34 streets.

We used a probabilistic sampling procedure, in which the minimum sample size was calculated on the basis of the total number of home gardens, with a 6% margin of error, using the following formulas: $N_0 = 1/ E_0^2$; $n = N. N_0 / N + N_0$. Where N_0 is the provisory sample size, E_0 is the margin of error, *n* is the sample size, and N is the total population. We thus calculated the minimum sample to be 233 home

gardens. To select the residents to be visited and subsequently interviewed, we used simple random sampling (Barbetta, 2013).

Data collection

Prior to initiating the fieldwork, we met with members of the community in order to present our research project and to obtain written consent, in the form of a permit signed by local authorities, granting permission for the study to be conducted.

Using questionnaires, we conducted semi-structured interviews (Albuquerque *et al*., 2010) with the owners of the 233 home gardens selected, in order to determine their level of knowledge about the medicinal plants growing therein. The questionnaires included questions about the geographic origin of the owners, what steps they take when they become ill and how often they seek medical treatment. Questions designed to collect ethnobotanical data regarding the medicinal plants were related to the conditions for which their use is indicated, the forms in which they are prepared, and which parts of the plant are used. In addition to the questionnaires, we used field diaries (Bernard, 2006), in which each researcher could record perceptions related to the theme of the investigation.

Identification of species

The plants cited in the interviews were identified in the Herbarium of the Museu Paraense Emílio Goeldi. We collected and preserved botanical specimens, as described by Fidalgo & Bononi (1984). The specimens were incorporated into the collection of the Prof. Dra. Marlene Freitas da Silva Herbarium of Pará State University, in the city of Belém. The scientific names of species were checked against the List of Species in the Plant of List (The Plant List, 2013) and against the database of the Missouri Botanical Garden (Missouri Botanical Garden, 2014).

Data analysis

Using a qualitative approach (Amorozo & Viertler, 2010), we analyzed the relationship that the residents had with the medicinal plants occurring in their home gardens. The diseases cited were grouped in accordance with the International Classification of Diseases, 10th revision (World Health Organization, 2008). In addition to health problems recognized by modern medicine, we considered so-called "Cultural ills" (Amorozo, 2002), including the effects of the "evil eye" and other types of curses or spells.

As can be seen in Table 1, we used a quantitative approach to evaluating the relevance of the medicinal plants in the home gardens visited. To determine the variety and distribution of uses, we calculated Total Species Diversity (SD_{tot}) and Total Species Equitability (SE_{tot}), as described by Byg & Balslev (2001) and adapted by Silva *et al*. (2006). To quantify the relative importance of a given species in relation to its use, we also calculated Use Value (UVs), as described by Phillips & Gentry (1993) and adapted by Rossato *et al*. (1999), and Importance Value (IVs), as also described by Byg & Balslev (2001) and adapted by Silva *et al*. (2006). By calculating the Informant Consensus Factor (ICF), as described by Troter & Logan (1986), we attempted to identify the subcategories of diseases that showed the greatest agreement among the interviewees in terms of the plant species indicated for their treatment.

For the plants identified to the species level, we searched the bibliographic databases Science Direct, PUBMED and LILACS to check whether they had been targets of previous phytochemical and pharmacological studies. Pharmacological studies were used for comparison and possible confirmation of folk indications.

RESULTS AND DISCUSSION

Lifestyles in the community

Of the 233 home garden owners interviewed, 170 (73%) were native to Abaetetuba - 123 and 47 having grown up in the rural and urban zones, respectively - 58 (25%) had been born in other municipalities within the state of Pará, and the remaining 5 (2%) had been born in another state. It is noteworthy that more than half of the interviewees were from rural areas of the region under study, where they had worked in agriculture, and had continued to grow plants in their home gardens after migrating to the urban zone. According to Amaral & Guarim Neto (2008), individuals who acquire the habit of planting and developing dependent relationships with plant resources rarely cease to engage in such activity, even after migrating to urban areas.

When they fall ill, 56% of the interviewees use medicinal plants from their home gardens as the first-line treatment, whereas the remaining 44% first seek medical treatment at a health care facility, although those in the latter group reported using plant-based home remedies as a complement to the

medications prescribed. The combined use of such home remedies and pharmaceutical drugs is common in Brazil, as has been reported by other authors (Silva *et al*., 2008; Oliveira *et al*., 2014a).

Table 1
Indices employed in the analysis of ethnobotanical data related to the uses of medicinal plant species grown in home gardens in the São Sebastião neighborhood of the city of Abaetetuba, in the state of Pará, Brazil. Source: Silva *et al.* (2006).
SD_{tot} – Total Species Diversity; SE_{tot} – Total Species Equitability; IVs – Importance Value; UVs – Use Value; ICF – Informant Consensus Factor.

Index	Description (in this context)	Formula	Range
SD_{tot}	Measures how multiple species are used and how they contribute to the total use	$SDtot = 1 / \sum Ps2$ where *P* is the total contribution of a given species (*s*) to the total use of all of the species included (number of times that species *s* is cited, divided by the total number of uses of all of the species included)	0-n
SE_{tot}	Measures how various species contribute to the total use, independent of the total number of species used	$SEtot = SDtot / n$ where *n* is the number of species used	0-1
IVs	Measures the proportion of informants who cite a given species as important	$IVs = nis / n$ where *nis* is the number of informants who consider a species most important, and *n* is the total number of informants	0-1
UVs	Indicates the value of the use of one species by one informant in relation to the total number of informants	$UVs = (\sum U) / n$ where U is the number of uses cited by an informant, and n is the total number of informants	0-1
ICF	Indicates which body systems (disease categories) have the greatest relative importance, as evidenced by the level of informant agreement regarding the therapeutic uses of the species under study	$ICF = (nur - nt) / (nur - 1)$ where *nur* is the number of use citations in each category, and *nt* is the number of species used in that category	0-1

In the São Sebastião neighborhood, there is a family health care clinic, where 55% of the interviewees reported receiving treatment on a regular basis, although 45% reported seeking treatment only after becoming ill. There are also 12 community health agents (affiliated with the national Family Health Program) working in the neighborhood, The community health agents conduct regular home visits in order to monitor residents who are currently under medical treatment. Despite having access to modern health care services, members of the community still cultivate and use plants as a therapeutic resource. According to Silva (2008), that can be explained by the fact that there is a cultural component to the use of medicinal plants in the treatment of diseases.

Within our sample, we identified six traditional healers - individuals sought out by the local population because they cultivate and have extensive knowledge of medicinal plants, as well as offering prayers in order to cure various ills. Santos *et al*. (2005) described the curative rituals performed by "prayer-reciters", "blessing-givers", and healers in the Rio Negro Valley region of the Brazilian state of Amazonas, emphasizing the important role that these social actors play in the use of local plants as phytotherapy.

Cultivation of medicinal plants

When asked about how and where they cultivate medicinal plants, 77% of the interviewees reported that they always plant them directly in the soil, 5% reported that they always grow them on raised, slatted wooden platforms (in pots, pans, buckets, or woven baskets), and 18% reported that they use a combination of those two approaches. Martins *et al*. (2012) stated that such platforms are used in the cultivation of plant species that require more care in terms of light intensity, protection from animal attacks, intensity of rainfall, and soil composition, whereas those that are more resistant to rain, pests and light are grown in the soil.

Medicinal plants are typically procured to meet the therapeutic needs of the family, and 82.5% of the interviewees reported that the labor involved in caring for those plants is supplied by the female members of the family. Siviero *et al*. (2012) also found that women are the primary caretakers of home gardens in the Amazon region, reporting that the gardens are strategically located in order to facilitate and promote their tending.

Among the São Sebastião residents interviewed, 74% stated that they exchanged medicinal plants with relatives and neighbors. That was previously reported by Pilla *et al*. (2006) for a town in southeastern Brazil, where the authors found that the majority of such plants were grown in home gardens and exchanged among family members. This habit constitutes an important practice for imparting knowledge through interaction, thus favoring the cultivation of medicinal plant species (Winklerprins & Oliveira, 2010).

The practices adopted in the home gardens evaluated include pruning (the cutting of selected limbs and branches), weeding (the removal of creeping plants with a hoe or machete), fertilization (with black soil and açaí seed or dry brush), and thinning (numerical reduction of species that pose risks to the garden as a whole). All of these cultural practices are aimed at the ideal development of the species. According to Silva *et al*. (2014c), the agricultural practices traditionally employed by humans contribute to reducing the use of chemical fertilizers, thus improving the quality of the soil.

Ethnobotanical aspects of home gardens

We identified 124 species of medicinal plants (Table 02), distributed among 107 genera and 55 families, the most well-represented families being Lamiaceae (accounting for 8.9% of the species); Asteraceae (5.6%); and Euphorbiaceae, Fabaceae, and Malvaceae (4.0% each). Lamiaceae and Asteraceae have also been cited as being the most species-rich families in other studies of medicinal plants in home gardens within the Amazon region (Martins *et al.*, 2012; Siviero *et al*., 2012), as well as within the Atlantic Forest Biome (Eichemberg *et al*., 2009; Oliveira *et al*., 2010; Althaus-Ottmann *et al*., 2011) and Cerrado Biome (Liporacci & Simão, 2013). Those two families include various species that contain bioactive compounds (Lorenzi & Souza, 2008), which could explain the high rates of the use of folk medicine.

Table 2
Species of medicinal plants occurring in home gardens in the São Sebastião neighborhood of the city of Abaetetuba, in the state of Pará, Brazil. UVs – Use Value; IVs – Importance Value.

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
Acanthaceae							
Hemigraphis colorata (Blume) Hallier f.	*Trevo-roxo* (purple waffle plant)	Hemorrhoids, infections of the navel in children, and ear infections	Tea (decoction), extract	Leaves	0.042	0.005	Purple anthocyanin (Skaar *et al*., 2014), phenol, carbohydrates, steroids, saponins, coumarins, tannins, proteins, carboxylic acid, flavonoids, xanthoproteins, alkaloids (Anitha *et al*., 2012), antibacterial effect (Anitha *et al*., 2012)
Justicia pectoralis Jacq.	*Abre caminho, trevo cumaru, trevo, trevinho* (water-willow)	Uterine infection, headache, *aborrecimento de criança*, *quebranto*, heart problems, nervousness	Decoction in a bath, maceration in a bath, tea (decoction)	Leaves	0.033	NCI	Estrogenic and progestagenic effects (Locklear *et al*., 2010)
Justicia secunda Vahl	*Correntinha, vissangue, foissangue, luftal, arnica em planta, esparmo luftal, sulfato ferroso* (St. John bush)	Gastritis, anemia, low resistance to infection, falls, menstrual cramps, diarrhea	Tea (decoction)	Leaves	0.085	0.014	Polyphenol (Koffi *et al*., 2013), secundarellone A, B, and C (Theiler *et al*., 2014)
Ruellia geminiflora Kunth	*Atroveran, buscopan* ([unknown])	Menstrual cramps	Tea (decoction)	Leaves	0.009	0.005	No data found
Adoxaceae							
Sambucus nigra L.	*Sabugueiro* ([European] [black] elder[berry])	Flu, measles, chicken pox, wounds, cough	Tea (decoction), decoction in a bath	Leaves	0.094	0.005	Anthocyanins (Cooney *et al*., 2015), fatty acids (Salvador *et al*., 2015), total phenolic (Fazio *et al*., 2013), sugars, organic acids, polyphenols (Veberic *et al*., 2009), triterpenoids (Salvador *et al*., 2015), antioxidant property (Mikulic-Petkovsek *et al*., 2016), against oxidative stress in human colon cells (Olejnik *et al*., 2016), anti-inflammatory effects (Olejnik *et al*., 2015)
Amaranthaceae							
Alternanthera bettzichiana (Regel) G. Nicholson	*Papagainho* (red calico plant)	Hemorrhage, anemia	Tea (decoction)	Leaves	0.024	NCI	No data found
Alternanthera brasiliana (L.) Kuntze	*Terramicina* (Brazilian joy weed)	Urinary tract infection, menstrual cramps, uterine infection, intestinal infection, wounds,	Tea (infusion), tea (decoction), extract	Leaves	0.052	0.009	Sitosterol-3-*O*-β-D-glucopyranoside, flavones, crysoeriol (5,7,4'-trihydroxy-3'-methoxyflavone), tricin (5,7,4'-trihydroxy-3',5'-

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
		poor circulation					dimethoxyflavone), 7- *O*-β-D-glucopyranoside-5,4'-dihydroxy-3' methoxyflavone (Facundo *et al*., 2012), antioxidant activity (Enechi *et al*., 2013)
Dysphania ambrosioides (L.) Mosyakin & Clemants	*Mastruz, metruz* (Epazote, wormseed, Jesuit's tea, Mexican tea)	Lung problems, cough, asthma, urinary tract infection, uterine infection, intestinal worms	Juice	Leaves	0.075	0.005	Terpenoids (Paré *et al*., 1993), carvacrol, caryophyllene oxide, ascaridole (Monzote *et al*., 2009), antifungal activity (Kumar *et al*., 2007), leishmanicidal activity (Monzote *et al*., 2014), antiaflatoxigenic activity (Kumar *et al*., 2007), anti-inflammatory and anti-nociceptive effects (Grassi *et al*., 2013), antioxidant activity, anti-tumor activity (Barros *et al*., 2013), acaricidal effect (Kouam *et al*., 2015)
Pfaffia glomerata (Spreng.) Pedersen	*Corrente* (Brazilian ginseng)	Gastritis, diarrhea, constipation	Tea (decoction), decoction in a bath	Leaves	0.019	NCI	Ecdysterone (Zimmer *et al*., 2006), gastroprotective effect (Freitas *et al*., 2004), analgesic and anti-inflammatory activities (Neto *et al*., 2005), trypanocidal and leishmanicidal activities (Neto *et al*., 2004)
Amaryllidaceae							
Eucharis amazonica Linden ex Planch.	*Cebolinha, cebola brava* (Amazon lily, Eucharist lily)	Asthma	Juice	Roots	0.019	NCI	Alkaloids (Cabezas *et al*., 2003)
Anacardiaceae							
Anacardium giganteum Hancock ex Engl.	*Caju do mato* (wild cashew)	Gastritis	Tea (decoction)	Skin/bark	0.005	NCI	Depressive activity (Castro *et al*., 2005)
Anacardium occidentale L.	*Cajueiro* (cashew tree)	Uterine infection, vaginal inflammation, diarrhea, wounds, gastritis	Decoction in a bath, tea (decoction), juice	Skin/bark and fruit	0.193	0.024	Anacardic acids, cardol, cardanol (Yuliana *et al*., 2014), total phenolic (Encarnação *et al*., 2016), monomeric phenols (Michodjehoun-Mestres *et al*., 2009), carotenoids, carotenoid esters, anthocyanins (Schweiggert *et al*., 2016), gastroprotective effect (Morais *et al*., 2010), antidiarroheal activity (Araújo *et al*., 2015), anti-ulcerogenic effect (Konan & Bacchi, 2007), anti-inflammatory property (Olajide *et al*., 2013), antioxidant activity (Encarnação *et al*., 2016), hypoglycemic effect (Dionísio *et al*., 2015), antimicrobial activity (Ajileye *et al*., 2015), antibacterial activity (Tan &

FAMILY ***Species***	**Common name(s) in Brazilian Portuguese (English)**	**Condition(s) for which treatment with the species is recommended**	**Preparation(s)**	**Plant part(s) used**	**UVs**	**IVs**	**Phytochemical and pharmacological studies**
							Chan, 2014)
Mangifera indica L.	*Mangueira* (mango tree)	Diarrhea	Tea (decoction)	Skin/bark	0.005	NCI	Gallotannins (Luo *et al*., 2014), 1,2,3,4,6 Penta-*O*-galloyl-β-D-glucose (Mohan *et al*., 2013), alkaloids, flavonoids, terpenoids (Prado *et al*., 2013), phenolic compounds (Fernández-Ponce *et al*., 2015), triterpenoids (Anjaneyulu *et al*., 1999), antihepatotoxic activity (Fahmy *et al*., 2016), anti-tumor effects (García-Rivera *et al*., 2011), antioxidant property (Fernández-Ponce *et al*., 2015), antidiarrhoeal activity (Yakubu & Salimon, 2015), antimicrobial activity (Singh *et al*., 2015), anti-inflammatory activity (Mohan *et al*., 2013)
Schinus terebinthifolia Raddi	*Aroeira* (Brazilian pepper, rose pepper, Christmasberry)	Uterine infection, intestinal infection, gastritis, stomach cancer	Tea (decoction)	Leaves	0.019	0.005	Flavonoids (Bernardes *et al*., 2014), spirocyclopropane (Richter *et al*., 2010), triterpene acids (Vieira *et al*., 2015), α-pinene, β-caryophyllene, germacrene D, β-pinene (Cavalcanti *et al*., 2015), antimetastatic protection (Matsuo *et al*., 2011), antioxidant and antimycobacterial activities (Uliana *et al*., 2016), neuroprotective effect (Sereniki *et al*., 2016), antimicrobial activity (Bernardes *et al*., 2014), anti-inflammatory effect (Rosas *et al*., 2015), anti-allergic activity (Cavalher-Machado *et al*., 2008)
Annonaceae							
Annona mucosa Jacq.	*Biribá* (biriba)	Sore throat	Tea (decoction)	Leaves and skin/bark	0.019	NCI	Epomusenins A and B (Chen *et al*., 1996), alkaloids, acetogenins (Ribeiro *et al*., 2013), annonaceous acetogenins (Gu *et al*., 1997), rollicosin (Liaw *et al*., 2003) insecticidal activity (Ribeiro *et al*., 2013)
Annona muricata L.	*Graviola* (soursop tree, custard apple tree)	Obesity, diabetes	Tea (decoction)	Leaves	0.019	NCI	Acetogenins (Jaramillo *et al*., 2000), annonacous acetogenins (Sun *et al*., 2014c), isoquinoline alkaloids (Hasrat *et al*., 1997), anticancer activity (Sun *et al*., 2015c), anti-ulcerogenic activity (Bento *et al*., 2016), leishmanicidal activity (Vila-Nova *et al*., 2013), anthelmintic activity (Ferreira *et al*., 2013), antidiabetic and antioxidant

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
							effects (Florence *et al*., 2014)
Apiaceae							
Eryngium foetidum L.	*Chicória* (culantro, blessed thistle, Amazon chicory)	Intestinal worms, diarrhea, stomachache, *diarreia de dentição*, high blood pressure, toothache	Tea (decoction)	Roots	0.042	NCI	Eryngial (trans-2-dodecenal) (Forbes *et al*., 2014), anti-inflammatory activity (Dawilai *et al*., 2013), anticlastogenic effect (Promkum *et al*., 2012)
Araceae							
Dieffenbachia seguine (Jacq.) Schott	*Comigo ninguém pode, aninga do maranhão* (dumb cane, dumbcane)	*Panemeira, mau olhado, olho gordo, quebranto*	Maceration in a bath, decoction in a bath	Leaves	0.094	0.005	No data found
Philodendron deflexum Poepp. ex Schott	*Jibóia* ([unknown])	Erysipelas	Plaster	Leaves	0.005	NCI	No data found
Araliaceae							
Polyscias scutellaria (Burm.f.) Fosberg	*Cuinha, cuerinha* (shield aralia, plum aralia, Balfour aralia)	*Aborrecimento de criança*, hemorrhage, menstrual cramps	Maceration in a bath, tea (decoction)	Leaves	0.019	0.005	Triterpenic glycosides (Paphassarang *et al*., 1989)
Arecaceae							
Bactris gasipaes Kunth	*Pupunha, pupunheira* (peach palm)	Hemorrhoids, uterine infection	Tea (decoction)	Roots	0.009	NCI	Carotenoid (Basto *et al*., 2016), carbohydrate (Bolanho *et al*., 2015), total phenolic, total flavonoids, total carotenoids (Espinosa-Pardo *et al*., 2014), antioxidant activity (Espinosa-Pardo *et al*., 2014)
Cocos nucifera L.	*Coqueiro* (coconut palm)	Diarrhea	Fresh	Fruit	0.009	0.005	Phenolic compounds, flavonoids, resins, alkaloids (Renjith *et al*., 2013), triterpens, saponnins, tannins (Costa *et al*., 2010), peroxidases (Balasubramanian & Boopathy, 2013), anthelmintic activity (Costa *et al*., 2010), antibacterial activity (Nitbani *et al*., 2016), cytoprotective and antihyperglycemic properties (Renjith *et al*., 2013), antioxidant and antimicrobial properties (Chakraborty & Mitra, 2008), antinociceptive and anti-inflammatory activity (Rinaldi *et al*., 2009), vasorelaxant and antihypertensive activities (Bankar *et al*., 2011), larvicidal activity (Roopan *et al*., 2013), estrogenic effect (Soumya *et al*., 2014)
Euterpe oleracea	*Açaí* (assai	Diarrhea, liver	Tea (decoction),	Roots and	0.038	0.005	Phenolic glucosides, neolignan

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
Mart.	palm, acai palm, açaí palm)	problems	extract	seeds			(Hu *et al*., 2014), anthocyanin (Rogez *et al*., 2011), flavonoids (Kang *et al*., 2010), fatty acids, phenolic compounds (Batista *et al*., 2016) antioxidant and cytotoxicity activities (Hu *et al*., 2014), anticonvulsant property (Souza-Monteiro *et al*., 2015), antiproliferative activity (Pacheco-Palencia *et al*., 2010), anti-inflammatory activity (Moura *et al*., 2012), allelopathic activity (Batista *et al*., 2016)
Aristolochiaceae							
Aristolochia trilobata L.	*Urubucaá* (Dutchman's pipe)	Gastritis, stomachache, hemorrhage	Tea (decoction)	Leaves	0.014	NCI	No data found
Asparagaceae							
Agave deserti Engelm.	*Espinheira santa* (desert agave)	*Quebranto*	Maceration in a bath	Leaves	0.005	NCI	No data found
Agave neglecta Small	*Coratá* (wild century plant)	*Quebranto*, *panemeira*, *mau olhado*, *espírito mau*, cough	Decoction in a bath, maceration in a bath, syrup	Leaves	0.028	NCI	No data found
Sansevieria trifasciata Prain	*Espada de São Jorge* (snake plant, mother-in-law's tongue, Saint George's sword)	*Quebranto*, *mau olhado*, *panemeira*, *olho gordo*, *espírito mau*	Decoction in a bath, maceration in a bath	Leaves	0.080	NCI	Steroidal saponins (Mimaki *et al*., 1996), pregnane glycosides (Mimaki *et al*., 1997), sappanin-type homoisoflavonoids (Tchegnitegni *et al*., 2015), anti-allergic and anti-anaphylactic activities (Andhare *et al*., 2012)
Asteraceae							
Acmella oleracea (L.) R.K.Jansen	*Jambu* (toothache plant, paracress)	Nervousness, gastritis, tachycardia	Tea (decoction)	Leaves	0.014	NCI	Rhamnogalacturonan (Maria-Ferreira *et al*., 2014), acetylenic 2-phenylethylamides (Simas *et al*., 2013), alkylamides (Cheng *et al*., 2015), gastroprotective effect (Maria-Ferreira *et al*., 2014), antinociceptive effects (Nomura *et al*., 2013), larvicidal activity (Simas *et al*., 2013)
Ayapana triplinervis (Vahl) R.M.King & H.Rob.	*Japana, japana branca* (water hemp)	Cough, *quebranto*, *aborrecimento de criança* rheumatism, *panemeira*, flu, vaginal infection, ovarian inflammation	Maceration in a bath, tea (decoction), syrup	Leaves	0.108	0.005	Thymohydroquinone dimethyl ether (Gauvin-Bialecki & Morodon, 2009)
Bidens pilosa L.	*Picão, alfazema* (hairy beggarticks)	Uterine infection, hepatitis, gastritis, *quebranto*	Tea (decoction), maceration in a bath	Leafy branches	0.042	NCI	Hydoxylcinnamoyl tartaric acids (Khoza *et al*., 2016), sesquiterpene, polyacetylene (Grombone-Guaratini *et al*., 2005), 5-*O*-methylhoslundin

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							(Sarker *et al*., 2000), flavonoids, centaurein, centaureidin (Chang *et al*., 2007), antimicrobial activity (Khan *et al*., 2001), antidiabetic property (Chien *et al*., 2009), immunosuppressive and anti-inflammatory effects (Pereira *et al*., 1999), antimalarial activity (Oliveira *et al*., 2004), antioxidant and immunomodulatory activities (Abajo *et al*., 2004), anti-tumor potential (Kviecinski *et al*., 2011), antiulcer activity (Alvarez *et al*., 1999), intestinal mucositis (Ávila *et al*., 2015), antibacterial and antifungal activities (Deba *et al*., 2008)
Gymnanthemum amygdalinum (Delile) Sch.Bip. ex Walp.	*Boldo de planta* (bitterleaf)	Gastritis, hepatitis, stomachache, diarrhea	Tea (decoction), tea (infusion)	Leaves	0.165	0.047	Antioxidant activity (Silva *et al*., 2013a; Del-Vechio-Vieira *et al*., 2013)
Mikania lindleyana DC.	*Sicuriju, sucuriju* (sucuriju)	Gastritis, stomachache, liver problems, diabetes, asthma	Tea (decoction)	Leaves	0.123	0.052	Anti-inflammatory activity (Vanderlinde *et al*., 2012)
Pluchea sagittalis Less	*Macela* (wingstem camphorweed)	Stomachache, vomiting, high blood pressure, stomachache, liver problems, diarrhea	Tea (decoction)	Leaves	0.009	0.019	Antinociceptive and gastroprotective activities (Figueredo *et al*., 2011)
Tagetes patula L.	*Cravo* (French marigold)	Rheumatism, headache, epilepsy, stroke, stomachache, intestinal worms, arthrosis	Maceration in a bath, tea (decoction), plaster	Leaves	0.075	0.009	Flavonoids (Munhoz *et al*., 2014), thiophenes (Margl *et al*., 2001), benzofuran derivatives (Margl *et al*., 2005), (Z)-β-ocimene, (E)-β-ocimene, terpinolene, (Z)-ocimenone, (E)-ocimenone, δ-elemene (Prakash *et al*., 2012), larvicidal effect (Munhoz *et al*., 2014)
Bignoniaceae							
Fridericia chica (Bonpl.) L.G.Lohmann	*Pariri* ([unknown])	Anemia, kidney problems, urinary tract infection, albumin deficiency during pregnancy	Tea (decoction), syrup	Leaves	0.283	0.071	Flavone (Takemura *et al*., 1995), 3-Desoxyanthocyanidins (Zorn *et al*., 2001), anthocyanins, luteolin (Paula *et al*., 2014), 3-Deoxyanthocyanidins (Devia *et al*., 2002), antimicrobial activity (Mafioleti *et al*., 2013), anti-inflammatory, antiangiogenic and antiproliferative activities (Michel *et al*., 2015), leishmanicidal and cytotoxicity activities (Sá *et al*., 2016), anti-ulcerogenic activity (Servat-Medina *et al*., 2015), antioxidant capacity (Siraichi *et*

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							al., 2013)
Mansoa standleyi (Steyerm.) A. H. Gentry	*Cipó-alho* (garlic vine)	*Quebranto, mau olhado, espírito mau, panemeira, uruca, assombro*	Decoction in a bath	Leaves	0.165	NCI	Diallyl disulfide and diallyl trisulfide (Souza Filho *et al*., 2009a), allelophatic effect (Souza Filho *et al*., 2009a)
Bixaceae							
Bixa orellana L.	*Urucu* (lipstick tree, achiote)	High cholesterol, conjunctivitis, vision problems, wounds, heart problems	Tea (maceration), maceration in a bath	Leaves and seeds	0.042	NCI	Carotenoids (Mercadante *et al*., 1997; Jako *et al*., 2002), terpenoids (Conrad *et al*., 2013), antioxidant activity (Smilin *et al*., 2012)
BromeliaceaE							
Ananas ananassoides (Baker) L. B. Sm.	*Nananzinho* (wild pineapple, cerrado pineapple)	Hemorrhage	Juice	Fruit	0.005	NCI	No data found
Cactaceae							
Cereus jamacaru DC.	*Jamacaru* (queen of the night cactus)	Urinary tract infection, kidney problems, erysipelas, sore throat, chest pain, lung problems, flu, *quebranto*	Tea (decoction), maceration in a bath, plaster, syrup	Stem	0.047	0.005	Anthelmintic effects (Vatta *et al*., 2011)
Epiphyllum phyllanthus (L.) Haw.	*Cacto de palma* (climbing cactus)	Cancer, toothache	Plaster	Stem	0.009	0.005	Saponins and alkaloids (Pereira *et al*., 2008)
Caricaceae							
Carica papaya L.	*Mamão macho* (papaya, pawpaw, papaw)	Intestinal worms, amoebic infection, diarrhea, vomiting, kidney problems,	Tea (decoction)	Roots, leaves and shoots	0.061	0.005	Flavonoids, alkaloids (Julianti *et al*., 2014), glucosides (Galang *et al*., 2016), total phenolic (Gogna *et al*., 2015), phenols, carotenoids, vitamin C (Sancho *et al*., 2011), antiplasmodial activity (Julianti *et al*., 2014), antithrombocytopenic activity (Zunjar *et al*., 2016), hypoglycemic activity (Juárez-Rojop *et al*., 2014)
Convolvulaceae							
Ipomoea asarifolia (Desr.) Roem. & Schult.	*Salsa* (ginger-leaf morning glory)	Wounds	Tea (decoction), extract	Leaves and roots	0.005	NCI	Hepatoprotective activity (Farida *et al*., 2012), potential effect against inflammation (Lima *et al*., 2014), trypanocidal efficacy (Alkali *et al*., 2015)
Costaceae							
Costus spicatus (Jacq.) Sw.	*Canafiche, canafístula* (spiked spiralflag ginger, Indian head ginger)	Painful urination, urinary tract infection, renal inflammation, kidney stone, uterine infection	Tea (decoction)	Leaves	0.274	0.028	Furostanol glycoside (Silva *et al*., 1999), flavonol glycosides (Silva *et al*., 2000), saponins, alkaloids, tannins (Paes *et al*., 2013), antioxidant activity (Azevedo *et al*., 2014)
Crassulaceae							
Kalanchoe pinnata	*Pirarucu* (life	Ear infection,	Tea (decoction)	Leaves	0.462	0.028	Flavonoids (Muzitano *et al*.,

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(Lam.) Pers.	leaf, leaf of life, life plant, good-luck leaf, miracle leaf)	urinary tract infection, endometritis, vaginal infection, gastritis, erysipelas, toothache, stomachache, headache, falls, wounds, sore throat, asthma, vision problems, boil	decoction in a bath, extract, plaster, juice				2011), antileishmanial activity (Muzitano *et al*., 2011), activity anticonvulsant (Mora-Pérez & Hernández-Medel, 2015), hypoglycemic and hypocholesterolemic activities (Menon *et al*., 2015), antihypertensive activity (Bopda *et al*., 2014)
Cyperaceae							
Cyperus articulatus L.	*Priprioca* (jointed flatsedge)	*Quebranto*, deep wound	Maceration in a bath	Roots	0.009	NCI	Corymbolone and mustakone (Rukunga *et al*., 2008), sedative property (Rakotonirina *et al*., 2001), antiplasmodial activity (Rukunga *et al*., 2008), anticonvulsant property (Bum *et al*., 2001)
Euphorbiaceae							
Croton cajucara Benth.	*Sacaca* (white sacaca, red sacaca)	Obesity, rheumatism, generalized aches/pains	Tea (decoction)	Leaves	0.014	NCI	Diterpene lactone (Melo *et al*., 2003), antinociceptive activity (Campos *et al*., 2002), anti-ulcerogenic effect (Paula *et al*., 2008), cytotoxic activity (Almeida *et al*., 2003), gastroprotective effect (Hiruma-Lima *et al*., 2000), antileishmanial activity (Lima *et al*., 2015)
Euphorbia tirucalli L.	*Cruzeiro* (pencil cactus, firestick plant, Indian tree spurge, naked lady, pencil tree, sticks on fire, milk bush)	Warts	Fresh	Sap	0.014	NCI	Euphol (Lin *et al*., 2012), maloyl glucans (Kuster *et al*., 2015) anti-arthritic activity (Bani *et al*., 2007), anti-tumor activity (Valadares *et al*., 2006)
Jatropha curcas L.	*Pião-branco* (Barbados nut, purging nut, physic nut)	Wounds, asthma, flu, sore throat, earache, gastritis, toothache	Fresh, tea (maceration) tea (decoction), lollipop, plaster	Fruit, leaves, skin/bark and sap	0.156	0.014	Diterpenoids (Liu *et al*., 2015), phorbol esters (Baldini *et al*., 2014), anti-toxoplasma activity (Soares *et al*., 2015), antioxidant activity (Fu *et al*., 2014)
Jatropha gossypiifolia L.	*Pião-roxo* (bellyache bush, black physic nut, cotton-leaf physic nut)	*Mau olhado*, *aborrecimento de criança*, "toxin buildup" (need to cleanse the body), *quebranto*, *panemeira*, *espírito mau*, wounds, chest pain, diarrhea	Maceration in a bath, Decoction in a bath, tea (decoction), fresh	Leaves, leafy branches and sap	0.170	0.005	Hypotensive and vasorelaxant effects (Abreu *et al*., 2003), anticoagulant and antioxidant activities (Félix-Silva *et al*., 2014)
Pedilanthus tithymaloides (L.) Poit.	*Coramina* (buckthorn, Christmas	Heart problems, cardiac arrhythmia, nervousness	Tea (decoction)	Leaves	0.160	0.019	Coumarin derivatives (Sandjo *et al*., 2012), antimicrobial effects (Vidotti *et al*., 2006), anti-

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	candle, fiddle flower, Jacob's ladder)						inflammatory and antioxidant activities (Abreu *et al*., 2006),
Fabaceae							
Abrus fruticulosus Wight & Arn.	*Acaçus* ([unknown])	Sore throat, cough, flu	Tea (decoction)	Leaves	0.014	NCI	No data found
Bauhinia forficata Link	*Pata-de-vaca* (cow's-foot)	High cholesterol, high triglycerides, high blood pressure, uterine infection	Tea (decoction)	Leaves	0.019	NCI	Flavonoids (Marques *et al*., 2013), anticoagulant and antifibrinogenolytic properties (Oliveira *et al*., 2005), antidiabetic activity (Pepato *et al*., 2002), hypoglycemic activity (Cunha *et al*., 2010)
Cajanus cajan (L.) Huth	*Feijão-cuandu* (pigeon-pea, Congo-pea)	Headache, flu, constipation	Decoction in a bath, maceration in a bath	Leafy branches	0.047	NCI	Cajanol (Luo *et al*., 2010), cajanuslactone (Kong *et al*., 2010), cajanin (Fu *et al*., 2015), phenolics (Wei *et al*., 2015), anticancer activity (Luo *et al*., 2010), antibacterial activity (Kong *et al*., 2010), antioxidant property (Gao *et al*., 2012)
Erythrina indica Lam.	*Brasileira* (tiger's claw)	Sore throat, "toxin buildup" (need to cleanse the body)	Decoction in a bath, tea (decoction)	Leaves	0.009	NCI	β-galactosidase (Kestwal & Bhide, 2007a), α-mannosidase (Kestwal *et al*., 2007b), hypoglycaemic and antidiabetic activities (Kumar *et al*., 2011), antibacterial and cytotoxic effects (Sre *et al*., 2015), antioxidant activity (Sre *et al*., 2012)
Libidibia ferrea (Mart. ex Tul.) L.P. Queiroz	*Jucá* (leopardtree, leopard tree)	Sore throat, hoarseness, leg pain, toothache, uterine inflammation, wounds, anemia, gastritis	Tea (decoction), tea (maceration), maceration in a bath	Fruit	0.151	0.028	Polyphenols (Araújo *et al*., 2014), anti-inflammatory activity (Dias *et al*., 2013), antinociceptive effect (Sawada *et al*., 2014), antimicrobial activity (Marreiro *et al*., 2014)
Iridaceae							
Eleutherine bulbosa (Mill.) Urb.	*Marupazinho* ("tears of the virgin")	Diarrhea, amoebic infection, *diarreia de dentição*, hemorrhoids, vomiting, stomachache	Tea (decoction)	Roots	0.241	0.038	Eleutherinone (Alves *et al*., 2003)
Lamiaceae							
Aeollanthus suaveolens Mart. ex. Spreng.	*Catinga-de-mulata* ("macassà")	Stroke, convulsions, intestinal worms, stomachache	Tea (decoction)	Leaves	0.028	NCI	No data found
Mentha spicata L.	*Hortelã, hortelazinho* (pennyroyal, squaw mint, mosquito plant, pudding grass)	*Diarreia de dentição*, diarrhea, intestinal worms, flu, headache, stomachache, vomiting, fever	Tea (decoction), syrup	Leaves	0.198	0.090	Terpenoids (Pragadheesh *et al*., 2015), β-carotene and lutein (Gómez-Prieto *et al*., 2007), limonene (Chauhan *et al*., 2009), pulegone (Telci *et al*., 2010), piperitenone oxide (Nakamura *et al*., 2014),

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							flavonoids (Bimakr *et al*., 2011), carvone (Zhao *et al*., 2013), anti-inflammatory activity (Arumugam *et al*., 2008), antifungal, antiaflatoxigenic and insecticidal efficacy (Kedia *et al*., 2014), antioxidant and antibacterial activities (Scherer *et al*., 2013)
Mentha pulegium L.	*Hortelã-pimenta* (pepper mint)	*Diarreia de dentição*, diarrhea	Tea (decoction)	Leaves	0.014	NCI	Piperitenone, β-humulene, germacrene D (Zantar *et al*., 2015), flavonoids (Zaidi *et al*., 1998), pulegone, menthone (Kamkar *et al*., 2010), chrysanthenone (Benlarbi *et al*., 2014), antioxidative effect (Kamkar *et al*., 2010; Jain *et al*., 2012), antimicrobial activity (Mahboubi & Haghi, 2008)
Ocimum campechianum Mill.	*Favaca, favaquinha* (Amazonian basil, wild sweet basil, wild mosquito plant, least basil)	Headache, painful urination, heart problems, cholesterol issues, constipation, high blood pressure, flu	Tea (decoction), decoction in a bath	Leaves	0.057	NCI	Methyl eugenol, germacrene D, eugenol (Pino Benitez *et al*., 2009)
Ocimum gratissimum L.	*Favacão* (African basil, clove basil)	Constipation, flu, *panemeira*, *aborrecimento de criança*, dizziness, headache, sore throat	Tea (decoction), maceration in a bath	Leaves	0.108	NCI	Thymol, γ-terpinene, myrcene (Marie *et al*., 2013), chicoric acid (Casanova *et al*., 2014), hypoglycemic activity (Casanova *et al*., 2014), anesthetic effect (Silva *et al*., 2012), antioxidant and anxiolytic effects (Venuprasad *et al*., 2014), anthelmintic activity (Pessoa *et al*., 2002), relaxant effect (Madeira *et al*., 2002), antitrypanosomal and antiplasmodial activities (Kpoviessi *et al*., 2014), antifungal activity (Nakamura *et al*., 2004), antibacterial property (Orafidiya *et al*., 2006), antileishmanial activity (Ueda-Nakamura *et al*., 2006), anti-arthritic potential (Madhu & Harindran, 2014)
Ocimum minimum L.	*Manjericão* (Greek basil, bush basil)	Stomachache, generalized aches/pains, gastritis, *quebranto*, *mau olhado*, flu, constipation, asthma, lung disease	Tea (decoction), maceration in a bath	Leaves	0.075	0.005	No data found
Plectranthus	*Anador*	Stomachache,	Tea (decoction)	Leaves	0.094	0.009	Trans-caryophyllene (Bandeira

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barbatus Andr.	("forskohlii")	gastritis, headache, generalized aches/pains, diarrhea, stomachache					*et al*., 2011), antioxidant activity (Falé *et al*., 2009; Maioli *et al*., 2010), antioxidant and anti-inflammatory activities (Kapewangolo *et al*., 2013)
Plectranthus neochilus Schltr.	*Sete dores, boldo da índia, anador da índia, boldo verdadeiro* (lobster flower)	Headache, stomachache, stomachache, generalized aches/pains	Tea (decoction), extract	Leaves	0.108	0.014	Trans-caryophyllene (Bandeira *et al*., 2011), antimicrobial activity (Crevelin *et al*., 2015)
Pogostemon heyneanus Benth.	*Oriza* ([Indian] [Java] [false] patchouli)	*Mau olhado, aborrecimento de criança, quebranto*, heart problems, headache, flu, asthma, rheumatism, cramp	Maceration in a bath, tea (decoction)	Leaves	0.104	0.005	α-Bulneseno (Souza Filho *et al*., 2009b)
Tetradenia riparia (Hochst.) Codd	*Mirra* (ginger bush)	Headache, stomachache, *mau olhado, quebranto*	Tea (decoction)	Leaves	0.024	NCI	Acaricidal activity (Gazim *et al*., 2011), antileishmanial activity (Demarchi *et al*., 2015), antidermatophytic activity (Endo *et al*., 2015), antimicrobial activity (Melo *et al*., 2015), analgesic activity (Gazim *et al*., 2010), cytotoxic and antioxidant activities (Gazim *et al*., 2014)
Vitex agnus-castus L.	*Alecrim* (rosemary)	Flu	Decoction in a bath	Leaves	0.005	NCI	Diterpenoids (Hoberg *et al*., 1999), vitexlactam A (Li *et al*., 2002), total phenolic, flavonoids (Sarikurkcu *et al*., 2009), linoleic acid (Liu *et al*., 2004), antifungal activity (Svecová *et al*., 2013), antioxidant activity (Sarikurkcu *et al*., 2009), antiepileptic activity (Saberi *et al*., 2008), antimicrobial activity (Stojkovic *et al*., 2011), cytotoxic activity (Duymus *et al*., 2014), antimutagenic activity (Sarac *et al*., 2015)
Lauraceae							
Cinnamomum verum J. Presl	*Canela* ([Ceylon] [Sri Lanka] [true] cinnamon)	Low blood pressure	Tea (decoction)	Leaves	0.094	NCI	Cinnamaldehyde, cinnamyl acetate, β-phellandrene (Choi *et al*., 2015), 2-methoxycinnamaldehyde (Wong *et al*., 2016; Perng *et al*., 2016), trans-cinnamaldehyde A- and B-type proanthocyanidins (Williams *et al*., 2015), antioxidant activity (Mathew & Abraham, 2006), antibacterial activity (Choi *et al*., 2015), anthelmintic activity (Williams

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							et al., 2015), anticancer effect (Wong *et al*., 2016)
Persea americana Mill.	*Abacateiro* (avocado tree)	Gastritis, liver problems, diarrhea, kidney stone, rheumatism	Tea (decoction), maceration in a bath	Leaves and seeds	0.118	0.005	Heptadecanols (Lee *et al*., 2012), analgesic and anti-inflammatory effects (Adeyemi *et al*., 2002), vasorelaxant action (Owolabi *et al*., 2005), larvicidal activity (Torres *et al*., 2014), antimycobacterial activity (Lu *et al*., 2012), antidiabetic activity (Lima *et al*., 2012a)
Malpighiaceae							
Callaeum antifebrile (Ruiz ex Griseb.) D.M.Johnson	*Cabi* ("ayahuasca negro" [from Spanish])	*Quebranto*, *mau olhado*, *panemeira*, *uruca*, *olho gordo*, stroke	Maceration in a bath, decoction in a bath	Leaves	0.057	0.009	No data found
Malpighia punicifolia L.	*Acerola* (Barbados cherry)	Anemia	Juice	Fruit	0.005	NCI	Antioxidant compounds (Mezadri *et al*., 2008), carotenoid (Rosso & Mercadante, 2005), antioxidant activity (Mezadri *et al*., 2008), antimicrobial Effect (Tremonte *et al*., 2016)
Malvaceae							
Gossypium barbadense L.	*Algodão* (Creole cotton)	Lung cancer, cough, flu, bronchitis, asthma, uterine inflammation, gastritis, stroke	Tea (decoction), juice, syrup, fresh	Leaves	0.123	0.014	Antibacterial activity (Cassano *et al*., 2009)
Hibiscus sabdariffa L.	*Vinagreira-roxa* (roselle, carcade)	Toothache, mycosis, erysipelas, diabetes, *quebranto*, *mau olhado*, constipation, flu	Tea (decoction), decoction in a bath, maceration in a bath	Leaves	0.052	NCI	Anthocyanins (Alarcon-Aguilar *et al*., 2007), total phenolic (Mohd-Esa *et al*., 2010), caffeic, gallic, chlorogenic acids (Mercado-Mercado *et al*., 2015), ascorbic acid (Kalla *et al*.,2015), 1-octen-3-ol, decanal, octanal, 1-hexanol, nonanal (Ramírez-Rodrigues *et al*., 2012), phenolic compounds, caffeoylquinic acids, flavonols (Borrás-Linares *et al*., 2015), anti-obesity (Alarcon-Aguilar *et al*., 2007), antimicrobial activity (Borrás-Linares e*t al*., 2015), antioxidant activity (Ramírez-Rodrigues *et al*., 2012)
Hibiscus rosa-sinensis L.	*Papoula* (Chinese hibiscus, China rose, Hawaiian hibiscus, shoe flower)	Heart problems	Tea (decoction)	Flowers	0.005	NCI	Total phenolics, tannins, flavonoids, favonols, anthocyanins (Mak *et al*., 2013), polyphenols (Silva *et al*., 2014a), antidiabetic potential (Pillai & Mini, 2016), antioxidant and antibacterial activities (Silva *et al*., 2014a)
Theobroma cacao	*Cacau* (cacao	Erysipelas	Fresh	Fruit	0.005	NCI	Polyphenols (González *et al*.,

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L.	tree, cocoa tree)						2013), phenolic compounds, procyanidins (Cádiz-Gerrea *et al*., 2014), flavanols (Ioannone *et al*., 2015), antioxidant activity (Ioannone *et al*., 2015)
Urena lobata L.	*Méssica* (caesar weed, caesarweed, bur mallow, pink burr)	Headache, stomachache, gastritis	Tea (decoction)	Seeds	0.009	NCI	Triglycerides (Morelli *et al.*, 2006), (-)-trachelogenin, clematoside-S (Gao *et al*., 2015), mangiferin, stigmasterol, β-sitosterol (Purnomo *et al*., 2015), antimicrobial activity (Gao *et al*., 2015), antidiabetic potential (Purnomo *et al*., 2015)
Marantaceae							
Ischnosiphon gracilis (Rudge) Körn.	*Unha de gato* ("warimbo")	Vaginal infection	Extract	Roots	0.005	NCI	No data found
Melastomataceae							
Tibouchina clavata (Pers.) Wurdack	*Cibalena* (bear's ear)	Headache	Tea (decoction)	Leaves	0.005	NCI	No data found
Meliaceae							
Cedrela odorata L.	*Cedro* ([Spanish] [Barbados] [Brazilian] [British Guiana] [British Honduras] cedar)	Headache, *aborrecimento de criança*	Maceration in a bath	Leaves	0.009	NCI	Phenolic compounds (Almonte-Flores *et al*., 2015), polyphenols, gallic acid, (-)-gallocatechin, (+)-catechin (Giordani *et al*., 2015), antioxidant activity (Almonte-Flores *et al*., 2015; Giordani *et al.*, 2015)
Moraceae							
Dorstenia asaroides Gardner.	*Apii* ([unknown])	Asthma	Tea (decoction)	Roots	0.005	NCI	No data found
Ficus maxima Mill.	*Caxinguba* (fig tree)	Amoebic infection, intestinal worms	Tea (decoction), fresh	Skin/bark and sap	0.009	NCI	No data found
Musaceae							
Musa x paradisiaca L.	*Banana roxa, banana são tomé* ([French] plantain)	Diarrhea, gastritis, intestinal worms	Tea (decoction)	Roots and fruit	0.024	NCI	Anthocyanins (Pazmiño-Durán *et al*., 2001), flavanoid (Nisha & Mini, 2013), polysaccharides (Mondal *et al*., 2001), rutin (Kappel *et al*., 2013), phenylpropanoid glycoside (Krishnan *et al*., 2014), anthelmintic activity (Hussain *et al*., 2011), antidiabetic potential (Krishnan *et al*., 2014), antioxidant, hypoglycaemic and anti-inflammatory activities (Nisha & Mini, 2013), potent antihyperglycemic and moderate antimicrobial activity (Jawla *et al*., 2012)
Myrtaceae							
Psidium	*Goiaba araçá*	Diarrhea	Tea (decoction)	Young	0.005	NCI	Disaccharide, monosaccharides,

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
acutangulum Mart. ex DC.	(Para guava)			leafy branches			organic acids, trihydroxycinnamic acid glucopyranosyl, tannine digalloylglucopyranosyl, triterpenoid acids, fatty acids (Ramos *et al*., 2015), antioxidant activity (Ramos *et al*., 2015), anti-inflammatory activity (Houël *et al*., 2015)
Psidium guajava L.	*Goiabeira, goiaba* ([yellow] [lemon] [common] guava)	Hemorrhoids, diarrhea, wounds, urinary tract infection, gastritis	Tea (decoction)	Young leafy branches, skin/bark and flowers	0.231	0.042	Flavonoids and phenolic acids (Fernandes *et al*., 2014; Morais-Braga *et al*., 2015), triterpenoids (Shu *et al*., 2012), antidiabetic activity (Soman *et al*., 2013), antidiarrhoeal activity (Mazumdar *et al*., 2015), antifungal potential (Morais-Braga *et al*., 2015), antimicrobial and antioxidant activities (Fernandes *et al*., 2014), anti-inflammatory effect (Jang *et al*., 2014)
Oxalidaceae							
Averrhoa carambola L.	*Caramba, carambola* (star fruit, starfruit)	Diabetes, flu, cholesterol issues	Fresh, juice, tea (decoction)	Fruit and flowers	0.033	NCI	2-Dodecyl-6-methoxycyclohexa-2,5-diene-1,4-Dione (Zheng *et al*., 2013), phenolics, total flavonoids (Wei *et al*., 2014), apigenin-6-C-β-fucopyranoside (Cazarolli *et al*., 2012), antioxidant activity (Thomas *et al*., 2016), Khanam *et al*., 2015), antihyperglycemic activity (Cazarolli *et al*., 2012), antidiabetic activity (Zheng *et al*., 2013)
Oxalis triangularis A.St.-Hil.	*Panama, panama branca* (false shamrock)	Sore throat	Tea (decoction)	Leaves	0.019	NCI	Anthocyanin-flavone (Fossen *et al*., 2007), anthocyanins (Fossen *et al*., 2005)
Passifloraceae							
Passiflora edulis Sims	*Maracujá* (passion flower, passion fruit, passionfruit, purple granadilla)	Heart problems, nervousness	Tea (decoction)	Flowers	0.014	NCI	C-dideoxyhexosyl flavones (Xu *et al*., 2013), vitamin C (Flores *et al*., 2011), total phenolic, flavonoids (López-Vargas *et al*., 2013), triterpenoids, saponins (Wang *et al*., 2013), tocopherols, carotenoids, β-criptoxanthin (Pertuzatti *et al*., 2015), O-flavonoids, C-flavonoids, cyanogenic glycosides, fatty acids (Otify *et al*., 2015), cyanidin-3-O-β-D glucopyranoside, aliphatic esters (Jiménez *et al*., 2011), total flavonoids (Zeraik & Yariwake, 2010), antioxidant and

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
							antibacterial capacities (López-Vargas *et al*., 2013), antidepressant effect (Wang *et al*., 2013), antidiabetic potential (Kandandapani *et al*., 2015)
Passiflora vespertilio L.	*Maracujá-do-mato* (black passion flower)	Stress, nervousness, wounds	Juice, decoction in a bath	Fruit	0.019	NCI	No data found
Phyllanthaceae							
Phyllanthus niruri L.	*Quebra-pedra* (niruri)	Kidney stone, urinary tract infection, painful urination	Tea (decoction)	Leaves	0.118	0.009	Tannins (Markom *et al*., 2007), antiplasmodial efficacy (Ifeoma *et al*., 2013), anti-inflammatory and antinociceptive activities (Porto *et al*., 2013), antiallodynic effects (Couto *et al*., 2013), antioxidant effect (Colpo *et al*., 2014)
Phytolaccaceae							
Petiveria alliacea L.	*Mucuracaá* (guinea hen weed)	*Mau olhado, assombro, quebranto, panemeira, olho gordo, mau fluído, aborrecimento de criança*, stroke, headache, intestinal worms	Decoction in a bath maceration in a bath, tea (decoction)	Leaves	0.288	0.014	Anticonvulsant potential (Gomes *et al*., 2008), anxiolytic and antidepressant effects (Andrade *et a*l., 2012), antimicrobial activity (Pacheco *et al*., 2013), antiproliferative and anti-tumor activities (Hernández *et al*., 2014), mnemonic effects (Silva *et al*., 2015)
Piperaceae							
Peperomia pellucida (L.) Kunth	*Comida-de-jabuti* (pepper elder, shining bush plant)	Painful urination, kidney stone, diarrhea, gastritis, diabetes, sore throat	Tea (decoction)	Leaves	0.047	NCI	Phytol, 2-Naphthalenol, decahydro, hexadecanoic acid, methyl ester (Wei *et al*., 2011), saponins, phenols, tannins, flavonoids, steroids, triterpenoids (Silva *et al*., 2013b) analgesic activity (Aziba *et al*., 2001), antibacterial activity (Khan & Omoloso, 2002), antiedematogenic and anti-inflammatory activities (Arrigoni-Blank *et al*., 2002), analgesic activity (Arrigoni-Blank *et al*., 2004), anticancer activity (Wei *et al*., 2011), antidiabetic and antioxidant properties (Hamzah *et al*., 2012)
Piper callosum Ruiz & Pav.	*Óleo-elétrico, elixir paregórico* ([unknown])	Stroke, facial paralysis, *mau olhado*, stomachache, gastritis, fever	Tea (decoction) maceration in a bath, plaster	Leaves	0.061	0.005	No data found
Piper arboreum Aubl.	*Pau-de-angola* (long pepper)	*Aborrecimento de criança, uruca, quebranto, mau olhado, panemeira*,	Maceration in a bath, Juice	Leaves	0.061	NCI	Curcumene, *Cis*-cadin-4-en-7-ol, germacrene B (Nascimento *et al*., 2015), 3- geranil-4-hidroxibenzoato de metila

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
		headache, gastritis					(Ramos & Kato, 2009), antifungal activity (Nascimento *et al*., 2015)
Piper peltatum L.	*Malvarisco* (monkey's hand)	Erysipelas	Plaster	Leaves	0.042	0.005	Nerolidylcatechol (Núñez *et al*., 2005), 4- Nerolidylcatechol (Silva *et al*., 2011), antioxidant capacity (Puertas-Mejía *et al*., 2009), antiplasmodial activity (Silva *et al*., 2011)
Plantaginaceae							
Plantago major L.	*Tançagem* (common plantain)	Sore throat	Tea (decoction)	Leaves	0.014	NCI	Polysaccharides, lipids, caffeic acid derivatives, flavonoids, iridoid glycosides, terpenoids (Samuelsen, 2000), oleanolic acid (Kartini *et al*., 2014), β-glucosidase (Pankoke *et al*., 2013), anti-inflammatory, analgesic, antioxidant, immunomodulating and antiulcer activities (Samuelsen, 2000)
Scoparia dulcis L.	*Vassourinha* (sweet broom, goatweed)	Kidney problems, difficulty urinating, herpes, mycosis	Tea (decoction), maceration in a bath	Leaves and roots		NCI	Benzoxazinoid glycoside, flavonoids (Wu *et al*., 2012), dulcinodal, dulcinodiol, scoadiol decatone (Ahsan *et al*., 2015), antiproliferative activity (Wu *et al*., 2012), antiulcer activity (Babincová *et al*., 2008), antioxidant activity (Ratnasooriya *et al*., 2005)
Poaceae							
Chrysopogon zizanioides (L.) Roberty	*Paticholim* (vetiver, cuscus grass)	Headache	Decoction in a bath	Roots	0.005	NCI	Khusimol, *E*-isovalencenol, α-vetivone (Lima *et al*., 2012b), terpene (Hartwig *et al*., 2015), anti-inflammatory and antinociceptive effects (Lima *et al*., 2012b), acaricidal agents (Campos *et al*., 2015)
Coix lacryma-jobi L.	*Lágrima de nossa senhora* (Job's tears, coixseed, tear grass)	Kidney stone, urinary tract infection, painful urination	Tea (decoction)	Leaves	0.024	0.005	Phenolic acids (Chung *et al*., 2011), flavonoids (Chen *et al*., 2011), flavones, luteolin (Chen *et al*., 2012), anticancer activity, gatroprotective effect (Chung *et al*., 2011), anti-allergic effect (Chen *et al*., 2012), anti-inflammatory effects (Chen *et al*., 2011), antioxidant activity (Wang *et al*., 2016b)
Cymbopogon citratus (DC.) Stapf	*Capim marinho, capim limão* (lemon grass, lemongrass, oil grass)	Gas, queasiness, stomachache, vomiting, flu, constipation, nervousness, hair loss, high blood pressure	Tea (decoction), decoction in a bath, maceration in a bath	Leaves	0.231	0.024	Polysaccharides (Thangam *et al*., 2014), myrcene (Lermen *et al*., 2015), polyphenols (Francisco *et al*., 2013), 2,2-difenil-1-picrilhidrazil, tannins, phenolics acids, flavones glycosides (Figueirinha *et al*., 2008), phenolic compounds

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
							(Roriz *et al*., 2015; Costa *et al*., 2016b), lutelin 7-*O*-neohesperidoside, cassiaoccidentalin B, carlinoside, cynaroside, tannins (Costa *et al*., 2016a), antinociceptive activity (Viana *et al*., 2000), anticancer therapy (Thangam *et al*., 2014), antioxidant capacity (Roriz *et al*., 2015) anti-inflammatory property (Francisco *et al*., 2013), antibacterial activity (Lucena *et al*., 2015), gastroprotective activity (Sagradas *et al*., 2015)
Saccharum officinarum L.	*Cana-de-açúcar* (sugar cane, sugarcane)	Hair loss	Decoction in a bath, maceration in a bath	Leaves	0.005	NCI	Phenolic acids, flavonoids, glycosides (Abbas *et al*., 2014), phenolic compounds (Sun *et al*., 2014b; Feng *et al*. 2014), triterpenoids, phytosterols (Feng *et al*. 2014), antioxidant activity (Abbas *et al*., 2014)
Polygalaceae							
Caamembeca spectabilis (DC.) J.F.B. Pastore	*Camembeca* ([unknown])	Hyperactivity	Maceration in a bath	Leaves	0.005	NCI	No data found
Portulacaceae							
Portulaca pilosa L.	*Amor-crescido* (kiss me quick, pink purslane)	Wounds, falls, vision problems, erysipelas, stomachache, spinal problems, liver problems, gastritis, cancer, hair loss, uterine infection	Decoction in a bath, tea (decoction), plaster, extract	Leafy branches	0.175	0.019	Trans-clerodane diterpenoids, pilosanol A, B, C (Ohsaki *et al*., 1991), diterpenoid (Ohsaki *et al*., 1995)
Rubiaceae							
Coffea arabica L.	*Café* (arabica coffee, mountain coffee)	Headache, gastritis	Maceration in a bath, tea (decoction)	Leaves and flowers	0.009	NCI	3-*O*-caffeoylquinic acid, 4-*O*-caffeoylquinic acid, 5-*O*-caffeoylquinic acid (Xu *et al*., 2015), ascorbic acid, total flavonoids (Kadri *et al*., 2016), cafestol, 16-*O*-methylcafestol (Guercia *et al*., 2016), chlorogenic acid (Babova *et al*., 2016), antioxidant activity (Babova *et al*., 2016)
Morinda citrifolia L.	*Noni* (great morinda, Indian mulberry, beach mulberry, cheese fruit)	Obesity, diabetes uterine cancer, stomach cancer, high cholesterol, high blood pressure, weakness, urinary tract infection	Tea (decoction) tea (maceration), juice	Leaves and fruit	0.255	0.038	Fatty acid glucosides (Kim *et al*., 2010), octanoic acid, hexanoic acid (Pino *et al*., 2010), total phenolic (Ruhomally *et al*., 2015; Krishnaiah *et al*., 2015), anthraquinones (Wang *et al*., 2016a), phenolic compounds, iridoids, ascorbic acid

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
							(Dussossoy *et al*., 2011), cytotoxic effect (Lv *et al*., 2011), anti-inflammatory property (Dussossoy *et al*., 2011), antioxidant activity (Ruhomally *et al*., 2015; Palioto *et al*., 2015), anticancer effect (Lim *et al*., 2016), immunomodulatory effect (Palu *et al*., 2008), anti-obesity activity (Jambocus *et al*., 2016), antiplatelet effect (Beltrán *et al*., 2015), antinociceptive activity (Campos *et al*., 2016), antiangiogenic activity (Piaru *et al*., 2012), antiviral activity (Wang *et al*., 2016a), antimicrobial activity (Tintino *et al*., 2015)
Rutaceae							
Citrus x *aurantium* L.	*Laranja da terra* ([bitter] [Seville] [sour] [bigarade] [marmalade] orange)	Albumin deficiency during pregnancy, high cholesterol, heart problems	Tea (decoction), juice, fresh	Fruit and leaves	0.024	0.005	β-mycerne (Bonamin *et al*., 2014), flavonoids (Park *et al*., 2014), hesperidin, neohesperidin (Hamdan *et al*., 2014), antiulcer activity (Bonamin *et al*., 2014), insecticides activity (Zarrad *et al*., 2015), anxiolytic effect (Pultrini *et al*., 2006), anti-inflammatory effect (Kang *et al*., 2011), anticancer effect (Park *et al*., 2014)
Citrus x limon (L.) Osbeck	*Limãozinho, limão* (mandarin lime)	Flu, colds, headache, cough, sore throat, wounds, kidney stone, venous obstruction, queasiness	Tea (decoction), juice, lollipop, fresh, decoction in a bath	Leaves and fruit	0.226	0.014	Total phenolic (Mushtaq *et al*., 2015), antimicrobial effect (Oliveira *et al*., 2014b), antioxidant and antimutagenic activities (Mushtaq *et al*., 2015)
Citrus sinensis (L.) Osbeck	*Laranjeira, laranja* ([sweet] orange)	Flu, colds, heart palpitations, nervousness, fatigue, stomachache	Tea (decoction) decoction in a bath, juice	Leaves and fruit	0.052	NCI	Vitamin C and phenolic compounds (Letaief *et al*., 2016), limonene (Gaínza *et al*., 2015), flavanoneglycosides, polymethoxylated flavones (Chen *et al*., 2015), linoleic acid, α-linoleic acid, oleic acid, estearic acid (Nunes *et al*., 2015), polyphenols (Nayak *et al*., 2015), flavonoids (Barreca *et al*., 2016), anthelmintic activity (Gaínza *et al*., 2015), antioxidant capacity (Barreca *et al*., 2016)
Ruta graveolens L.	*Arruda* ([common] rue; herb-of-grace)	*Aborrecimento de criança, quebranto, mau olhado*, stomachache, stroke, headache, flu, vision	Maceration in a bath, tea (decoction), plaster, fresh, tea (infusion)	Leafy branches	0.165	0.009	2-nonanone and 2-undecanone (Orlanda & Nascimento, 2015), coumarin compounds (Harat *et al*., 2015), rutina and furanocoumarins (Ueng *et al*., 2015), anti-inflammatory and

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
		problems, facial paralysis, heart problems					antioxidant effects (Raghav *et al*., 2007), hypoglycemic effects (Figueroa-Valverde *et al*., 2009), antimicrobial and anti-inflammatory properties (Harat *et al*., 2015), relaxant activity (Águila *et al*., 2015)
Simaroubaceae							
Quassia amara L.	*Quina* (bitter ash, bitter wood)	Boils	Extract	Leaves	0.005	NCI	Quassinoids (Houël *et al*., 2009), simalikalactone D (Bertani *et al*., 2012), antimalarial property (Bertani *et al*., 2012), anti-ulcerogenic effect (García-Barrantes & Badilla, 2011)
Solanaceae							
Brugmansia suaveolens (Humb. & Bonpl. ex Willd.) Bercht. & C. Presl	*Zabumba* ([white] angel's trumpet)	Asthma	Inhalable mist	Flowers	0.005	NCI	Flavonol glycosides (Geller *et al*., 2014)
Capsicum frutescens L.	*Pimenta malagueta* (cayenne pepper)	*Mau olhado*	Maceration in a bath	Leaves	0.014	NCI	Capsaicin, dihydrocapsaicin, *N*-vanillyl-*n*-acylamide group (Schweiggert *et al*., 2006), capsaicinoid, phenolics compounds (Santos *et al*., 2015), total phenolic, total flavonoids (Gurnani *et* al., 2015), antioxidant effect (Oboh & Ogunruku, 2010), antibacterial activity (Carvalho *et al*., 2010), antimicrobial activity (Gurnani *et* al., 2015)
Solanum melongena L.	*Berinjela* (eggplant)	High cholesterol	Tea (maceration)	Fruit	0.005	NCI	Total phenolics and flavonoids (Kaur *et al*., 2014), ligananamids (Sun *et al*., 2014a), anthocyanins, total monomeric anthocyanin (Dranca & Oroian, 2015), phenylpropanoid amides (Sun *et al*., 2015a), γ-alkylated-γ-butyrolactone (Sun *et al*., 2015b), antioxidant activity (Braga *et al*., 2016) anti-inflammatory effect (Sun *et al*., 2014a; Sun *et al*., 2015b)
Solanum stramoniifolium Jacq.	*Jurubeba* ([unknown])	Intestinal worms	Fresh	Fruit	0.009	NCI	No data found
Talinaceae							
Talinum triangulare (Jacq.) Willd.	*Caruru* (waterleaf, Surinam purslane, Florida spinach, potherb	Stomachache	Tea (decoction)	Leaves	0.005	NCI	Betaxanthin and betacyanin (Swarna *et al*., 2013), phenolics compounds (Brasileiro *et al*., 2015), antioxidant activity (Swarna *et al*., 2013; Brasileiro *et al*., 2015)

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
	fameflower, sweetheart)						
Turneraceae							
Turnera ulmifolia L.	*Chanana* (yellow alder)	Kidney stone, urinary tract infection	Tea (decoction)	Leaves	0.009	NCI	Flavanoids and phenolics compounds (Brito *et al*., 2012), anti-ulcerogenic and anti-inflammatory effects (Antônio & Brito, 1998), anti-inflammatory and antioxidant activities (Galvez *et al*., 2006; Nascimento *et al*., 2006), antiparasitic activity (Santos *et al*., 2012)
Verbenaceae							
Lippia alba (Mill.) N.E.Br. ex Britton & P.Wilson	*Erva-cidreira* (bushy matgrass)	Stomachache, constipation, heart problems, stomachache, vomiting, high blood pressure, nervousness, insomnia, intestinal worms	Tea (decoction)	Leaves	0.425	0.104	β-guaiene, piperitenone (Alea *et al*., 1996), linalool, 1,8-cineole, β-caryophylene (Siani *et al*., 2002), geranial, geraniol, germacrene D, 1,8-cienole, β-elemene (Tavares *et al*., 2005), citral (neral + geranial), geraniol, β-bourbonene (Jezler *et al*., 2013), carvone, limonene (Ehlert *et al*., 2013), neral (Juiz *et al*., 2015), antibacterial activity (Alea *et al*., 1996) reduction of migraine (Carmona *et al*., 2013), antimicrobial activity (Juiz *et al*., 2015)
Lippia thymoides Mart. & Schauer	*Manjirona* ([unknown])	Gastritis, stomachache, diarrhea, generalized aches/pains	Tea (decoction)	Leaves	0.038	NCI	No data found
Stachytarpheta cayennensis (Rich.) Vahl	*Fel de gozo, ferdeguzo* ([dark-][blue] [Cayenne] snakeweed; bluetop; nettle-leaf [Cayenne] porterweed; Cayenne vervain; rattail; rough-leaf false vervain; blue rat's tail; Brazilian tea; false verbena; nettleleaf velvetberry)	Stomachache, diarrhea, vomiting, cough	Tea (decoction)	Leaves	0.014	NCI	Antimicrobial activity (Souza *et al*., 2010), antioxidant activity (Souza *et al*., 2011)
Violaceae							
Pombalia calceolaria (L.)	*Pecaconha* ([unknown])	Flu, cough	Syrup	Leaves	0.009	NCI	No data found

FAMILY *Species*	Common name(s) in Brazilian Portuguese (English)	Condition(s) for which treatment with the species is recommended	Preparation(s)	Plant part(s) used	UVs	IVs	Phytochemical and pharmacological studies
Paula-Souza							
Vitaceae							
Cissus verticillata (L.) Nicolson & C.E.Jarvis	*Cipó-pucá* (princess vine, millionaire vine, curtain ivy)	Stroke	Tea (decoction), plaster	Leaves	0.028	NCI	Compounds phenolic, terpenoids, polysaccharides (Oliveira *et al*., 2012)
Xanthorrhoeaceae							
Aloe vera (L.) Burm. f.	*Babosa* (aloe vera, aloe, burn plant, lily of the desert, elephant's gall)	Hair loss, erysipelas, stomach cancer, uterine cervical cancer, cough, gastritis, liver problems, wounds, burns, heart problems, urinary tract infection	Tea (decoction), juice, fresh, plaster, syrup, decoction in a bath	Leaves	0.363	0.052	Polysaccharides (Tabandeh *et al*., 2014), lophenol and cycloartanol (Nomaguchi *et al*., 2011), triglucosylated naphthalene glycoside (Yang *et al*., 2010), treatment of gastroesophageal reflux (Panahi *et al*., 2015), anticancer activity (Shalabi *et al*., 2015), antioxidant activity (Kang *et al*., 2014), antidiabetic activity (Nomaguchi *et al*., 2011), antifungal and anti-inflammatory properties (Das *et al*., 2011)
Zingiberaceae							
Alpinia purpurata (Vieill.) K. Schum	*Vindicá* (shellflower, dwarf cardamom)	Heart problems, *mau olhado*, *quebranto*, hyperactivity, albumin deficiency during pregnancy, anemia in pregnancy	Tea (decoction), decoction in a bath	Flowers and leaves	0.071	NCI	Flavanoids (Victório *et al*., 2009a), polyphenols (Silva *et al*., 2014b), antibacterial and anticancer activities (Raj *et al*., 2012), vasodilator activity (Victório *et al*., 2009b), hypotensive effect (Silva *et al*., 2014b)
Hedychium coronarium J. Koenig	*Borboleta* (white ginger, butterfly ginger)	Albumin deficiency during pregnancy, bloating during pregnancy, anemia	Tea (decoction), decoction in a bath	Roots and leaves	0.085	0.005	Saponins, caryophyllene and myrcene (Martins *et al*., 2010)
Zingiber officinale Roscoe	*Gengibre* (ginger)	Sore throat, colds, falls, rheumatism, spinal problems, low blood pressure, fatigue, abdominal cramping	Maceration in a bath, tea (decoction), syrup, lollipop	Roots	0.292	0.028	Gerinal, neral, geraniol (Dabague *et al*., 2011), zingiberene, gerinal, β-phellandrene, β-sesquiphellandrene, β-bisabolene, α-curmene (An *et al*., 2016), antioxidant and antimicrobial activities (Bellik, 2014)

About the main therapeutic use of medicinal plants indicated, which were grouped in accordance with the International Classification of Diseases following: Infectious and Parasitic Diseases (17.6% of the plant species identified); "Cultural ills" (14.5%); Gastrointestinal Disorders (11%); Circulatory Disorders (10.3%); and Respiratory Disorders (10.0%). Similar findings have been reported in other studies conducted within the Amazon region (Carneiro *et al*., 2010; Santos & Lima, 2008) and Atlantic Forest (Vendruscolo & Mentz 2006; Albertasse *et al*., 2010). Data from the National Basic Health Care Database of the Brazilian National Ministry of Health show that 46.55% of households in Abaetetuba have open sewers and only 1.7% are connected to the municipal sewer system

(DATASUS, 2013). Therefore, the fact that medicinal plants are most often used in the treatment of Infectious and Parasitic Diseases could be attributable to the lack of basic sanitation in the city.

The "Cultural ills" cited by the interviewees included *quebranto* (general malaise and physical weakness attributed to a curse), *mau olhado* ("evil eye"), *panemeira* (unhappiness attributed to a curse), *olho gordo* (supposed effect of the envy or jealousy of others), *espírito mau* (evil spirits), *assombro* (haunting), *uruca* (constant bad luck attributed to a curse), *diarreia de dentição* (teething-related diarrhea), *aborrecimento de criança* (childhood annoyance/irritability), and *mau fluído* (literally "bad fluid"; similar to the "evil eye"). Within this subcategory of medicinal plant use, the species most often cited (by 21.2% of the interviewees) was *Petiveria alliacea* L. (*mucuracaá* locally; guinea hen weed in English). Depending on the form in which it is prepared, *P. alliacea* presents varying degrees of toxicity, provoking insomnia, hallucinations, and dysfunction of the central nervous system (Oliveira *et al*., 2010). In Brazil, *P. alliacea* was first used during the time of slavery, because it was the principal ingredient in the preparation known as "*amansa senhor*" (another name for the plant itself, loosely translating to "master-be-gone" or "neutralize the master"), which was used by the slaves in order to make their masters apathetic and less inclined to mete out punishments (Camargo, 2007). In the São Sebastião neighborhood, *P. alliacea* is primarily used in the form of a decoction that is added to a bath as a treatment for *quebranto* or *mau olhado*. Apparently the use of these vegetables can relate to the biological activities provided their active ingredients with supernatural beliefs through which obtain the cure (Camargo, 2014). Citations for the treatment of "Cultural ills" is not restricted to the home gardens of interviewees in Brazil because Molares & Rovere (2016) in Argentina also reported the use of nine species, eight of which are native to that country.

Any or all parts of a given medicinal plant can be used in the preparation of herbal medicines. Among the individuals interviewed in the present study, the plant parts most often cited as being used in such preparations were the leaves (in 71.4%), the roots (in 8.9%), and the fruit (in 6.9%). Other studies of medicinal plants have also found that the leaves are the part of the plants that is most often used in the production of home remedies (Coelho-Ferreira & Jardim 2005; Leão *et al*., 2007; Aguiar & Barros, 2012). The preference for leaves might be related to ease of use and greater availability of leaves throughout the year (Brito & Senna-Valle, 2011).

The most commonly reported formulation of home remedies in the present study was decoction (tea, in 58.2%), followed by maceration into a bath (in 13.1%) and decoction into a bath (in 9.8%). The predominance of decoction tea has been reported in other studies of medicinal plants in the Amazon region (Leão *et al*., 2007; Siviero *et al*., 2012; Vásquez *et al*., 2014).

For the species identified here, the Total Species Diversity and Total Species Equitability were 47.43 and 0.383, respectively. The high Total Species Diversity indicates that there was considerable species variety among the medicinal plants identified. In other studies of urban home gardens (Althaus-Ottmann *et al*., 2011; Eichemberg *et al*., 2009), high species diversity was attributed to the rural origin of the interviewees (garden owners), who had come to cultivate various new species as a way of adapting to the urban environment. We observed the same in the São Sebastião neighborhood, where the majority of the interviewees were from rural communities and continued to grow plants in their home gardens.

As shown in Table 2, the species with the highest UVs in the present study were *Kalanchoe pinnata* (UVs-0.462); *Lippia alba* (UVs-0.425); *Aloe vera* (UVs-0.363); *Zingiber officinale* (UVs-0.292); *Petiveria alliacea* (UVs-0.288); *Fridericia chica* (UVs-0.283); *Costus spicatus* (UVs-0.274); *Morinda citrifolia* (UVs-0.255); *Eleutherine bulbosa* (UVs-0.241); *Cymbopogon citratus* (UVs-0.231) and *Psidium guajava* (UVs-0.231).

The species of the greatest relative importance, showing high UVs (*K. pinnata* and *L. alba*), were recommended as treatments for ailments affecting various human body systems (up to 10) or were cited multiple times as indicated for the treatment of conditions affecting a single body system. That suggests that there is strong pressure on these species due to their widespread use, because they are so widely known in the local community. *K. pinnata* was cited as a treatment for disorders of 10 body systems, compared with five for *L. alba*, the latter being recommended as a treatment for Circulatory Disorders by 55% of the interviewees and for Behavioural Disorders, including stress, insomnia, and depression, by 19%.

Studies such as that conducted by Almeida *et al.* (2000) have shown that leaf extracts of *K. pinnata* contain flavonoids, suggesting that these metabolites are gastroprotective and can heal gastric ulcers. Studies of *L. alba* have shown that it has antibacterial, antifungal, anti-ulcer, analgesic, anti-inflammatory, sedative, muscle relaxant, and anxiolytic properties (Pascual *et al*., 2001; Heinzmann & Barros, 2007; Aguiar *et al*., 2008). Those effects could explain the high use of those two species by the practitioners of folk medicine in the São Sebastião neighborhood.

Table 2 also shows that the species of medicinal plants with the highest IVs in São Sebastião were *L. alba* (IVs-0.104); *Mentha spicata* (IVs-0.090); *F. chica* (IVs-0.071); *A. vera* (IVs-0.052); *Mikania lindleyana* (IVs-0.052); *Gymnanthemum amygdalinum* (IVs-0.047); *Psidium guajava* (IVs-0.042); *Eleutherine bulbosa* (IVs-0.038) and *Morinda citrifolia* (IVs-0.038). We observed that the interviewees determined the importance of medicinal plant species on the basis of whether or not they had used it as a treatment and on the predominance of at-risk groups (children, the elderly, and pregnant women) within their family. Of the interviewees, 12% cited *L. alba* as the most important species for use in the treatment of high blood pressure, stress, and insomnia. For disorders affecting five different body systems, especially Infectious and Parasitic Diseases, *M. spicata* was cited by 88%. However, the interviewees who reported no longer using *M. spicata* attributed that change to an absence of children in the home but stated their willingness to grow the species again if grandchildren arrive.

Table 3

Informant Consensus Factors for health conditions that are reportedly treatable with the medicinal plant species grown in home gardens in the São Sebastião neighborhood of the city of Abaetetuba, in the state of Pará, Brazil. Nur – number of citations per category; Nt – number of species cited per category; ICF - Informant Consensus Factors.

Category	Nur	Nt	ICF
Infectious and parasitic diseases	333	53	0.84
Tumors (neoplasms)	50	6	0.90
Disorders of the blood/hematopoietic organs and certain immune system disorders	69	6	0.93
Endocrine, nutritional, and metabolic disorders	52	12	0.78
Central nervous system disorders	56	29	0.49
Ocular disorders	15	4	0.79
Diseases of the ear and mastoid process	31	4	0.90
Circulatory disorders	195	38	0.81
Respiratory disorders	189	37	0.81
Gastrointestinal disorders	207	34	0.84
Diseases of the skin and subcutaneous tissues	96	14	0.86
Diseases of the musculoskeletal system and connective tissue	50	8	0.86
Genitourinary disorders	157	33	0.79
Pregnancy, childbirth, and puerperium	20	4	0.84
Behavioral disorders	18	2	0.94
Trauma and poisoning	20	8	0.63
Symptoms and signs	56	23	0.60
Cultural ills	273	31	0.89

Table 3 shows the ICF values for the various ailments cited by the home garden owners interviewed in the present study. We divided those into 18 categories, of which 12 showed ICF values > 0.8. There were four categories in particular that were notable for their high relative importance (ICF values): Behavioural Disorders (0.94); Disorders of the Blood and Hematopoietic Organs (0.93); Ear Disorders (0.90); and Tumors and Neoplasms (0.90).

In a similar study Alves & Povh (2013) also found that the best consensus was for Behavioural Disorders, depression being the most frequently cited such disorder. According to Maioli-Azevedo & Fonseca-Kruel (2007), the medicinal plants for which there is the highest concordance among respondents are of great cultural importance for the local community, the extensive exchange of such species expanding the local knowledge base by virtue of the increased interaction. In addition, high ICF values can indicate which species merit further study in terms of their pharmacological properties (Almeida & Albuquerque, 2002).

As can be seen in Table 2 89 species (71.77%) were featured in previous pharmacological studies. For 37 of these species (41.57%), the uses cited by the residents in São Sebastião showed some similarity to the investigated effects/actions, demonstrating concordance between popular knowledge and academic science.

CONCLUSIONS

Although the home gardens studied here were in the urban zone of a relatively large city, their owners cultivated and used medicinal plants not only for therapeutic purposes but also as a reflection of their cultural heritage. However, in the study area, knowledge of the various species was not distributed in a uniform manner, which is likely attributable to the diversity of our sample of interviewees, in terms of their geographic origins. From a quantitative perspective, the heterogeneous distribution of knowledge was also evidenced by the low value of total species evenness.

The production of botanical knowledge in a community appears to be directly linked to the relationship that its residents have with the medicinal plants they grow in their home gardens. The local culture affects knowledge regarding the use of therapeutic plant resources, due to the interaction among groups of individuals of different geographic origins.

The existence of pharmacological studies that confirm the indications of interviewees demonstrates the importance of rescue and conservation of folk medicine both for the residents of São Sebastião and for science itself.

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REFERENCIAS

Abajo C, Boffill MA, Campo J, Méndeza MA, González Y, Mitjans M, Vinardell MP. 2004. *In vitro* study of the antioxidant and immunomodulatory activity of aqueous infusion of *Bidens pilosa*. **J Ethnopharmacol** 93: 319 - 323.

Abbas SR, Sabir SM, Ahmad SD, Boligon AA, Athayde ML. 2014. Phenolic profile, antioxidant potential and DNA damage protecting activity of sugarcane (*Saccharum officinarum*). **Food Chem** 147: 10 - 16.

Abreu IC, Marinho ASS, Paes AMA, Freirea SMF, Oleab RSG, Borgesa MOR, Borges ACR. 2003. Hypotensive and vasorelaxant effects of ethanolic extract from *Jatropha gossypiifolia* L. in rats. **Fitoterapia** 74: 650 - 657.

Abreu P, Matthew S, González T, Costa D, Segundo MA, Fernandes E. 2006. Anti-inflammatory and antioxidant activity of a medicinal tincture from *Pedilanthus tithymaloides*. **Life Sci** 78: 1578 - 1585.

Adeyemi OO, Okpo SO, Ogunti OO. 2002. Analgesic and anti-inflammatory effects of the aqueous extract of leaves of *Persea americana* Mill (Lauraceae). **Fitoterapia** 73: 375 - 380.

Aguiar JS, Maria CCD, Costa MCCD, Nascimento SC, Sena KXFR. 2008. Atividade antimicrobiana de *Lippia alba* (Mill.) N. E. Brown (Verbenaceae). **Rev Bras Farmacogn** 18: 436 - 440.

Aguiar LCGG, Barros RFM. 2012. Plantas medicinais cultivadas em quintais de comunidades rurais no domínio do cerrado piauiense (Município de Demerval Lobão,

Piauí, Brasil). **Rev Bras Plant Med** 14: 419 - 434.

Águila L, Ruedlinger J, Mansilla K, Ordenes J, Salvatici R, Campos RR, Romero F. 2015. Relaxant effects of a hydroalcoholic extract of *Ruta graveolens* on isolated rat tracheal rings. **Biol Res** 48: 1 - 6.

Ahsan M, Haque MR, Islam SKN, Gray AI, Hasan CM. 2015. New labdane diterpenes from the aerial parts of *Scoparia dulcis* L. **Phytochem Lett** 5: 609 - 612.

Ajileye OO, Obuotor EM, Akinkunmi EO, Aderogba MA. 2015. Isolation and characterization of antioxidant and antimicrobial compounds from *Anacardium occidentale* L. (Anacardiaceae) leaf extract. **J King Saud Univ - Science** 27: 244 - 252.

Alarcon-Aguilar FJ, Zamilpa A, Perez-Garcia MD, Almanza-Perez JC, Romero-Nuñez E, Campos-Sepulveda EA, Vazquez-Carrillo LI, Roman-Ramos R. 2007. Effect of *Hibiscus sabdariffa* on obesity in MSG mice. **J Ethnopharmacol** 114: 66 - 71.

Albertasse PD, Thomaz LD, Andrade MA. 2010. Plantas medicinais e seus usos na comunidade da Barra do Jucu, Vila Velha, ES. **Rev Bras Plant Med** 12: 250 - 260.

Albuquerque UP, Lucena RFP, Neto EMFL. 2010. **Seleção dos participantes da pesquisa**. In: Albuquerque UP, Lucena RFP, Cunha LVFC (orgs). Métodos e técnicas na pesquisa Etnobiológica e Etnoecológica. NUPEEA, Recife, Brasil.

Alea JAP, Luis AGO, Pérez AR, Jorge MR, Baluja R. 1996. Composición y propiedades antibacterianas del aceite esencial de *Lippia alba* (Mill.) N. E. Brown. **Rev Cub Farm** 30: 1 - 4.

Alkali Y, Gana AK, Abdulkadir A, Humphrey NC. 2015. Trypanocidal efficacy of two indigeneous ethanolic plant extracts (*Mimosa pigra* and *Ipomoea asarifolia*) against *Trypanosoma evansi* phospholipase A2 activity. **J Acute Dis** 1: 28 - 31.

Almeida AP, Silva SAG, Souza MLM, Lima LMTR, Rossibergmann B, Moraes VLG, Costa SS. 2000. Isolation and chemical analysis of a fatty acid fraction of *Kalanchoe pinnata* with a potent lymphocyte suppressive activity. **Planta Medica** 66: 134 - 137.

Almeida CFCBR, Albuquerque UP. 2002. Uso e conservação de plantas e animais medicinais no estado de Pernambuco (nordeste do Brasil): um estudo de caso. **Interciência** 27: 276 - 285.

Almeida ABA, Melo PS, Hiruma-Limac CA, Graciosod JS, Carlie L, Nunese DS, Haunb M, Brito ARMS. 2003. Antiulcerogenic effect and cytotoxic activity of semi-synthetic crotonin obtained from *Croton cajucara* Benth. **Eur J Pharmacol** 472: 205 - 212.

Almeida JRGS, Meira PRM, Nobre IBC, Tupiná JR. 2012. Uso de plantas medicinais em uma Unidade de Saúde da Família no município de Juazeiro-Ba. **Interfaces Científicas - Saúde e Ambiente** 1: 9 - 12.

Almonte-Flores DC, Paniagua-Castro N, Escalona-Cardoso G, Rosales-Castro M. 2015. Pharmacological and genotoxic properties of polyphenolic extracts of *Cedrela odorata* L. and *Juglans regia* L. barks in rodents. **Evid-Based Complement Alternat Med Http://dx.doi.org/10.1155/2015/187346**

Althaus - Ottmann MM, Cruz MJR, Fonte NN. 2011. Diversidade e uso das plantas cultivadas nos quintais do Bairro Fanny, Curitiba, PR, Brasil. **Rev Bras Biociências** 9: 39 - 49.

Alvarez A, Pomar F, Sevilla MA, Montero MJ. 1999. Gastric antisecretory and antiulcer activities of an ethanolic extract of *Bidens pilosa* L. var. *radiata* Schult. Bip. **J Ethnopharmacol** 67: 333 - 340.

Alves TMA, Kloos H, Zani CL. 2003. Eleutherinone, a Novel Fungitoxic Naphthoquinone from *Eleutherine bulbosa* (Iridaceae). **Mem Inst Oswaldo Cruz** 98: 709 - 712.

Alves GSP, Povh JA. 2013. Estudo etnobotânico de plantas medicinais na comunidade de Santa Rita, Ituiutaba – MG. **Biotemas** 26: 231 - 242.

Amaral CN, Guarim Neto G. 2008. Os quintais como espaços de conservação e cultivo de alimentos: um estudo na cidade de Rosário Oeste (Mato Grosso, Brasil). **Bol Museu Paraense Emílio Goeldi** 3: 329 - 341.

Amorozo MCM. 2002. Uso e diversidade de plantas medicinais em Santo Antônio do Laverger, MT, Brasil. **Acta Bot Bras** 16: 189 - 203.

Amorozo MCM, Viertler RB. 2010. **A abordagem qualitativa na coleta e análise de dados em**

etnobiologia e etnoecologia. In: Albuquerque UP, Lucena RFP, Cunha LVFC. (orgs). Métodos e técnicas na pesquisa Etnobiológica e Etnoecológica. NUPEEA, Recife, Brasil.

An K, Zhao D, Wang Z, Wu J, Xu Y, Xiao G. 2016. Comparison of different drying methods on Chinese ginger (*Zingiber officinale* Roscoe): Changes in volatiles, chemical profile, antioxidant properties and microstructure. **Food Chem** 197: 1292 - 1300.

Andhare RN, Raut MK, Naik SR. 2012. Evaluation of antiallergic and anti-anaphylactic activity of ethanolic extract of *Sansevieria trifasciata* leaves (EEST) in rodents. **J Ethnopharmacol** 142: 627 - 633.

Andrade TM, Melo AS, Dias RGC, Varela ELP, Oliveira RF, Vieira JLF, Andrade MA, Baetas AC, Monteiro MC, Maia CSF. 2012. Potential behavioral and pro-oxidant effects of *Petiveria alliacea* L. extract in adult rats. **J Ethnopharmacol** 143: 604 - 610.

Anitha VT, Antonisamy JM, Jeeva S. 2012. Anti-bacterial studies on *Hemigraphis colorata* (Blume) H.G. Hallier and *Elephantopus scaber* L. **Asian Pacific J Trop Med** 1: 52 - 57.

Anjaneyulu V, Satyanarayana P, Viswanadham KN, Jyothi VG, Rao KN, Radhika P. 1999. Triterpenoids from *Mangifera indica*. **Phytochemistry** 49: 118 - 125.

Antônio MA, Brito ARMS. 1998. Oral anti-inflammatory and anti-ulcerogenic activities of a hydroalcoholic extract and partitioned fractions of *Turnera ulmifolia* (Turneraceae). **J Ethopharmacol** 61: 215 - 228.

Araújo AA, Soares LAL, Ferreira MRA, Neto MAS, Silva GR, Araújo Jr RF, Guerra GCB, Melo MCN. 2014. Quantification of polyphenols and evaluation of antimicrobial, analgesic and anti-inflammatory activities of aqueous and acetone–water extracts of *Libidibia ferrea*, *Parapiptadenia rigida* and *Psidium guajava*. **J Ethnopharmacol** 156: 88 - 96.

Araújo TSL, Costa DS, Sousa NA, Souza LKM, Araújo S, Oliveira AP, Sousa FBM, Silva DA, Barbosa ALR, Leite JRSA, Medeiros JVR. 2015. Antidiarrheal activity of cashew GUM, a complex heteropolysaccharide extracted from exudate of *Anacardium occidentale* L. in rodents. **J Ethnopharmacol** 174: 299 - 307.

Arrigoni-Blank MF, Oliveira RLB, Mendes SS, Silva PA, Antoniolli AR, Vilar JC, Cavalcanti SCH, Blank AF. 2002. Seed germination, phenology, and antiedematogenic activity of *Peperomia pellucida* (L.) H.B.K. **BMC Pharmacology** 2: 1 - 8.

Arrigoni-Blank MF, Dmitrieva EG, Franzotti EM, Antoniolli AR, Andrade MR, Marchioro M. 2004. Anti-inflammatory and analgesic activity of *Peperomia pellucida* (L.) HBK (Piperaceae). **J Ethnopharmacol** 91: 215 - 218.

Arumugam P, Priya NG, Subathra M, Ramesh A. 2008. Anti-inflammatory activity of four solvent fractions of ethanol extract of *Mentha spicata* L. investigated on acute and chronic inflammation induced rats. **Environment Toxicol Pharmacol** 26: 92 - 95.

Ávila PHM, Ávila RI, Filho EXS, Bastos CCC, Batista AC, Mendonça EF, Serpa RC, Marreto RN, Cruz AF, Lima EM, Valadares MC. 2015. Mucoadhesive formulation of *Bidens pilosa* L. (Asteraceae) reduces intestinal injury from 5-fluorouracil-inducedmucositis in mice. **Toxicol Reports** 2: 563 - 573.

Azevedo LFP, Faria TSA, Pessanha FF, Araujo MF, Lemos GCS. 2014. Triagem fitoquímica e atividade antioxidante de *Costus spicatus* (Jacq.) S.w. **Rev Bras Plant Med** 16: 209 - 215.

Aziba PI, Adedeji UA, Ekor M, Adeyemi O. 2001. Analgesic activity of *Peperomia pellucida* aerial parts in mice. **Fitoterapia** 72: 57 - 58.

Babincová M, Schronerová K, Sourivong P. 2008. Antiulcer activity of water extract of *Scoparia dulcis*. **Fitoterapia** 79: 587 - 588.

Babova O, Occhipinti A, Maffei ME. 2016. Chemical partitioning and antioxidant capacity of green coffee (*Coffea arabica* and *Coffea canephora*) of different geographical origin. **Phytochemistry** 123: 33 - 39.

Balasubramanian M, Boopathy R. 2013. Purification and characterization of peroxidases from liquid endosperm of *Cocos nucifera* (L.): Biotransformation. **J Mol Catal B: Enzymatic** 90: 33 - 42.

Baldini M, Ferfuia C, Bortolomeazzi R, Verardo G,

Pascali J, Piasentier E, Franceschi L. 2014. Determination of phorbol esters in seeds and leaves of *Jatropha curcas* and in animal tissue by high-performance liquid chromatography tandem mass spectrometry. **Ind Crops Prod** 59: 268 - 276.

Bandeira JM, Barbosa FF, Barbosa LMP, Rodrigues ICS, Bacarin MA, Peters JA, Braga EJB. 2011. Composição do óleo essencial de quatro espécies do gênero *Plectranthus.* **Rev Bras Plant Med** 13: 157 - 164.

Bani S, Kaul A, Khana *B*, Gupta VK, Satti NK, Suri KA, Qazi GN. 2007. Anti-arthritic activity of a biopolymeric fraction from *Euphorbia tirucalli.* **J Ethnopharmacol** 110: 92 - 98.

Bankar GR, Nayak PG, Bansal P, Paul P, Pai KSR, Singla RK, Bhat VG. 2011. Vasorelaxant and antihypertensive effect of *Cocos nucifera* Linn. endocarp on isolated rat thoracic aorta and DOCA salt-induced hypertensive rats. **J Ethnopharmacol** 134: 50 - 54.

Barbetta PA. 2013. **Estatística aplicada às Ciências Sociais**. UFSC, Santa Catarina, Brasil.

Barreca D, Gattuso G, Laganà G, Leuzzi U, Bellocco E. 2016. *C*- and *O*-glycosyl flavonoids in Sanguinello and Tarocco blood orange (*Citrus sinensis* (L.) Osbeck) juice: Identification and influence on antioxidant properties and acetylcholinesterase activity. **Food Chem** 196: 619 - 627.

Barros L, Pereira E, Calhelha RC, Dueñas M, Carvalho AM, Santos-Buelga C, Ferreira ICFR. 2013. Bioactivity and chemical characterization in hydrophilic and lipophilic compounds of *Chenopodium ambrosioides* L. **J Funct Foods** 5: 1732 - 1740.

Basto GJ, Carvalho CWP, Soares AG, Costa HTGB, Chávez DWH, Godoy RLO, Pacheco S. 2016. Physicochemical properties and carotenoid content of extruded and non-extruded corn and peach palm (*Bactris gasipaes*, Kunth). **LWT - Food Science Technol** 69: 312 - 318.

Batista CCR, Oliveira MS, Araújo ME, Rodriguesa AMC, Botelho JRS, Filho APSS, Machado NT, Junior RNC. 2016. Supercritical CO_2 extraction of açaí (*Euterpe oleracea*) berry oil: Globalyield, fatty acids, allelopathic activities, and determination of phenolicand anthocyanins total compounds in the residual pulp. **J Supercritical Fluids** 107: 364 - 369.

Bellik Y. 2014. Total antioxidant activity and antimicrobial potency of the essential oil and oleoresin of *Zingiber officinale* Roscoe. **Asian Pacific J Trop Dis** 4: 40 - 44.

Beltrán RR, Mir CGV, Herrera DMA, Pena AMQ, Garcia-Mesa CM. 2015. Antiplatelet but not anticoagulant activity of *Morinda citrifolia* L. leaf extracts. **Rev Cub Plant Med** 19: 235 - 245.

Benlarbi KH, Elmtili N, Macías FA, Galindo JCG. 2014. Influence of *in vitro* growth conditions in the production of defence compounds in *Mentha pulegium* L. **Phytochem Lett** 8: 233 - 244.

Bento ENB, Júnior FEB, Oliveira DR, Fernandes CN, Delmondes GA, Cesásrio FRAS, Rodrigues CKS, Sales VS, FRSDNF, Lemos ICS, Monteiro AB, Menezes IRA, Costa JGM, Kerntopf MR. 2016. Antiulcerogenic activity of the hydroalcoholic extract of leaves of *Annona muricata* Linnaeus in mice. **Saudi J Biol Sci http://dx.doi.org/10.1016/j.sjbs.2016.01.024**

Bernard HR. 2006. **Research methods in cultural anthropology**. Altamira Press, Oxford, UK.

Bernardes NR, Heggdorne-Araújo M, Borges IFJC, Almeida FM, Amaral EP, Lasunskaia EB, Muzitano MF, Oliveira DB. 2014. Nitric oxide production, inhibitory, antioxidant and antimycobacterial activities of the fruits extract and flavonoid content of *Schinus terebinthifolius.* **Rev Bras Farmacogn** 24: 644 - 650.

Bertani S, Houël e, Jullian V, Bourdy G, Valentin A, Stien D, Deharo E. 2012. New findings on Simalikactone D, an atimalarial compound from *Quassia amara* L. (Simaroubaceae). **Exp Parasitol** 130: 341 - 347.

Bimakr M, Rahman RA, Taip FS, Ganjloo A, Salleh LM, Selamat J, Hamid A, Zaidul ISM. 2011. Comparison of different extraction methods for the extraction of major bioactive flavonoid compounds from spearmint (*Mentha spicata* L.) leaves. **Food Bioprod Process** 89: 67 - 72.

Bolanho BC, Danesi EDG, Beléia ADP. 2015. Carbohydrate composition of peach palm (*Bactris gasipaes* Kunth) by-products flours. **Carbohydrate Polymers** 124: 196 - 200.

Bonamin F, Moraes TM, Santos RC, Kushima H, Faria FM, Silva MA, Junior IV, Nogueira L, Bauab TM, Brito AMRS, Rocha LRM, Hiruma-Lima CA. 2014. The effect of a minor constituent of essential oil from *Citrus aurantium*: The role of β-myrcene in preventing peptic ulcer disease. **Chem-Biol Interact** 212: 11 - 19.

Bopda OSM, Longo F, Bella TN, Edzah PMO, Taïwe GS, Bilanda DC, Tomb ENL, Kamtchouing P, Dimo T. 2014. Antihypertensive activities of the aqueous extract of *Kalanchoe pinnata* (Crassulaceae) inhighsalt-loadedrats. **J Ethnopharmacol** 153: 400 - 407.

Borrás-Linares I, Fernández-Arroyo S, Arráez-Roman D, Palmeros-Suárez PA, Val-Díaz RD, Andrade-Gonzáles I, Fernández-Gutiérrez A, Gómez-Leyva JF, Segura-Carretero A. 2015. Characterization of phenolic compounds, anthocyanidin, antioxidant and antimicrobial activity of 25 varieties of Mexican Roselle (*Hibiscus sabdariffa*). **Ind Crops Prod** 69: 385 - 394.

Braga PC, Scalzo RL, Sasso MD, Lattuada N, Greco V, Fibiani M. 2016. Characterization and antioxidant activity of semi-purified extracts and purê delphinidin-glycosides from eggplant peel (*Solanum melongena* L.). **J Funct Foods** 20: 411 - 421.

Brasileiro BG, Leite JPV, Casali VWD, Pizziolo VR, Coelho OGL. 2015. The influence of planting and harvesting time on the total phenolic content and antioxidant activity of *Talinum triangulare* (Jacq.) Willd. **Acta Scientiarum** 37: 249 - 255.

Brito MR, Senna-Valle L. 2011. Plantas medicinais utilizadas na comunidade caiçara da Praia do Sono, Paraty, Rio de Janeiro, Brasil. **Acta Bot Bras** 25: 363 - 372.

Brito NJN, López JA, Nascimento MA, Macedo JBM, Silva GAS, Oliveira CN, Rezende AA, Brandão-Neto J, Schwarz A, Almeida MG. 2012. Antioxidant activity and protective effect of *Turnera ulmifolia* Linn. var. *elegans* against carbon tetracholoride-induce oxidative damage in rats. **Food Chem Toxicol** 50: 4340 - 4347.

Bum EN, Schmutz M, Meyer C, Rakotonirina A, Bopelet M, Portet C, Jeker A, Rakotonirina SV, Olpe HR, Herrling P. 2001. Anticonvulsant properties of the methanolic extract of *Cyperus articulatus* (Cyperaceae). **J Ethnopharmacol** 76: 145 - 150.

Byg A, Balslev H. 2001. Diversity and use of palms in Zahamena, eastern Madagascar. **Biodiversity and Conservation** 10: 951 - 970.

Cabezas F, Ramírez A, Viladomat F, Codina C, Bastida J. 2003. Alkaloids from *Eucharis amazonica* (Amaryllidaceae). **Chem Pharm Bull** 51: 315 - 317.

Cádiz-Gurrea ML, Lozano-Sanchez J, Contreras-Gámez M, Legeai-Mallet L, Fernández-Arroyo S, Segura-Carretero A. 2014. Isolation, comprehensive characterization and antioxidant activities of *Theobroma cacao* extract. **J Funct Foods** 10: 485 - 498.

Camargo MTLA. 2007. Contribuição etnofarmacobotânica ao estudo de *Petiveria alliacea* L.-Phytolacaceae - ("amansa-senhor") e a atividade hipoglicemiante relacionada a transtornos mentais. **Dominguezia** 23: 21 - 27.

Camargo MTLA. 2014. **As plantas medicinais e o sagrado: a etnofarmacobotânica em uma revisão historiográfica da medicina popular no Brasil**. Ícone, São Paulo, Brasil.

Campos AR, Albuquerque FAA, Rao VSN, Maciel MAM, Pinto AC. 2002. Investigations on the antinociceptive activity of crude extracts from *Croton cajucara* leaves in mice. **Fitoterapia** 73: 116 - 120.

Campos RNS, Lima CBN, Oliveira AP, Araújo APA, Blank AF, Alves PB, Lima RN, Araújo VN, Santana AS, Bacci L. 2015. Acaricidal properties of vetiver essential oil from *Chrysopogon zizanioides* (Poaceae) against the tick species *Amblyomma cajennense* and *Rhipicephalus (Boophilus) microplus* (Acari: Ixodidae). **Vet Parasitol** 212: 324 - 330.

Campos DCO, Costa AS, Lima ADR, Silva FDA, Lobo MDP, Monteiro-Moreira ACO, Moreira RA, Leal LKAM, Miron D, Vasconcelos IM, Oliveira HD. 2016. First isolation and antinociceptive activity of a lipid transfer protein from noni (*Morinda citrifolia*) seeds. **Int J Biol Macromol** 86: 71 - 79.

Carmona F, Angelucci MA, Sales DS, Chiaratti TM, Honorato FB, Bianchi RV, Pereira AMS. 2013. *Lippia alba* (Mill.) N. E. Brown

hydroethanolic extract of the leaves is effective in the treatment of migraine in women. **Phytomedicine** 20: 947 - 950.

Carneiro DB, Barboza M SL, Menezes MP. 2010. Plantas nativas úteis na Vila dos Pescadores da Reserva Extrativista Marinha Caeté-Taperaçu, Pará, Brasil. **Acta Bot Bras** 24: 1027 - 1033.

Carniello MA, Silva RS, Cruz MAB, Guarim Neto G. 2010. Quintais urbanos de Mirassol D'Oeste-MT, Brasil: uma abordagem etnobotânica. **Acta Amazonica** 40: 451 - 470.

Carvalho HH, Wiest JM, Cruz FT. 2010. Atividade antibacteriana *in vitro* de pimentas e pimentões (*Capsicum* sp.) sobre quatro bactérias toxinfectivas alimentares. **Rev Bras Plant Med** 12: 6 - 12.

Casanova LM, Silva D, Sola-Penna M, Camargo LMM, Celestrini DM, Tinoco LW, Costa SS. 2014. Identification of chicoric acid as a hypoglycemic agent from *Ocimum gratissimum* leaf extract in a biomonitoring *in vivo* study. **Fitoterapia** 93: 132 - 141.

Cassano R, Trombino S, Ferrarelli T, Muzzalupo R, Tavano L, Picci N. 2009. Synthesis and antibacterial activity evaluation of a novel cotton fiber (*Gossypium barbadense*) ampicillin derivative. **Carbohydrate Polymers** 78: 639 - 641.

Castro PCF, Hoshino A, Nascimento DC, Teixeira JRM. 2005. Depressive activity of the extract of *Anacardium giganteum* in the central nervous system in experimental models. **Rev Para Med** 19: 7 - 13.

Cavalcanti AS, Alves MS, Silva LCP, Patrocínio DS, Sanches MN, Chaves DSA, Souza MAA. 2015. Volatiles composition and extraction kinetics from *Schinus terebinthifolius* and *Schinus molle* leaves and fruit. **Rev Bras Farmacogn** 25: 356 - 362.

Cavalher-Machado SC, Rosas EC, Brito FA, Heringe AP, Oliveira RR, Kaplan MAC, Figueiredo MR, Henriques MGMO. 2008. The anti-allergic activity of the acetate fraction of *Schinus terebinthifolius* leaves in IgE induced mice paw edema and pleurisy. **Int Immunopharmacol** 8: 1552 - 1560.

Cazarolli LH, Kappel VD, Pereira DF, Moresco HH, Brighente IMC, Pizzolatti MG, Silva FRMB. 2012. Anti-hyperglycemic action of apigenin-6-C-β-fucopyranoside from *Averrhoa carambola*. **Fitoterapia** 83: 1176 - 1183.

Chakraborty M, Mitra A. 2008. The antioxidant and antimicrobial properties of the methanolic extract from *Cocos nucifera* mesocarp. **Food Chem** 107: 994 - 999.

Chang S, Chiang Y, Chang CL, Yeh H, Shyur L, Kuo Y, Wu T, Yang W. 2007. Flavonoids, centaurein and centaureidin, from *Bidens pilosa*, stimulate IFN-γ expression. **J Ethnopharmacol** 112: 232 - 236.

Chauhan RS, Kaul MK, Shahi AK, Kumar A, Ram G, Tawa A. 2009. Chemical composition of essential oils in *Mentha spicata* L. accession [IIIM(J)26] from North-West Himalayan region, India. **Ind Crops Prod** 29: 654 - 656.

Chen Y, Chang F, Yen H, Wu Y. 1996. Epomusenins A and B, two acetogenins from fruits of *Rollinia mucosa*. **Phytochemistry** 42: 1081 - 1083.

Chen HJ, Chung CP, Chiang W, Lin YL. 2011. Anti-inflammatory effects and chemical study of a flavonoid-enriched fraction from adlay bran. **Food Chem** 126: 1741 - 1748.

Chen HJ, Lo YC, Chiang W. 2012. Inhibitory effects of adlay bran (*Coix lachryma-jobi* L. var. *ma-yuen* Stapf) on chemical mediator release and cytokine production in rat basophilic leukemia cells. **J Ethnopharmacol** 141: 119 - 127.

Chen J, Zhang J, Pang Y, Cheng Y, Deng X, Xu J. 2015. Comparative study of flavonoid production in lycopene-accumulated and blonde-flesh sweet oranges (*Citrus sinensis*) during fruit development. **Food Chem** 184: 238 - 246.

Cheng Y, Liu RH, Ho M, Wu T, Chen C, Lo I, Hou M, Yuan S, Wu Y, Chang F. 2015. Alkylamides of *Acmella oleracea*. **Molecules** 20: 6970 - 6977.

Chien S, Young PH, Hsu Y, Chen C, Tien Y, Shiu S, Li T, Yang C, Marimuthu P, Tsai LF, Yang W. 2009. Anti-diabetic properties of three common *Bidens pilosa* variants in Taiwan. **Phytochemistry** 70: 1246 - 1254.

Choi O, Cho SK, Kim J, Park CG, Kim J. 2015. *In vitro* antibacterial activity and major bioactive components of *Cinnamomum verum* essential oils against cariogenic bacteria, *Streptococcus mutans* and

Streptococcus sobrinus. **Asian Pacific J Trop Biomed** 1: 1 - 23.

Chung CP, Hsia SM, Lee MY, Chen HJ, Cheng F, Chan LC, Kuo YH, Lin YL, Chiang W. 2011. Gastroprotective activities of Adlay (*Coix lachryma-jobi* L. var. *ma-yuen* Stapf) on the growth of the stomach cancer AGS cell line and indomethacin-induced gastric ulcers. **J Agric Food Chem** 59: 6025 - 6033.

Coelho-Ferreira MR, Jardim MAG. 2005. Algumas Espécies Vegetais Usadas pelos Moradores da llha de Algodoal, Maiandeua, município de Maracanã, Pará. **Bol Museu Paraense Emílio Goeldi** 1: 45 - 51.

Colpo E, Vilanova CDDA, Pereira RP, Reetz LGB, Oliveira L, Farias ILG, Boligon AA, Athayde ML, Rocha JBT. 2014. Antioxidant effects of *Phyllanthus niruri* tea on healthy subjects. **Asian Pacific J Trop Med** 113 - 118.

Conrad OA, Dike IP, Agbara U. 2013. *In vivo* antioxidant assessment of two antimalarial plants - *Allamamda cathartica* and *Bixa orellana*. **Asian Pac J Trop Biomed** 3: 388 - 394.

Cooney LJ, Schaefer HM, Logan BA, Cox B, Gould KS. 2015. Functional significance of anthocyanins in peduncles of *Sambucus nigra*. **Environment Exp Bot** 119: 18 - 26.

Costa CTC, Bevilaqua CML, Morais SM, Camurça-Vasconcelos ALF, Maciel MV, Braga RR, Oliveira LMB. 2010. Anthelmintic activity of *Cocos nucifera* L. on intestinal nematodes of mice. **Res Vet Science** 88: 101 - 103.

Costa G, Ferreira JP, Vitorino C, Pina ME, Sousa JJ, Figueiredo IV, Batista MT. 2016a. Polyphenols from *Cymbopogon citratus* leaves as topical anti-inflammatory agents. **J Ethnopharmacol** 178: 222 - 228.

Costa G, Grangei H, Figueirinha A, Figueiredo IV, Batista MT. 2016b. Influence of harvest date and material quality on polyphenolic content and antioxidant activity of *Cymbopogon citratus* infusion. **Ind Crops Prod** 83: 738 - 745.

Couto AG, Kassuya CAL, Calixto JB, Petrovick PR. 2013. Anti-inflammatory, antiallodynic effects and quantitative analysis of gallic acid in spray dried powders from *Phyllanthus niruri* leaves, stems, roots and whole plant. **Braz J Pharmacogn** 23: 124 - 131.

Crevelin EJ, Caixeta SC, Dias HJ, Groppo M, Cunha WR, Martins CHG, Crotti AEM. 2015. Antimicrobial Activity of the Essential Oil of *Plectranthus neochilus* against Cariogenic Bacteria. **Evid-Based Complement Alternat Med** **Http://dx.doi.org/10.1155/2015/102317**

Cunha AM, Menon S, Menon R, Couto AG, Burger GC, Biavatti MW. 2010. Hypoglycemic activity of dried extracts of *Bauhinia forficata* Link. **Phytomedicine** 17: 37 - 41.

Dabague ICM, Deschamps C, Mógor AF, Scheer AP, Côcco L. 2011. Teor e composição do óleo essencial de rizomas de gengibre (*Zingiber officinale* Roscoe) após diferentes tipos de secagem. **Rev Bras Plant Med** 13: 70 - 84.

Das S, Mishra B, Gill K, Ashraf MS, Singh AK, Sinha M, Sharma S, Xess I, Dalal K, Singh TP, Dey S. 2011. Isolation and characterization of novel protein with anti-fungal and anti-inflammatory properties from *Aloe vera* leaf gel. **Int J Biol Macromol** 48: 38 - 43.

DATASUS. 2013. **Sistema de Informação da Atenção Básica do Ministério da Saúde**. Disponível em **http://tabnet.datasus.gov.br/cgi/deftohtm.exe?siab/cnv/SIABCbr.def**

Dawilai S, Muangnoi C, Praengamthanachoti P, Tuntipopipat S. 2013. Anti-Inflammatory Activity of Bioaccessible Fraction from *Eryngium foetidum* Leaves. **BioMed Res Int** http://dx.doi.org/10.1155/2013/958567

Deba F, Xuan TD, Yasuda M, Tawata S. 2008. Chemical composition and antioxidant, antibacterial and antifungal activities of the essential oils from *Bidens pilosa* Linn. var. *Radiata*. **Food Control** 19: 346 - 352.

Del-Vechio-Vieira G, Sousa OV, Alves MS. 2013. *Vernonia condensata* Baker (Asteraceae): A Promising Source of Antioxidants. **Oxidative Medicine and Cellular Longevity** 1: 1 - 10.

Demarchi IG, Thomazella MV, Terron MS, Lopes L, Gazim ZC, Cortez DAG, Donatti L, Aristides SMA, Silveira TGV, Lonardoni MVC. 2015. Antileishmanial activity of essential oil and 6,7 dehydroroyleanone isolated from *Tetradenia riparia*. **Exp Parasitol** 157: 128 - 137.

Devia B, Llabres G, Wouters J, Dupont L, Escribano-

Bailon MT, Pascual-Teresa S, Angenot L, Tits M. 2002. New 3-Deoxyanthocyanidins from Leaves of *Arrabidaea chica*. **Phytochem Anal** 13: 114 - 120.

Dias AMA, Rey-Rico A, Oliveira RA, Marceneiro S, Alvarez-Lorenzo C, Concheiro A, Junior RNC, Braga MEM, Sousa HC. 2013. Wound dressings loaded with an anti-inflammatory juca (*Libidibia*) extract using supercritical carbon dioxide technology. **J Supercritical Fluids** 74: 34 - 45.

Dionísio AP, Carvalho-Silva LB, Vieira NM, Goes TS, Wurlitzer NJ, Borges MF, Brito ES, Ionta M, Figueiredo RW. 2015. Cashew-apple (*Anacardium occidentale* L.) and yacon (*Smallanthus sonchifolius*) functional beverage improve the diabetic state in rats. **Food Res Int** 77: 171 - 176.

Dranca F, Oroian M. 2015. Optimization of ultrasound-assisted extraction of total monomeric anthocyanin (TMA) and total phenolic content (TPC) from eggplant (*Solanum melongena* L.) peel. **Ultrasonics Sonochemistry** **http://dx.doi.org/10.1016/j.ultsonch.2015.11.008**

Dussossoy E, Brat P, Bony E, Boudard F, Poucheret P, Mertza C, Giaimis J, Michel A. 2011. Characterization, anti-oxidative and anti-inflammatory effects of Costa Rican noni juice (*Morinda citrifolia* L.). **J Ethnopharmacol** 133: 108 - 115.

Duymus HG, ÇiftÇi GA. Yıldırım SU, Demirci B, Kırımer N. 2014. The cytotoxic activity of *Vitex agnus castus* L. essential oils and theirbiochemical mechanisms. **Ind Crops Prod** 55: 33 - 42.

Ehlert PAD, Ming LC, Marques MOM, Fernandes, DM, Rocha WA, Luz JMQ, Silva RF. 2013. Influência do horário de colheita sobre o rendimento e composição do óleo essencial de erva cidreira brasileira [*Lippia alba* (Mill.) N. E. Br.]. **Rev Bras Farmacogn** 15: 72 - 77.

Eichemberg MT, Amorozo MCM, Moura LC. 2009. Species composition and plant use in old urban homegardens in Rio Claro, Southeast of Brazil. **Acta Bot Bras** 23: 1057 - 1075.

Encarnacão S, Mello-Sampayo C, Graça NAG¸ Catarino L, Silva IBM, Lima BS, Silva OMD. 2016. Total phenolic content, antioxidant activity and pre-clinical safety evaluation of an *Anacardium occidentale* stem bark Portuguese hypoglycemic traditional herbal preparation. **Ind Crops Prod** 82: 171 - 178.

Endo EH, Costa GM, Nakamura TU, Nakamura CV, Filho BPD. 2015. Antidermatophytic activity of hydroalcoholic extracts from *Rosmarinus officinalis* and *Tetradenia riparia*. **J Mycol Med** 25: 274 - 279.

Enechi OC, Odo CE, Wuave CP. 2013. Evaluation of the in vitro anti-oxidant activity of *Alternanthera brasiliana* leaves. **J Pharm Res** 6: 919 - 924.

Espinosa-Pardo FA, Martinez J, Martinez-Correa HA. 2014. Extraction of bioactive compounds from peach palm pulp (*Bactris gasipaes*) using supercritical CO_2. **J Supercritical Fluids** 93: 2 - 6.

Facundo VA, Azevedo MS, Rodrigues RV, Nascimento LF, Militão JSLT, Silva GVJ, Braz-Filho. 2012. Chemical constituents from three medicinal plants: *Piper renitens*, *Siparuna guianensis* and *Alternanthera brasiliana*. **Braz J Pharmacogn** 22: 1134 - 1139.

Fahmy SR, Amien AI, Abd-Elgleel FM, Elaskalany SM. 2016. Antihepatotoxic efficacy of *Mangifera indica* L. polysaccharides against cyclophosphamide in rats. **Chem-Biol Interactions** 244: 113 - 120.

Falé PL, Borges C, Madeira PJA, Ascensão L, Araújo MEM, Florêncio MH, Serralheiro MLM. 2009. Rosmarinic acid, scutellarein 40-methyl ether 7-O-glucuronide and (16S)-coleon Eare the main compounds responsible for the antiacetylcholinesterase and antioxidant activity in herbal tea of *Plectranthus barbatus* (‘‘falso boldo”). **Food Chem** 114: 798 - 805.

Farida T, Salawu OA, Tijani AY, Ejiofor JI. 2012. Pharmacological evaluation of *Ipomoea asarifolia* (Desr.) against carbon tetrachloride-induced hepatotoxicity in rats**. J Ethnopharmacol** 142: 642 - 646.

Fazio A, Plastina P, Meijerink J, Witkamp RF, Gabriele B. 2013. Comparative analyses of seeds of wild fruits of *Rubus* and *Sambucus* species from Southern Italy: Fatty acid composition of the oil, total phenolic content,

antioxidant and anti-inflammatory properties of the methanolic extracts. **Food Chem** 140: 817 - 824.

Félix-Silva J, Souza T, Camara RBG, Cabral B, Silva-Júnior AA, Rebecchi IMM, Zucolotto SM, Rocha HAO, Fernandes-Pedrosa MF. 2014. *In vitro* anticoagulant and antioxidant activities of *Jatropha gossypiifolia* L. (Euphorbiaceae) leaves aiming therapeutical applications. **BMC Complement Alternat Med** 14: 1 - 13.

Feng S, Luo Z, Zhang Y, Zhong Z, Lu B. 2014. Phytochemical contents and antioxidant capacities of different parts of two sugarcane (*Saccharum officinarum* L.) cultivars. **Food Chem** 151: 452 - 458.

Fernandes MRV, Dias ALT, Carvalho RR, Souza CRF, Oliveira WP. 2014. Antioxidant and antimicrobial activities of *Psidium guajava* L. spray dried extracts. **Ind Crops Prod** 60: 39 - 44.

Fernández-Ponce MT, Casas L, Mantell C, Ossa EM. 2015. Use of high pressure techniques to produce *Mangifera indica* L. leaf extracts enriched in potent antioxidant phenolic compounds. **Innovative Food Science and Emerging Technologies** 29: 94 - 106.

Ferreira LE, Castro PMN, Chagas ACS, França SC, Beleboni RO. 2013. *In vitro* anthelmintic activity of aqueous leaf extract of *Annona muricata* L. (Annonaceae) against *Haemonchus contortus* from sheep. **Exp Parasitol** 134: 327 - 332.

Fidalgo O, Bononi VLR. (Coords.). 1984. **Técnicas de Coleta, Preservação e Herborização de Material Botânico**. Instituto de Botânica, São Paulo, Brasil.

Figueirinha A, Paranhos A, Pérez-Alonso JJ, Santos-Buelga C, Batista MT. 2008. *Cymbopogon citratus* leaves: Characterisation of flavonoids by HPLC–PDA–ESI/MS/MS and an approach to their potential as a source of bioactive polyphenols. **Food Chem** 110: 718 - 728.

Figueredo SM, Nascimento FP, Freitas CS, Baggio CH, Soldi C, Pizzolatti MG, Ibarrola MCC, Arrua RLD, Santos ARS. 2011. Antinociceptive and gastroprotective actions of ethanolic extract from *Pluchea sagittalis* (Lam.) Cabrera. **J Ethnopharmacol** 135: 603 - 609.

Figueroa-Valverde L, Díaz-Cedillo F, Camacho-Luis A, Ramos ML. 2009. Efectos inducidos por *Ruta graveolens* L., *Cnidoscolus chayamansa* McVaugh y *Citrus aurantium* L. sobre los niveles de glucosa, colesterol y triacilglicéridos en un modelo de rata diabética. **Braz J Pharmacogn** 19: 898 - 907.

Florence NT, Benoit MZ, Jonas K, Alexandra T, Désiré DDP, Pierre K, Théophile D. 2014. Antidiabetic andantioxidant effects of *Annona muricata* (Annonaceae), aqueous extract on streptozotocin-induced diabetic rats. **J Ethnopharmacol** 151: 784 - 790.

Flores OS, Silva DFP, Bruckner CH, Oliveira SP, Salomão LCC. 2011. Caracterização físico-química de frutos de maracujazeiro amarelo provenientes da irradiação com raios gama. **Ciência Rural** 41: 1903 - 1906.

Forbes WM, Gallimore WA, Mansingh A, Reese PB, Robinson RD. 2014. Eryngial (trans-2-dodecenal), a bioactive compound from *Eryngium foetidum*: its identification, chemical isolation, characterization and comparison with ivermectin *in vitro*. **Parasitology** 141: 269 - 278.

Fossen T, Rayyan S, Holmberg MA, Nateland HS, Andersen OM. 2005. Acylated anthocyanins from leaves of *Oxalis triangularis.* **Phytochemistry** 66: 1133 - 1140.

Fossen T, Rayyan S, Holmberg MH, Nimtz M, Andersen OM. 2007. Covalent anthocyanin-flavone dimer from leaves of *Oxalis triangularis.* **Phytochemistry** 68: 652 - 662.

Francisco V, Costa G, Figueirinha A, Marques C, Pereira P, Neves BM, Lopes MC, García-Rodríguez C, Cruz MT, Batista MT. 2013. Anti-inflammatory activity of *Cymbopogon citratus* leaves infusion via proteasome and nuclear factor-κB pathway inhibition: Contribution of chlorogenic acid. **J Ethnopharmacol** 148: 126 - 134.

Freitas CS, Baggio CH, Silva-Santosa JE, Rieck L, Santos CAM, Júnior CC, Ming LC, Cortez DAG, Marques MCA. 2004. Involvement of nitric oxide in the gastroprotective effects of an aqueous extract of *Pfaffia glomerata* (Spreng) Pedersen, Amaranthaceae, in rats. **Life Sci** 74: 1167 - 1179.

Fu R, Zhang Y, Guo Y, Liu F, Chen F. 2014. Determination of phenolic contents and antioxidant activities of extracts of *Jatropha curcas* L. seed shell, a by-product, a new source of natural antioxidant. **Ind Crops Prod** 58: 265 - 270.

Fu Y, Kadioglu O, Wiench B, Wei Z, Gao C, Luo M, Gu C, Zu Y, Efferth T. 2015. Cell cycle arrest and induction of apoptosis by cajanin stilbene acid from *Cajanus cajan* in breast cancer cells. **Phytomedicine** 22: 462 - 468.

Gaínza YA, Domingues LF, Perez OP, Rabelo MD, López ER, Chagas ACS. 2015. Anthelmintic activity *in vitro* of *Citrus sinensis* and *Melaleuca quinquenervia* essential oil from Cuba on *Haemonchus contortus*. **Ind Crops Prod** 76: 647 - 652.

Galang MGM, Macabeo APG, Chang W, Isobe M, Aguinaldo MAM. 2016. Glucosides from the unripe fruit juice of *Carica papaya* Linn. (Caricaceae) cultivar 'Red Lady' with antioxidant activity. **J Funct Foods** 22: 358 - 362.

Galvez J, Gracioso JS, Camuesco D, Galvez J, Vilegas W, Brito ARMS, Zarzuelo A. 2006. Intestinal antiinflammatory activity of a lyophilized infusion of *Turnera ulmifolia* in TNBS rat colitis. **Fitoterapia** 77: 515 - 520.

Gao Y, Zhao J, Zu Y, Fu Y, Liang L, Luo M, Wang W, Gao TEY, Zhao J, Zu Y, Fu Y, Liang L, Luo M, Wei Wang W, Efferth T. 2012. Antioxidant properties, superoxide dismutase and glutathione reductase activities in HepG2 cells with a fungal endophyte producing apigenin from pigeon pea [*Cajanus cajan* (L.) Millsp.]. **Food Res Int** 49: 147 - 152.

Gao XL, Liao Y, Wang J, Liu XY, Zhong K, Huang YH, Gao H, Gao B, Xu ZJ. 2015. Discovery of a Potent Anti-Yeast Triterpenoid Saponin, Clematoside-S from *Urena lobata* L. **Int J Mol Sci** 16: 4731 - 4743.

García-Barrantes PM, Badilla B. 2011. Anti-ulcerogenic properties of *Quassia amara* L. (Simaroubaceae) standardized extracts in rodent models. **J Ethnopharmacol** 134: 904 - 910.

García-Rivera D, Delgado R, Bougarne N, Haegeman G, Berghe WV. 2011. Gallic acid indanone and mangiferin xanthone are strong determinants of immunosuppressive anti-tumour effects of *Mangifera indica* L. bark in MDA-MB231 breast cancer cells. **Cancer Lett** 305: 21 - 31.

Gauvin-Bialecki A, Marodon C. 2009. Essential oil of *Ayapana triplinervis* from Reunion Island: A good natural source of thymohydroquinone dimethyl ether. **Biochem Syst Ecol** 36: 853 - 858.

Gazim ZC, Amorim ACL, Hovell AMC, Rezende CM, Nascimento IA, Ferreira GA, Cortez DAG. 2010. Seasonal variation, chemical composition, and analgesic and antimicrobial activities of the essential oil from leaves of *Tetradenia riparia* (Hochst.) Codd in Southern Brazil. **Molecules** 15: 5509 - 5524.

Gazim ZC, Demarchi IG, Lonardoni MVC, Amorim ACL, Hovell AMC, Rezende CM, Ferreira GA, Lima EL, Cosmo FA, Cortez DAG. 2011. Acaricidal activity of the essential oil from *Tetradenia riparia* (Lamiaceae) on the cattle tick *Rhipicephalus* (*Boophilus*) *microplus* (Acari; Ixodidae). **Exp Parasitol** 129: 175 - 178.

Gazim ZC, Rodrigues F, Amorin ACL, Rezende CM, Soković M, Tešević V, Vučković I, Krstić G, Cortez LER, Colauto NB, Linde GA, Cortez DAG. 2014. New natural diterpene-type abietane from *Tetradenia riparia* essential oil with cytotoxic and antioxidant activities. **Molecules** 19: 514 - 524.

Geller F, Murillo R, Steinhauser L, Heinzmann B, Albert K, Merfort I, Laufer S. 2014. Four new flavonol glycosides from the leaves of *Brugmansia suaveolens.* **Molecules** 19: 6727 - 6736.

Giordani MA, Collicchio TCM, Ascêncio SD, Martins DTO, Balogun SO, Bieski IGC, Silva LA, Colodel EM, Souza RL, Souza DLP, França SA, Andrade CMB, Kawashita NH. 2015. Hydroethanolic extract of the inner stem bark of *Cedrela odorata* has low toxicity and reduces hyperglycemia induced by an overload of sucrose and glucose. **J Ethnopharmacol** 162: 352 - 361.

Giraldi M, Hanazaki N. 2010. Uso e conhecimento tradicional de plantas medicinais no Sertão do Ribeirão, Florianópolis, SC, Brasil. **Acta Bot Bras** 24: 395 - 406.

Gogna N, Hamid N, Dorai K. 2015. Metabolomic profiling of the phytomedicinal constituents

of *Carica papaya* L. leaves and seeds by ^{1}H NMR spectroscopy and multivariate estatistical analysis. **J Pharmac Biomed Anal** 115: 74 - 85.

Gomes PB, Noronha EC, Melo CTV, Bezerra JNS, Neto MA, Linoa CS, Vasconcelos SMM, Viana GSB, Sousa FCF. 2008. Central effects of isolated fractions from the root of *Petiveria alliacea* L. (tipi) in mice. **J Ethnopharmacol** 120: 209 - 214.

Gómez-Prieto MS, Castillo MLR, Flores G, Santa-Marí G, Blanch GP. 2007. Application of Chrastil's model to the extraction in SC-CO_2 of β-carotene and lutein in *Mentha spicata* L. **J Supercritical Fluids** 43: 32 - 36.

González MBR, Niño VHC, Ramírez SI. 2013. Antioxidant activity of clones of cocoa (*Theobroma cacao L.*) fine and aromatic grown in the state of Chiapas-México. **Perspectivas en Nutrición Humana** 15: 27 - 40.

Grassi LT, Malheiros A, Meyre-Silva C, Buss ZS, Monguilhott ED, Fröde TS, Silva KABS, Souza MM. 2013. From popular use to pharmacological validation: A study of the anti-inflammatory, anti-nociceptive and healing effects of *Chenopodium ambrosioides* extract. **J Ethnopharmacol** 145: 127 - 138.

Grombone-Guaratini MT, Silva-Brandão KL, Solferinia VN, Semirc J, Trigo JR. 2005. Sesquiterpene and polyacetylene profile of the *Bidens pilosa* complex (Asteraceae: Heliantheae) from Southeast of Brazil. **Biochem Syst Ecol** 33: 479 - 486.

Gu Z, Zhou D, Lewis NJ, Jinn Wu J, Shi G, McLaughlin JL. 1997. Isolation of new bioactive annonaceous acetogenins from *Rollinia mucosa* guided by liquid chromate-gramphy/Mass spectrometry**. Bioorganic Med Chem** 5: 1911 - 1916.

Guercia E, Forzato C, Navarini L, Berti F. 2016. Interaction of coffee compounds with serum albumins. Part II: Diterpenes. **Food Chem** 199: 502 - 508.

Gurnani N, Gupta M, Mehtaa D, Mehta BK. 2015. Chemical composition, total phenolic and flavonoid contents, and *in vitro* antimicrobial and antioxidant activities of crude extracts from red chilli seeds (*Capsicum frutescens* L.). **J Taibah Univ Science Http://dx.doi.org/10.1016/j.jtusci.2015.06.011**

Hamdan DI, Mahmoud MF, Winkc M, El-Shazlya AM. 2014. Effect of hesperidin and neohesperidin from bittersweet orange (*Citrus aurantium* var. *bigaradia*) peel on indomethacin-induced peptic ulcers in rats. **Environment Toxicol Pharmacol** 37: 907 - 915.

Hamzah RU, Odetola AA, Erukainure OL, Oyagbemi AA. 2012. *Peperomia pellucida* in diets modulates hyperglyceamia, oxidative stress and dyslipidemia in diabetic rats. **J Acute Dis** 135 - 140.

Harat ZN, Lakpour N, Sadeghipoor HR, Kamalinejad M, Eshraghian MR, Naghibi B, Akhondi MM, Binaafar S, Sadeghi MR. 2015. Immobilising effect of *Ruta graveolens* L. on human spermatozoa: coumarin compounds are involved. **Andrologia** 47: 1183 - 1189.

Hartwig S, Frister T, Alemdar S, Scheper ZLT, Beutel S. 2015. SUMO-fusion, purification, and characterization of a (þ)-zizaene synthase from *Chrysopogon zizainioides*. **Biochem Biophys Res Comm** 458: 883 - 889.

Hasrat JA, Pieters L, Backer JP, Vauquelln G, Vlletinck AJ. 1997. Screening of medicinal plants from Suriname for 5-HT ligands: Bioactive isoquinoline alkaloids from the fruit of *Annona muricata*. **Phytomedicine** 4: 133 - 140.

Heinzmann, B. M. & Barros, F. M. C. 2007. Potencial das plantas nativas brasileiras para o desenvolvimento de fitomedicamentos tendo como exemplo *Lippia alba* (Mill.) N. E. Brown (Verbenaceae). **Saúde** 33: 43 - 48.

Hernández JF, Urueña CP, Cifuentes MC, Sandoval TA, Pombo LM, Castañeda D, Asea A, Fiorentino S. 2014. A *Petiveria alliacea* standardized fraction induces breast adenocarcinoma cell death by modulating glycolytic metabolism. **J Ethnopharmacol** 153: 641 - 649.

Hiruma-Lima CA, Gracioso JS, Rodríguez JA, Haun M, Nunes DS, Brito ARMS. 2000. Gastroprotective effect of essential oil from *Croton cajucara* Benth. (Euphorbiaceae). **J Ethnopharmacol** 69: 229 - 234.

Hoberg E, Orjala J, Meier B, Sticher O. 1999.

Diterpenoids from the fruits of *Vitex agnus-castus*. **Phytochemistry** 52: 1555 - 1558.

Houël E, Bertani S, Bourdy G, Deharo E, Jullian V, Valentin A, Chevalley S, Stien D. 2009. Quassinoid constituents of *Quassia amara* L. leaf herbal tea. Impact on its antimalarial activity and cytotoxicity. 2009. **J Ethnopharmacol** 126: 114 - 118.

Houël E, Fleury M,Odonne G, Nardella F, Bourdy G, Vonthron-Sénécheau C, Villa P, Obrecht A, Eparvier V, Deharo E, Stien D. 2015. Antiplasmodial and anti-inflammatory effects of an antimalarial remedy from the Wayana Amerindians, French Guiana: Takamalaimë (*Psidium acutangulum* Mart. Ex DC., Myrtaceae). **J Ethnopharmacol** 166: 279 - 285.

Hu J, Zhao J, Khan SI, Liu Q, Liu Y, Ali Z, Li X, Zhang S, Xiong Cai X, Huang H, Wang W, Khan IA. 2014. Antioxidant neolignan and phenolic glucosides from the fruit of *Euterpe oleracea*. **Fitoterapia** 99: 178 - 183.

Hussain A, Khan MN, Iqbal Z, Sajid MS, Khan MK. 2011. Anthelmintic activity of *Trianthema portula castrum* L. and *Musa paradisiaca* L. against gastrointestinal nematodes of sheep. **Vet Parasitol** 179: 92 - 99.

IBGE - Instituto Brasileiro de Geografia e Estatística. 2010. **Senso demográfico**. Disponível em **http://www.ibge.gov.br**

Ifeoma O, Samuel O, Itohan AM, Adeola SO. 2013. Isolation, fractionation and evaluation of the antiplasmodial properties of *Phyllanthus niruri* resident in its chloroform fraction. **Asian Pacific J Trop Med** 169 - 175.

Ioannone F, Mattia CDD, Gregorio M, Sergi M, Serafini M, Sacchetti G. 2015. Flavanols, proanthocyanidins and antioxidant activity changes during cocoa (*Theobroma cacao* L.) roasting as affected by temperature and time of processing. **Food Chem** 174: 256 – 262.

Jain S, Jain DK, Balekar N. 2012. *In vivo* Antioxidant activity of ethanolic extract of *Mentha pulegium* leaf against CCl4 induced toxicity in rats. **Asian Pacific J Trop Biomed** 1: 737 - 740.

Jako C, Coutu C, Roewer I, Reed DW, Pelcher LE, Covello PS. 2002. Probing carotenoid biosynthesis in developing seed coats of *Bixa orellana* (Bixaceae) through expressed sequence tag analysis. **Plant Science** 163: 141 - 145.

Jambocus NGS, Saari N, Ismail A, Khatib A, Mahomoodally MF, Hamid AA. 2016. An investigation into the antiobesity effects of M*orinda citrifolia* L. leaf extract in high fat diet induced obese rats using a H NMR metabolomics approach. **J Diabetes Res http://dx.doi.org/10.1155/2016/2391592**

Jang M, Jeong SW, Cho SK, Yang HJ, Yoon DS, Kim JC, Park KH. 2014. Improvement in the anti-inflammatory activity of guava (*Psidium guajava* L.) leaf extracts through optimization of extraction conditions. **J Funct Foods** 10: 161 - 168.

Jaramillo MC, Arango GJ, González MC, Robledo SM, Velez ID. 2000. Cytotoxicity and antileishmanial activity of *Annona muricata* pericarp. **Fitoterapia** 71: 183 - 186.

Jawla S, Kumar Y, Khan MSY. 2012. Antimicrobial and antihyperglycemic activities of *Musa paradisiaca* flowers. **Asian Pacific J Trop Biomed** 914 - 918.

Jezler CN, Oliveria ARMF, Batista RS, Oliveira RA, Silva DC, Costa LCB. 2013. *Lippia alba* morphotypes cidreira and melissa exhibit significant differences in leaf characteristics and essential oil profile. **Rev Bras Farmacog** 23: 217 - 223.

Jiménez AM, Sierra CA, Rodríguez-Pulido FJ, González-Miret ML, Heredia FJ, Osorio C. 2011. Physicochemical characterisation of gulupa (*Passiflora edulis* Sims. fo *edulis*) fruit from Colombia during the ripening. **Food Res Int** 44: 1912 - 1918.

Juárez-Rojop IE, Tovilla-Zárat CA, Aguilar-Domínguez DE, Fuente LFR, Lobato-García CE, Blé-Castillo JL, López-Meraz L, Díaz-Zagoya JC, Bermúdez-Ocaña DY. 2014. Phytochemical screening and hypoglycemic activity of *Carica papaya* leaf in streptozotocin-induced diabetic rats. **Rev Bras Farmacogn** 24: 341 - 347.

Juiz PJL, Lucchese AM, Gambari R, Piva R, Penolazzi L, Ciano MD, Uetanabaro APT, Silva F, Avila-Campos, MJ. 2015. Essential oils and isolated compounds from *Lippia alba* leaves and flowers: antimicrobial activity and osteoclast apoptosis. **Int J Mol Med** 35: 211 - 217.

Julianti T, Mieri M, Zimmermann S, Ebrahimi SN, Kaiser M, Neuburger M , Raith M, Brun R, Hamburger M. 2014. HPLC-based activity profiling for antiplasmodial compounds in the traditional Indonesian medicinal plant *Carica papaya* L. **J Ethnopharmacol** 155: 426 - 434.

Kadri SM, Zaluski R, Lima GPP, Mazzafera P, Orsi RO. 2016. Characterization of *Coffea arabica* monofloral honey from Espírito Santo, Brazil. **Food Chem** 203: 252 - 257.

Kalla MLM, Jong EM, Kayem JG, Sreekumar MM, Nisha P. 2015. Effect of re-extraction parameters and drying temperature on the antioxidant properties and dietary fiber of Red sorrel (*Hibiscus sabdariffa* L.) calyces residues. **Ind Crops Prod** 74: 680 - 688.

Kamkar A, Javan AJ, Asadi F, Kamalinejad M. 2010. The antioxidative effect of Iranian *Mentha pulegium* extracts and essential oil in sunflower oil. **Food Chem Toxicol** 48: 1796 - 1800.

Kandandapani S, Balaraman AK, Ahamed HN. 2015. Extracts of passion fruit peel and seed of *Passiflora edulis* (Passifloraceae) attenuate oxidative stress in diabetic rats. **Chin J Nat Med** 13: 680 - 686.

Kang J, Li Z, Wu T, Jensen GS, Schauss AG, Wu X. 2010. Anti-oxidant capacities of flavonoid compounds isolated from acai pulp (*Euterpe oleracea* Mart.). **Food Chem** 122: 610 - 617.

Kang SR, Park KI, Park HS, Lee DH, Kim JA, Nagappan A, Kim EH, Lee WS, Shin SC, Park MF, Han DY, Kim GS. 2011. Anti-inflammatory effect of flavonoids isolated from Korea *Citrus aurantium* L. on lipopolysaccharide-induced mouse macrophage RAW 264.7 cells by blocking of nuclear factor-kappa B (NF-jB) and mitogen-activated protein kinase (MAPK) signalling pathways. **Food Chem** 129: 1721 - 1728.

Kang M, Kim SY, Kim YT, Kim E, Lee S, Ko S, Wijesinghe W, Samarakoon KW, Kim Y, Cho JH, Jang H, Jeon Y. 2014. *In vitro* and *in vivo* antioxidant activities of polysaccharide purified from *Aloe vera* (*Aloe barbadensis*) gel. **Carbohidratos Polymers** 99: 365 - 371.

Kapewangolo P, Hussein AA, Meyer D. 2013. Inhibition of HIV-1enzymes, antioxidantandanti-inflammatory activitiesof *Plectranthus barbatus*. **J Ethnopharmacol** 149: 184 - 190.

Kappel VD, Cazarolli LH, Pereira DF, Postal BG, Madoglio FA, Buss ZS, Reginatto FH, Silva FRMB. 2013. Benefi cial effects of banana leaves (*Musa* x *paradisiaca*) on glucose homeostasis: multiple sites of action. **Braz J Pharmacogn** 23: 706 - 715.

Kartini, Piyaviriyakul S, Siripong P, Vallisuta O. 2014. HPTLC simultaneous quantification of triterpene acids for quality control of *Plantago major* L. and evaluation of their cytotoxic andantioxidant activities. **Ind Crops Prod** 60: 239 - 246.

Kaur C, Nagal S, Nishad J, Kumar R, Sarika. 2014. Evaluating eggplant (*Solanum melongena* L.) genotypes for bioactive properties: a chemometric approach. **Food Res Int** 60: 205 - 211.

Kedia A, Prakash B, Mishra PK, Chanotiya CS, Dubey NK. 2014. Antifungal, antiaflatoxigenic, and insecticidal efficacy of spearmint (*Mentha spicata* L.) essential oil. **Int Biodeterioration Biodegradation** 89: 29 - 36.

Kestwal RM, Bhide SV. 2007a. Purification of β-galactosidase from *Erythrina indica*: Involvement of tryptophan in active site. **Biochim Biophys Acta** 1770: 1506 - 1512.

Kestwal RM, Konozy EHE, Hsiao C, Roque-Barreira MC, Bhide SV. 2007b. Characterization of α-mannosidase from *Erythrina indica* seeds and influence of endogenous lectin on its activity. **Biochim Biophys Acta** 1770: 24 - 28.

Khan MR, Kihara M, Omoloso AD. 2001. Anti-microbial activity of *Bidens pilosa*, *Bischofia javanica*, *Elmerillia papuana* and *Sigesbekia orientalis.* **Fitoterapia** 72: 662 - 665.

Khan MR, Omoloso AD. 2002. Antibacterial activity of *Hygrophila stricta* and *Peperomia pellucida*.**Fitoterapia** 73: 251 - 254.

Khanam Z, Sam KH, Zakaria NHBM, Chua Hui Ching CH, Bhat IUH. 2015. Determination of polyphenolic content, HPLC analyses and DNA cleavage activity of Malaysian *Averrhoa carambola* L. fruit extracts. **J King Saud Univ - Science** 27: 331 - 337.

Khoza BS, Gbashi S, Steenkamp PA, Njobeh PB, Madala NE. 2016. Identification of hydroxylcinnamoyl tartaric acid esters in

Bidens pilosa by UPLC-tandem mass spectrometry. **South African J Bot** 103: 95 - 100.

Kim HK, Kwon MK, Kim JN, Kim CK, Lee YJ, Shin HJ, Lee J, Lee HS. 2010. Identification of novel fatty acid glucosides from the tropical fruit *Morinda citrifolia* L. **Phytochem Lett** 3: 238 - 241.

Koffi EN, Guernevé CL, Lozano PR, Meudec E, Adjé FA, Bekro Y, Lozano YF. 2013. Polyphenol extraction and characterization of *Justicia secunda* Vahl leaves for traditional medicinal uses. **Ind Crops Prod** 49: 682 - 689.

Konan NA , Bacchi EM. 2007. Antiulcerogenic effect and acute toxicity of a hydroethanolic extract from the cashew (*Anacardium occidentale* L.) leaves. **J Ethnopharmacol** 112: 237 - 242.

Kong Y, Fu Y, Zu Y, Chang F, Chen Y, Liu X, Stelten J, Schiebel H. 2010. *Cajanuslactone*, a new coumarin with anti-bacterial activity from pigeon pea [*Cajanus cajan* (L.) Millsp.] leaves. **Food Chem** 121: 1150 - 1155.

Kouam MK, Payne VK, Miégoué E, Tendonkeng F, Lemoufouet J, Kana JR, Boukila B, Pamo T, Bertine MNM. 2015. Evaluation of *in vivo a*caricidal effect of soap containing essential oil of *Chenopodium ambrosioides l*eaves on *Rhipicephalus lunulatus* in the Western Highland of Cameroon. **J Pathogens** 1: 1 - 6.

Kpoviessi BGH, Kpoviessi SDS, Ladekan EY, Gbaguidi F, Frédérich M, Moudachirou M, Quetin-Leclercq J, Accrombessi GC, Bero J. 2014. *In vitro* antitrypanosomal and antiplasmodial activities of crude extracts and essential oils of *Ocimum gratissimum* Linn from Benin and influence of vegetative stage. **J Ethnopharmacol** 155: 1417 - 1423.

Krishnaiah D, Bono A, Sarbatly R, Anisuzzaman SM. 2015. Antioxidant activity and total phenolic content of an isolated *Morinda citrifolia* L. methanolic extract from Poly-ethersulphone (PES) membrane separator. **J King Saud Univ - Engineering Sciences** 27: 63 - 67.

Krishnan SSC, Subramanian IP, Subramanian SP**.** 2014. Isolation, characterization of syringin, phenylpropanoid glycoside from *Musa paradisiaca* tepal extract and evaluation of its antidiabetic effect in streptozotocin-induced diabetic rats. **Biomed Prevent Nut** 4: 105 - 111.

Kumar R, Mishra AK, Dubey NK, Tripathi YB. 2007. Evaluation of *Chenopodium ambrosioides* oil as a potential source of antifungal, antiaflatoxigenic and antioxidant activity. **Int J Food Microbiol** 115: 159 - 164.

Kumar AY, Nandakumar K, Handral M, Talwar S, Dhayabaran D. 2011. Hypoglycaemic and anti-diabetic activity of stem bark extracts *Erythrina indica* in normal and alloxan-induced diabetic rats. **Saudi Pharmaceut J** 19: 35 - 42.

Kuster a RM, Caxito MLC, Sabino KCC, Costa HB, Tose LV, W. Romão W, Vaz BG, Silva AG. 2015. Identification of maloyl glucans from *Euphorbia tirucalli* by ESI-(-)-FT-ICR MS analyses. **Phytochem Lett** 12: 209 - 214.

Kviecinski MR, Benelli P, Felipe KB, Correia JFG, Pich CT, Ferreira SRS, Pedrosa RC. 2011. SFE from *Bidens pilosa* Linné to obtain extracts rich in cytotoxic polyacetylenes with antitumor activity. **J Supercritical Fluids** 56: 243 - 248.

Leão RBA, Coelho-Ferreira MR, Jardim MAG. 2007. Levantamento de plantas de uso terapêutico no município de Santa Bárbara do Pará, Estado do Pará, Brasil. **Rev Bras Farm** 88: 21 - 25.

Lee T, Tsai Y, Huang T, Chen P, Liang W, Lee C. 2012. Heptadecanols from the leaves of *Persea americana* var. *americana*. **Food Chem** 132: 921 - 924.

Lermen C, Morellib F, Gazima ZC, Silva AP, Gonçalves JE, Dragunski DC, Albertona O. 2015. Essential oil content and chemical composition of *Cymbopogon citratus* inoculated with arbuscular mycorrhizal fungi under different levels of lead. **Ind Crops Prod** 76: 734 - 738.

Letaief H, Zemni H, Mliki A, Chebil S. 2016. Composition of *Citrus sinensis* (L.) Osbeck cv Maltaise demi-sanguine juice. A comparison between organic and conventional farming. **Food Chem** 194: 290 - 295.

Li S, Zhang H, Qiu S, Niu X, Santarsiero BD, Mesecar AD, Fong HHS, Farnsworth NR,

Sun H . 2002. Vitexlactam A, a novel labdane diterpene lactam from the fruits of *Vitex agnus-castus.* **Tetrahedron Lett** 43: 5131 - 5134.

Liaw C, Chang F, Wu M, Wu Y. 2003. A Novel Constituent from *Rollinia mucosa*, Rollicosin, and a new approach to develop Annonaceous acetogenins as potential antitumor agents. **J Nat Prod** 66: 279 - 281.

Lim SL, Goh YM, Noordin MM, Rahman HS, Othman HH, Bakara NAA, Mohamed S. 2016. *Morinda citrifolia* edible leaf extract enhanced immune response against lung cancer. **Food Function** 7: 741 - 751.

Lima CR, Vasconcelos CFB, Costa-Silva JH, Maranhao CA, Costa J, Batista TM, Carneiro EM, Soares LAL, Ferreira F, Wanderley AG. 2012a. Anti-diabetic activity of extract from *Persea americana* Mill. leaf via the activation of protein kinase B (PKB/Akt) in streptozotocin-induced diabetic rats. **J Ethnopharmacol** 141: 517 - 525.

Lima GM, Quintans-Júnior LJ, Thomazzi SM, Almeida EMSA, Melo MS, Serafini MR, Cavalcanti SCH, Gelain DP, Santos JPA, Blank AFA, Alves PB, Oliveira Neta PM, Lima JT, Rocha RF, Moreira JCF, Araújo AAS. 2012b. Phytochemical screening, antinociceptive and anti-inflammatory activities of *Chrysopogon zizanioides* essential oil. **Rev Bras Farmacogn** 22: 443 - 450.

Lima MCJS, Bitencourt MAO, Furtado AA, Rocha HAO, Oliveira RM, Silva-Júnior AA, Egito EST, Tambourgi DL, Zucolotto SM, Fernandes-Pedrosa MF. 2014. *Ipomoea asarifolia* neutralizes inflammation inducedby *Tityus serrulatus* scorpion venom. **J Ethnopharmacol** 153: 890 - 895.

Lima GS, Castro-Pinto DB, Machado GC, Maciel MAM, Echevarria A. 2015. Antileishmanial activity and trypanothione reductase effects of terpenes from the Amazonian species *Croton cajucara* Benth. (Euphorbiaceae). **Phytomedicine** 22: 1133 - 1137.

Lin M, Lin A, Wub D, Wang SSW, Chang F, Wu Y, Huang Y. 2012. Euphol from *Euphorbia tirucalli* selectively inhibits human gastric cancer cell growth through the induction of ERK1/2-mediated apoptosis. **Food Chem Toxicol** 50: 4333 - 4339.

Liporacci HSN, Simão DG. 2013. Levantamento etnobotânico de plantas medicinais nos quintais do Bairro Novo Horizonte, Ituiutaba, MG. **Rev Bras Plant Med** 15: 529 - 540.

Liu J, Burdette JE, Sun Y, Deng S, Schlecht SM, Zheng W, Nikolic D, Mahady G, Breemen RBV, Fong HHS, Pezzuto JM, Bolton JL, Farnsworth NR. 2004. Isolation of linoleic acid as an estrogenic compound from the fruits of *Vitex agnus-castus* L. (chaste-berry). **Phytomedicine** 11: 18 - 23.

Liu JQ, Yang YF, Xia JJ, Li XY, Li ZR, Zhou L, Qiu MH. 2015. Cytotoxic diterpenoids from *Jatropha curcas cv. nigroviensrugosus* CY Yang Roots. **Phytochemistry** 117: 462 - 468.

Locklear TD, Huang Y, Frasor J, Doyle BJ, Perez A, Gomez-Lauritod J, Mahady GB. 2010. Estrogenic and progestagenic effects of extracts of *Justicia pectoralis* Jacq., na herbal medicine from Costa Rica used for the treatment of menopause and PMS. **Maturitas** 66: 315 - 322.

López-Vargas JH, Fernández-López J, Pérez-Álvarez JA, Viuda-Martos M. 2013. Chemical, physico-chemical, technological, antibacterial and antioxidant properties of dietary fiber powder obtained from yellow passion fruit (*Passiflora edulis* var. *flavicarpa*) co-products. **Food Res Int** 51: 756 - 763.

Lorenzi H, Souza VC. 2008. **Botânica Sistemática: guia ilustrado para identificação das famílias de Fanerógamas nativas e exóticas no Brasil, baseado em APG II**. Instituto Plantarum, São Paulo, Brasil.

Lu Y, Chang H, Peng C, Lin C, Chen I. 2012. Secondary metabolites from the unripe pulp of *Persea americana* and their antimycobacterial activities. **Food Chem** 135: 2904 - 2909.

Lucena BFF, Tintino SR, Figueredo FG, Oliveira CDM, Aguiar JJS, Cardoso EN, Aquino PEA, Andrade JC, Coutinho HDM, Matias EFF. 2015. Avaliação da atividade antibacteriana e moduladora de aminoglicosídeos do óleo essencial de *Cymbopogon citratus* (DC.) Stapf. **Acta Biol Colombiana** 20: 39 - 45.

Luo M, Liu X, Zu Y, Fu Y, Zhang S, Yao L, Efferth T. 2010. Cajanol, a novel anticancer agent

from Pigeonpea [*Cajanus cajan* (L.) Millsp.] roots, induces apoptosis in human breast cancer cells through a ROS-mediated mitochondrial pathway. **Chem-Biol Interactions** 188: 151 - 160.

Luo F, Fu Y, Xiang Y, Yan S, Huc G, Huang X, Huang G, Sun C, Li X, Chen K. 2014. Identification and quantification of gallotannins in mango (*Mangifera indica* L.) kernel and peel and their antiproliferative activities. **J Funct Foods** 8: 282 - 291.

Lv L, Chen H, Ho CT, Sang S. 2011. Chemical components of the roots of Noni (*Morinda citrifolia*) and their cytotoxic effects. **Fitoterapia** 82: 704 - 708.

Madeira SVF, Matos FJA, Leal-Cardoso JH, Criddle DN. 2002. Relaxant effects of the essential oil of *Ocimum gratissimum* on isolated ileum of the guinea pig. **J Ethnopharmacol** 81: 1 - 4.

Madhu K, Harindran J. 2014. Antiarthritic potentialof *Ocimum gratissimum* L. incollagen induced arthritic Sprague-Dawleyrats. **Biomed Aging Pathol** 4: 191 - 196.

Mafioleti L, Junior IFS, Colodel EM, Flach A, Martins DTO. 2013. Evaluation of the toxicity and antimicrobial activity of hydroethanolic extract of *Arrabidaea chica* (Humb. & Bonpl.) B. Verl. **J Ethnopharmacol** 150: 576 - 582.

Mahboubi M, Haghi G. 2008. Antimicrobial activity and chemical composition of *Mentha pulegium* L. essential oil. **J Ethnopharmacol** 119: 325 - 327.

Maioli MA, Alves LC, Campanini AL, Lima MC, Dorta DJ, Groppo M, Cavalheiro AJ, Curti C, Mingatto FE. 2010. Iron chelating-mediated antioxidant activity of *Plectranthus barbatus* extract on mitochondria. **Food Chem** 122: 203 - 208.

Maioli-Azevedo V, Fonseca-Kruel VS. 2007. Plantas medicinais e ritualísticas vendidas em feiras livres no município do Rio de Janeiro, RJ, Brasil: estudo de caso nas zonas Norte e Sul. **Acta Bot Bras** 21: 263 - 275.

Mak YW, Chuah LO, Ahmad R, Bhat R. 2013. Antioxidant and antibacterial activities of hibiscus (*Hibiscus rosa-sinensis* L.) and *Cassia* (*Senna bicapsularis* L.) flower extracts. **J King Saud Univ - Science** 25: 275 - 282.

Margl L, Eisenreich W, Adam P, Bacher A, Zenk MH. 2001. Biosynthesis of thiophenes in *Tagetes patula*. **Phytochemistry** 58: 875 - 881.

Margl L, Ettenhuber C, Gyurján I, Zenk mh, Bacher A, Eisenreich W. 2005. Biosynthesis of benzofuran derivatives in root cultures of *Tagetes patula* via phenylalanine and 1-deoxy-D-xylulose 5-phosphate. **Phytochemistry** 66: 887 - 899.

Maria-Ferreira D, Silva LM, Mendes DAGB, Cabrini1 DA, Nascimento AM, Iacomini M, Cipriani TR, Santos ARS, Werner MFP, Baggio CH. 2014. Rhamnogalacturonan from *Acmella oleracea* (L.) R.K. Jansen: Gastroprotective and ulcer healing properties in rats. **Plos One** 9: 1 - 11.

Marie GM, Nguemtchouin, Martin B, Ngassoum, Pascale C, Richard K, Léonard ST, Ngamo, Marc C. 2013. *Ocimum gratissimum* essential oil and modified montmorillonite clay, a means of controlling insect pests in stored products. **J Stored Prod Res** 52: 57 - 62.

Markom M, Hasan M, Daud WMW, Singh H, Jahim JM. 2007. Extraction of hydrolysable tannins from *Phyllanthus niruri* Linn.: Effects of solvents and extraction methods. **Separation and Purification Technology** 52: 487 - 496.

Marques GS, Leão WF, Lyra MAM, Peixoto MS, Monteiro RPM, Rolim LA, Xavier HS, Neto PJR, Soares LAL. 2013. Comparative evaluation of UV/VIS and HPLC analytical methodologies applied for quantification of flavonoids from leaves of *Bauhinia forficata*. **Braz J Pharmacogn** 23: 51 - 57.

Marreiro RO, Bandeira MFCL, Souza TP, Almeida MC, Bendaham K, Venâncio GN, Rodrigues IC, Coelho CN, Milério PSLL, Oliveira GP, Conde NCO. 2014. Evaluation of the stability and antimicrobial activity of an ethanolic extract of *Libidibia ferrea*. **Clin Cosmetic Invest Dent** 6: 9 - 13.

Martins MBG, Caravante ALC, Apezzato-da-Glória B, Soares MKM, Moreira, RRD, Santos LE. 2010. Caracterização anatômica e fitoquímica de folhas e rizomas de *Hedychium coronarium* J. König (Zingiberaceae). **Rev Bras Plant Med** 12: 179 - 187.

Martins WMO, Martins LMO, Paiva FS, Martins

WJO, Júnior SFL. 2012. Agrobiodiversidade nos quintais e roçados ribeirinhos na comunidade Boca do Môa - Acre. **Biotemas** 25: 111 - 120.

Mathew S, Abraham TE. 2006. *In vitro* antioxidant activity and scavenging effects of *Cinnamomum verum* leaf extract assayed by different methodologies. **Food Chem Toxicol** 44: 198 - 206.

Matsuo AL, Figueiredo CR, Arruda DC, Pereira FV, Scutti JAB, Massaoka MH, Travassos LR, Sartorelli P, Lago JHG. 2011. α-Pinene isolated from *Schinus terebinthifolius* Raddi (Anacardiaceae) induces apoptosis and confers antimetastatic protection in a melanoma model. **Biochem Biophys Res Comm** 411: 449 - 454.

Mazumdar S, Akter R, Talukder D. 2015. Antidiabetic and antidiarrhoeal effects on ethanolic extract of *Psidium guajava* (L.) Bat. leaves in Wister rats. **Asian Pacific J Trop Biomed** 5: 10 - 14.

Melo PS, Durán N, Hiruma-Lima CA, Souza-Brito ARM, Haun M. 2003. Comparison of the gastroprotective effect of a diterpene lactone isolated from *Croton cajucara* with its synthetic derivatives. **J Ethnopharmacol** 87: 169 - 174.

Melo NI, Carvalho CE, Fracarolli L, Cunha WR, Veneziani RCS, Martins CHG, Crotti AEM. 2015. Antimicrobial activity of the essential oil of *Tetradenia riparia* (Hochst.) Codd. (Lamiaceae) against cariogenic bactéria. **Braz J Microbiol** 46: 519 - 525.

Menon N, Sparks J, Omoruyi F. 2015. Hypoglycemic and hypocholesterolemic activities of the aqueous preparation of *Kalanchoe pinnata* leaves in streptozotocin-induced diabetic rats. **Asian Pac J Trop Biomed** 5: 3 - 9.

Mercadante AZ, Steck A, Pfander H. 1997. Isolation and structure elucidation of minor carotenoids from annatto (*Bixa orellana* L.) Seeds. **Phytochemistry** 46: 1379 - 1383.

Mercado-Mercado G, Blancas-Benitez FJ, Velderrain-Rodríguez GR, Montalvo-González E, González-Aguilar GA, Alvarez-Parrilla E, Sáyago-Ayerdi SG. 2015. Bioaccessibility of polyphenols released and associated to dietary fibre in calyces and decoction residues of Roselle (*Hibiscus sabdariffa* L.). **J Funct Foods** 18: 171 - 181.

Mezadri T, Villaño D, Fernández-Pachón MS, García-Parrilla MC, Troncoso AM. 2008. Antioxidant compounds and antioxidant activity in acerola (*Malpighia emarginata* DC.) fruits and derivatives. **J Food Comp Anal** 21: 282 - 290.

Michel AFRM, Melo MM, Campos PP, Oliveira MS, Cassali GD, Ferraz VP, Cota BB, Andrade SP, Souza-Fagundes EM. 2015. Evaluation of anti-inflammatory, antiangiogenic and antiproliferative activities of *Arrabidaea chica* crude extracts. **J Ethnopharmacol** 165: 29 - 38.

Michodjehoun-Mestres L, Souquet JM, Fulcrand H, Bouchut C, Reynes M, Brillouet J. 2009. Monomeric phenols of cashew apple (*Anacardium occidentale* L.). **Food Chem** 112: 851 - 857.

Mikulic-Petkovsek M, Ivancic A, Schmitzer V, Veberic R, Stampar F. 2016. Comparison of major taste compounds and antioxidative properties of fruits and flowers of different *Sambucus* species and interspecific hybrids. **Food Chem** 200: 134 - 140.

Mimaki Y, Inoue T, Kuroda M, Sashid Y. 1996. Steroidal saponins from *Sansevieria trifasciata*. **Phytochemistry** 43: 1325 - 1331.

Mimaki Y, Inoue T, Kuroda M, Sashida Y. 1997. Pregnane glycosides from *Sansevieria trifasciata*. **Phytochemistry** 44: 107 - 111.

Missouri Botanical Garden (MOBOT). 2014. **Tropicos**. **http://www.tropicos.org**

Mohan CG, Viswanatha GL, Savinay G, Rajendra CE, Halemani PD. 2013. 1,2,3,4,6 Penta-O-galloyl-β-D-glucose, a bioactivity guided isolated compound from *Mangifera indica* inhibits 11β-HSD-1 and ameliorates high fat diet-induced diabetes in C57BL/6 mice. **Phytomedicine** 20: 417 - 426.

Mohd-Esa N, Hern FS, Ismail A, Yee CL. 2010. Antioxidant activity in different parts of roselle (*Hibiscus sabdariffa* L.) extracts and potential exploitation of the seeds. **Food Chemistry** 122: 1055 - 1060.

Molares S, Rovere AE. 2016. Plantas medicinales, comestibles y aromáticas en cercos vivos de una ciudad patagónica de Argentina: características y potencialidades de un recurso poco explorado. **Bol Latinoam**

Caribe Plant Med Aromat 15: 41 - 52.

Mondal SK, Ray B, Thakur S, Ghosal PK. 2001. Isolation, purification and some structural features of the mucilaginous exudate from *Musa paradisiaca*. **Fitoterapia** 72: 263 - 271.

Monzote L, Stamberg W, Staniek K, Gille L. 2009. Toxic effects of carvacrol, caryophyllene oxide, and ascaridole from essential oil of *Chenopodium ambrosioides* on mitochondria. **Toxicol Applied Pharmacol** 240: 337 - 347.

Monzote L, García M, Pastor J, Gil L, Scull M, Maes L, Cos P, Gille L. 2014. Essential oil from *Chenopodium ambrosioides* and main components: Activity against *Leishmania*, their mitochondria and other Microorganisms. **Exp Parasitol** 136: 20 - 26.

Morais TC, Pinto NB, Carvalho KMMB, Rios JB, Ricardo NMPS, Trevisan MTS, Rao VS, Santos FA. 2010. Protective effect of anacardic acids from cashew (*Anacardium occidentale*) on ethanol-induced gastric damage in mice. **Chem-Biol Interactions** 183: 264 - 269.

Morais-Braga MFB, Carneiro JNP, Machado AJT, Sales D, Santos ATL, Boligon AA, Athayde ML, Menezes IRA, Souza DSL, Costa JGM, Coutinho HDM. 2015. Phenolic composition and medicinal usage of *Psidium guajava* Linn.: Antifungal activity or inhibition of virulence? **Saudi J Biol Sci** **http://dx.doi.org/10.1016/j.sjbs.2015.09.028**

Mora-Pérez A, Hernández-Medel MR. 2015. Actividad anticonvulsivante del extracto metanólico detallo y raíz de *Kalanchoe pinnata* Lam. en ratones: Comparación con diazepam. **Neurología** 1: 1 - 8.

Morelli CF, Cairoli P, Speranza G, Alamgir M, Rajia S. 2006. Triglycerides from *Urena lobata*. **Fitoterapia** 77: 296 - 299.

Moura RS, Ferreira TS, Lopes AA, Pires KMP, Nesi RT, Resende AC, Souza PJC, Silva AJR, Borges RM, Porto LC, Valenca SS. 2012. Effects of *Euterpe oleracea* Mart. (AÇAÍ) extract in acute lung inflammation induced by cigarette smoke in the mouse. **Phytomedicine** 19: 262 - 269.

Munhoz VM, Longhini R, Souza JRP, Zequi JAC, Mello EVSL, Lopes GC, Mello JCP. 2014. Extraction of flavonoids from *Tagetes patula*: process optimization and screening for biological activity. **Rev Bras Farmacogn** 24: 576 - 583.

Mushtaq M, Sultana B, Anwar F, Batoo S. 2015. Antimutagenic and antioxidant potential of aqueous and acidified methanol extracts from *Citrus limonum* fruit residues. **J Chil Chem Soc** 60: 2979 - 2983.

Muzitano MF, Bergonzi MC, Melo GO, Lage CLS, Bilia AR, Vincieri FF, Rossi-Bergmann B, Costa SS. 2011. Influence of cultivation conditions, season of collection and extraction method on the content of antileishmanial flavonoids from *Kalanchoe pinnata*. **J Ethnopharmacol** 133: 132 - 137.

Nakamura CV, Ishida K, Faccin LC, Filho BPD, Cortez DAG, Rozental S, Souza W, Ueda-Nakamura T. 2004. *In vitro* activity of essential oil from *Ocimum gratissimum* L. against four *Candida* species. **Res Microbiol** 155: 579 - 586.

Nakamura Y, Hasegawa Y, Shirota K, Suetome N, Nakamura T, Chomnawang MT, Thirapanmethee K, Khuntayaporn P, Boonyaritthongchai P, Wongs-Aree C, Okamoto S, Shigeta T, Matsuo T, Park EY, Sato K. 2014. Differentiation-inducing effect of piperitenone oxide, a fragrant ingredient of spearmint (*Mentha spicata*), but not carvone and menthol, against human colon cancer cells. **J Funct Foods** 8: 62 - 67.

Nascimento MA, Silva AK, França LCB, Quignard ELJ, López JA, Almeida MG. 2006. *Turnera ulmifolia* L. (Turneraceae): preliminary study of its antioxidant activity. **Bioresource Technology** 97: 1387 - 1391.

Nascimento SA, Araújo EA, Silva JM, Ramos CS. 2015. Chemical study and antimicrobial activities of *Piper arboreum* (Piperaceae). **J Chil Chem Soc** 60: 2837 - 2839.

Nayak B, Dahmoune F, Moussi K, Remini H, Dairi S, Aoun O, Khodir M. 2015. Comparison of microwave, ultrasound and accelerated-assisted solvent extraction for recovery of polyphenols from *Citrus sinensis* peels. **Food Chem** 187: 507 - 516.

Neto AG, Filho AAS, Costa JMLC, Vinholis AHC, Souza GHB, Cunha WR, Silva MLAE, Albuquerque S, Bastos JK. 2004. Evaluation of the trypanocidal and leishmanicidal *in vitro* activity of the crude hydroalcoholic

extract of *Pfaffia glomerata* (Amarathanceae) roots. **Phytomedicine** 11: 662 - 665.

Neto AG, Costa JMLC, Belati CC, Vinhólis AHC, Possebom LS, AAS, Cunha WR, Carvalho JCT, Bastos JK, Silva MLA. 2005. Analgesic and anti-inflammatory activity of a crude root extract of *Pfaffia glomerata* (Spreng) Pedersen. **J Ethnopharmacol** 96: 87 - 91.

Nisha P, S. Mini S. 2013. Flavanoid rich ethyl acetate fraction of *Musa paradisiaca* inflorescence down-regulates the streptozotocin induced oxidative stress, hyperglycaemia and mRNA levels of selected inflammatory genes in rats. **J Funct Foods** 5: 1838 - 1847.

Nitbani FO, Jumina, Siswanta D, Solikhah EN. 2016. Isolation and antibacterial activity test of lauric acid from crude coconut oil (*Cocos nucifera* L.). **Procedia Chemistry** 18: 132 - 140.

Nomaguchi K, Tanaka M, Misawa E, Yamada M, Toida T, Iwatsuki K, Goto T, Kawada T. 2011. *Aloe vera* phytosterols act as ligands for PPAR and improve the expression levels of PPAR target genes in the livers of mice with diet-induced obesity. **Obesity Res Clin Pract** 5: 190 - 201.

Nomura ECO, Rodrigues MRA, Silva CF, Hamma LA, Nascimento AM, Souza LM, Cipriani TR, Baggio CH, Werner MFP. 2013. Antinociceptive effects of ethanolic extract from the flowers of *Acmella oleracea* (L.) R.K. Jansen in mice. **J Ethnopharmacol** 150: 583 - 589.

Nunes PMP, Silva CB, Paula CS, Smolarek FF, Zeviani WM, Chaves SC, Lorini F, Dias JFG, Migue OG, Zanin SMW, Miguel MD. 2015. Residues of *Citrus sinensis* (L.) Osbeck as agents that cause a change in antioxidant defense in plants. **Braz J Pharm Sci** 51: 479 - 493.

Núñez V, Castro V, Murillo R, Ponce-Soto LA, Merfort I, Lomonte B. 2005. Inhibitory effects of *Piper umbellatum* and *Piper peltatum* extracts towards myotoxic phospholipases A_2 from Bothrops snake venoms: Isolation of 4-nerolidylcatechol as active principle. **Phytochemistry** 66: 1017 - 1025.

Oboh G, Ogunruku OO. 2010. Cyclophosphamide-induced oxidative stress in brain: protective effect of hot short pepper (*Capsicum frutescens* L. var. *abbreviatum*). **Exp Toxicol Pathol** 62: 227 - 233.

Ohsaki A, Kasetani Y, Asaka Y, Shibata K, Tokoroyama T, Kubota T. 1991. Clerodane diterpenoids from the of *Portulaca pilosa*. **Phytochemistry** 30: 4075 - 4077.

Ohsaki A, Kasetani Y, Asaka Y, Shibata K, Tokoroyama T, Kubota T. 1995. A diterpenoid from *Portulaca pilosa*. **Phytochemistry** 40: 205 - 207.

Olajide OA, Aderogba MA, Fiebich BL. 2013. Mechanisms of anti-inflammatory property of *Anacardium occidentale* stem bark: Inhibition of NF-kB and MAPK signaling in the microglia. **J Ethnopharmacol** 145: 42 - 49.

Olejnik A, Kowalska K, Olkowicz M, Rychlik J, Juzwa W, Myszka K, Dembczýnski R, Białas W. 2015. Anti-inflammatory effects of gastrointestinal digested *Sambucus nigra* L. fruit extract analysed in co-cultured intestinal epithelial cells and lipopolysaccharide-stimulated macrophages. **J Funct Foods** 19: 649 - 660.

Olejnik A, Olkowicz M, Kowalska K, Rychlik J, Dembczýnski R, Myszka K, Juzwa W, Białas W, Moyer MP. 2016. Gastrointestinal digested *Sambucus nigra* L. fruit extract protects *in vitro* cultured human colon cells against oxidative stress. **Food Chem** 197: 648 – 657.

Oliveira FQ, Andrade-Neto V, Krettli AU, Brandão MGL. 2004. New evidences of antimalarial activity of *Bidens pilosa* roots extract correlated with polyacetylene and flavonoids. **J Ethnopharmacol** 93: 39 - 42.

Oliveira CZ, Maiorano VA, Marcussi S, Santana CD, Januário AH, Lourenço MV, Sampaio SV, França SC, Pereira PS, Soares AM. 2005. Anticoagulant and antifibrinogenolytic properties of the aqueous extract from *Bauhinia forficata* against snake venoms. **J Ethnopharmacol** 98: 213 - 216.

Oliveira GL, Oliveira AFM, Andrade LHC. 2010. Plantas medicinais utilizadas na comunidade urbana de Muribeca, Nordeste do Brasil. **Acta Bot Bras** 24: 571 - 577.

Oliveira AB, Mendonça MS, Azevedo AA, Meira MAS. 2012. Anatomy and histochemistry of

the vegetative organs of *Cissus verticillata* - a native medicinal plant of the Brazilian Amazon. **Rev Bras Farmacogn** 22: 1201 - 1211.

Oliveira LAR, Machado RD, Rodrigues AJL. 2014a. Levantamento sobre o uso de plantas medicinais com a terapêutica anticâncer por pacientes da Unidade Oncológica de Anápolis. **Rev Bras Plant Med** 16: 32 - 40.

Oliveira SAC, Zambrana JRM, Iorio FBRD, Pereira CA, Jorge AOC. 2014b. The antimicrobial effects of *Citrus limonum* and *Citrus aurantium* essential oils on multi-species biofilms. **Braz Oral Res** 28: 1 - 6.

Orafidiya LO, Adesina Jr SK, Igbeneghu OA, Akinkunmi EO, Adetogun GE, Salau AO. 2006. The effect of honey and surfactant type on the antibacterial properties of the leaf essential oil of *Ocimum gratissimum* Linn. against common wound-infecting organisms. **Int J Aromather** 16: 57 - 62.

Orlanda JFF, Nascimento AR. 2015. Chemical composition and antibacterial activity of *Ruta graveolens* L. (Rutaceae) volatile oils, from São Luís, Maranhão, Brazil. **South African J Bot** 99: 103 - 106.

Otify A, George C, Elsayed A, Farag MA. 2015. Mechanistic evidence of *Passiflora edulis* (Passifloraceae) anxiolytic activity in relation to its metabolite fingerprint as revealed via LC-MS and chemometrics. **Food Function** 6: 3807 - 3817.

Owolabi MA, Jaja SI, Coker HAB. 2005. Vasorelaxant action of aqueous extract of the leaves of *Persea americana* on isolated thoracic rat aorta. **Fitoterapia** 76: 567 - 573.

Pacheco AO, Morán JM, Giro ZG, Rodríguez AH, Mujawimana RJ, González KT, Frómeta SS. 2013. *In vitro* antimicrobial activity of total extracts of the leaves of *Petiveria alliacea* L. (Anamu). **Braz J Pharm Sci** 49: 241 - 250.

Pacheco-Palencia LA, Mertens-Talcott SU, Talcott ST. 2010. *In vitro* absorption and antiproliferative activities of monomeric and polymeric anthocyanin fractions from açai fruit (*Euterpe oleracea* Mart.). **Food Chem** 119: 1071 - 1078.

Paes LS, Mendonça M S, Casas LL. 2013. Aspectos Estruturais e fitoquímicos de partes vegetativas de *Costus spicatus* (Jacq.) Sw. (Costaceae). **Rev Bras Plant Med** 15: 380 - 390.

Palioto GF, Silva CFG, Mendes MP, Almeida VV, Rocha CLMSC. Tonin LTD. 2015. Composição centesimal, compostos bioativos e atividade antioxidante de frutos de *Morinda citrifolia* Linn (noni) cultivados no Paraná. **Rev Bras Plant Med** 17: 59 - 66.

Palu AK, Kim AH, West BJ, Deng S, Jensen J, White L. 2008. The effects of *Morinda citrifolia* L. (noni) on the immune system: Its molecular mechanisms of action. **J Ethnopharmacol** 115: 502 - 506.

Panahi Y, Khedmat H, Valizadegan G, Mohtashami R, Sahebkar A. 2015. Efficacy and safety of *Aloe vera* syrup for the treatment of gastroesophageal reflux disease: a pilot randomized positive-controlled trial. **J Trad Chin Med** 35: 632 - 636.

Pankoke H, Buschmann T, Muller C. 2013. Role of plant β-glucosidases in the dual defense system of iridoid glycosides and their hydrolyzing enzymes in *Plantago lanceolata* and *Plantago major*. **Phytochemistry** 94: 99 - 107.

Paphassarang S, Raynaud J, Lussignol M, Becchi M. 1989. Triterpenic glycosides from *Polyscias scutellaria*. **Phytochemistry** 28: 1539 - 1541.

Paré PW, Zajicek J, Ferracini VL, Melo IS. 1993. Antifungal Terpenoids from *Chenopodium ambrosioides*. **Biochem Syst Ecol** 21: 649 - 653.

Park KI, Park HS, Kimb MK, Hongb GE, Nagappanb A, Leeb AJ, Yumnamb S, Lee WS, Wonb CK, Shind SC, Kimb GS. 2014. Flavonoids identified from Korean *Citrus aurantium* L. inhibit Non-Small Cell Lung Cancer growth *in vivo* and *in vitro*. **J Funct Foods** 7: 287 - 297.

Pascual ME, Slowing K, Carretero E, Sanchez-Mata D, Villar A. 2001. *Lippia*: traditional uses, chemistry and pharmacology: a review. **J Ethnopharmacol** 76: 201 - 214.

Paula ACB, Gracioso JS, Toma W, Hiruma-Lima CA, Carneiro EM, Brito ARMS. 2008. The antiulcer effect of *Croton cajucara* Benth in normoproteic and malnourished rats. **Phytomedicine** 15: 815 - 825.

Paula JT, Paviani LC, Foglio MA, Sousa IMO, Duarte GHB, Jorge MP, Eberlin MN, Cabral

FA. 2014. Extraction of anthocyanins and luteolin from *Arrabidaea chica* by sequential extraction in fixed bed using supercritical CO_2, ethanol and water as solventes. **J Supercritical Fluids** 86: 100 - 107.

Pazmiño-Durán EA, Giusti MM, Wrolstad RE, Glória MBA. 2001. Anthocyanins from banana bracts (*Musa x paradisíaca)* as potential food colorants. **Food Chem** 73: 327 - 332.

Pepato MT, Keller EH, Baviera AM, Kettelhut IC, Vendramini RC, Brunetti IL. 2002. Anti-diabetic activity of *Bauhinia forficata* decoction in streptozotocin-diabetic rats. **J Ethnopharmacol** 81: 191 - 197.

Pereira RLC, Ibrahim T, Lucchetti L, Silva AJR, Moraes VLG. 1999. Immunosuppressive and anti-inflammatory effects of methanolic extract and the polyacetylene isolated from *Bidens pilosa* L. **Immunopharmacology** 43: 31 - 37.

Pereira CAP, Álvarez MJM Martínez CAM. 2008. Composición química, análisis estructural y factores antinutricionales de filocladios de *Epiphyllum phyllanthus* (L.) Haw. var. *hookeri* (Link & Otto) Kimn. (CACTACEAE). **Interciencia** 33: 443 - 448.

Pereira BE, Diegues AC. 2010. Conhecimento de populações tradicionais como possibilidade de conservação da natureza: uma reflexão sobre a perspectiva da etnoconservação. **Desenvolvimento e Meio Ambiente** 22: 37 - 50.

Perng D; Tsai Y; Cherng J; Wang J; Chou K; Shih C; Cherng J. 2016. Discovery of a novel anticancer agent with both anti-topoisomerase I and II activities in hepatocellular carcinoma SK-Hep-1 cells *in vitro* and *in vivo*: *Cinnamomum verum* component 2-methoxycinnamaldehyde. **Drug Design Developm Ther** 10: 141 - 153.

Pertuzatti PB, Sganzerla M, Jacques AC, Barcia MT, Zambiazi RC. 2015. Carotenoids, tocopherols and ascorbic acid content in yellow passion fruit (*Passiflora edulis*) grown under different cultivation systems. **LWT - Food Sci Technol** 64: 259 - 263.

Pessoa LM, Morais SM, Bevilaqua CML, Luciano JHS. 2002. Anthelmintic activity of essential oil of *Ocimum gratissimum* Linn. and eugenol against *Haemonchus contortus.* **Vet Parasitol** 109: 59 - 63.

Phillips O, Gentry AH. 1993. The useful plants of Tambopata, Peru: I. Statistical hypotheses tests with a new quantitative technique. **Econ Bot** 47: 15 - 32.

Piaru SP, Mahmud R, Majid AMSA, Nassar ZDM. 2012. Antioxidant and antiangiogenic activities of the essential oils of *Myristica fragrans* and *Morinda citrifolia*. **Asian Pacific J Trop Med** 2012: 294 - 298.

Pilla MAC, Amorozo MCM, Furlan A. 2006. Obtenção e uso das plantas medicinais no distrito de Martim Francisco, Município de Mogi-Mirim, SP, Brasil. **Acta Bot Bras** 20: 789 - 802.

Pillai SS, Mini S. 2016. Polyphenols rich *Hibiscus rosa sinensis* Linn. petals modulate diabetic stress signaling pathways in streptozotocin-induced experimental diabetic rats**. J Funct Foods** 20: 31 - 42.

Pino Benitez N, Meléndez León EM, Stashenko EE. 2009. Eugenol and methyl eugenol chemotypes of essential oil of species *Ocimum gratissimum* L. and *Ocimum campechianum* Mill. from Colombia. **J Chromatogr Sci** 47: 800 - 803.

Pino JA, Márquez E, Quijano CE, Castro D. 2010. Volatile compounds in noni (*Morinda citrifolia* L.) at two ripening stages. **Ciência e Tecnologia de Alimentos** 30: 183 - 187.

Porto CRC, Soares LAL, Souza TP, Petrovick PR, Lyra IL, Araújo Júnior RF, Langassner SMZ, Ferreira AAA, Guerra GCB. 2013. Anti-inflammatory and antinociceptive activities of *Phyllanthus niruri* spray-dried standardized extract. **Braz J Pharmacogn** 23: 138 - 144.

Posey DA. 1985. Indigenous management of tropical forest ecosystems: the case of the Kayapó of the Brazilian Amazon. **Agroforest Syst** 3: 139 - 158.

Prado IM, Prado GHC, Prado JM, Meireles MAA. 2013. Supercritical CO_2 and low-pressure solvent extraction of mango (*Mangifera indica*) leaves: Global yield, extraction kinetics, chemical composition and cost of manufacturing. **Food Bioprod Proc** 91: 656 - 664.

Pragadheesh VS, Yadav A, Chanotiya CS. 2015.

Role of substituents in cyclodextrin derivatives for enantioselective gas chromatographic separation of chiral terpenoids in the essential oils of *Mentha spicata*. **J Chromatography B** 1002: 30 - 41.

Prakash O, Rout PK, Chanotiya CS, Misra LN. 2012. Composition of essential oil, concrete, absolute and SPME analysis of *Tagetes patula* capitula. **Ind Crops Prod** 37: 195 - 199.

Promkum C, Butryee C, Tuntipopipat S, Kupradinun P. 2012. Anticlastogenic effect of *Eryngium foetidum* L. Assessed by Erythrocyte Micronucleus Assay. **Asian Pacific J Cancer Prev** 13: 3343 - 3347.

Puertas-Mejía MA, Gómez-Chabala L, Rojano B, Sáez-Veja JÁ. 2009. Capacidad antioxidante *in vitro* de fracciones de hojas de *Piper peltatum* L**. Ver Cub Plant Med** 14: 1 - 11.

Pultrini AM, Galindo LA, Costa M. 2006. Effects of the essential oil from *Citrus aurantium* L. in experimental anxiety models in mice. **Life Sci** 78: 1720 - 1725.

Purnomo Y, Soeatmadji DW, Sumitro SB, Widodo MA. 2015. Anti-diabetic potential of *Urena lobata* leaf extract through inhibition of dipeptidyl peptidase IV activity. **Asian Pacific J Trop Biomed** 5: 645 - 649.

Raghav SK, Gupta B, Shrivastava A, Das HR. 2007. Inhibition of lipopolysaccharide-inducible nitric oxide synthase and IL-1β through suppression of NF-κB activation by 3-(1′-1′-dimethyl-allyl)-6-hydroxy-7-methoxy-coumarin isolated from *Ruta graveolens* L. **Eur J Pharmacol** 560: 69 - 80.

Raj CA, Sophia D, Ragavendran P, Starlin T, Rathi MA, Gopalakrishnan VK. 2012. Leaf extract of *Alpinia purpurata* (Vieill.) K. Schum screened for its phytochemical constituents and antibacterial and anticancer activities. **J Chin Integrat Med** 10: 1460 - 1464.

Rakotonirina VS, Bum EN, Rakotonirina A, Bopelet M. 2001. Sedative properties of the decoction of the rhizome of *Cyperus articulatus.* **Fitoterapia** 72: 22 - 29.

Ramírez-Rodrigues MM, Plaza ML, Azeredo A, Balaban MO, Marshall MR. 2012. Phytochemical, sensory attributes and aroma stability of dense phase carbon dioxide processed *Hibiscus sabdariffa* beverage during storage. **Food Chem** 134: 1425 - 1431.

Ramos CS, Kato MJ. 2009. Hydrolysis of methyl benzoate from *Piper arboreum* by *Naupactus bipes* Beetle. **J Braz Chem** 20: 560 - 563.

Ramos AS, Souza ROS, Boleti APA, Bruginski ERD, Lima ES, Campos FR, Machado MB. 2015. Chemical characterization and antioxidant capacity of the araçá-pera (*Psidium acutangulum*): An exotic Amazon fruit. **Food Res Int** 75: 315 - 327.

Ratnasooriya WD, Jayakody JRAC, Premakumara GAS, Ediriweera ERHSS. 2005. Antioxidant activity of water extract of *Scoparia dulcis.* **Fitoterapia** 76: 220 - 222.

Renjith RS, Chikku AM, Rajamohan T. 2013. Cytoprotective, antihyperglycemic and phytochemical properties of *Cocos nucifera* (L.) inflorescence. **Asian Pacific J Trop Med** 1: 804 - 810.

Ribeiro LP, Vendramim JD, Bicalho KU, Andrade MS, Fernandes JB, Moral RA, Demétrio CGB. 2013. *Annona mucosa* Jacq. (Annonaceae): A promising source of bioactive compounds against *Sitophilus zeamais* Mots. (Coleoptera: Curculionidae). **J Stored Prod Res** 55: 6 - 14.

Richter R, Reu SHV, König WA. 2010. Spirocyclopropane-type sesquiterpene hydrocarbons from *Schinus terebinthifolius* Raddi. **Phytochemistry** 71: 1371 - 1374.

Rinaldi S, Silva DO, Bello F, Alviano CS, Alviano DS, Matheus ME, Fernandes PD. 2009. Characterization of the antinociceptive and anti-inflammatory activities from *Cocos nucifera* L. (Palmae). **J Ethnopharmacol** 122: 541 - 546.

Rogez H, Pompeu DR, Akwie SNT, Larondelle Y. 2011. Sigmoidal kinetics of anthocyanin accumulation during fruit ripening: A comparison between açai fruits (*Euterpe oleracea*) and other anthocyanin-rich fruits. **J Food Comp Anal** 24: 796 - 800.

Roopan SM, Rohit, Madhumitha G, Rahuman AA, Kamaraj C, Bharathi A, Surendra TV. 2013. Low-cost and eco-friendly phyto-synthesis of silver nanoparticles using *Cocos nucifera* coir extract and its larvicidal activity. **Ind Crops Prod** 43: 631 - 635.

Roriz CL, Barros L, Carvalho AM, Santos-Buelga C,

Ferreira ICFR. 2015. Scientific validation of synergistic antioxidant effects in commercialized mixtures of *Cymbopogon citratus* and *Pterospartum tridentatum* or *Gomphrena globosa* for infusions preparation. **Food Chem** 185: 16 - 24.

Rosas EC, Correa LB, Pádua TA, Costa TEMM, Mazzei JL, Heringer AP, Bizarro CA, Kaplan MAC, Figueiredo MR, Henriques MG. 2015. Anti-inflammatory effect of *Schinus terebinthifolius* Raddi hydroalcoholic extract on neutrophil migration in zymosan-induced arthritis. **J Ethnopharmacol** 175: 490 - 498.

Rossato SC, Leitão Filho H, Begossi A. 1999. Ethnobotany de Caiçaras of the Atlantic Forest Coast (Brazil). **Econ Bot** 53: 387 - 395.

Rosso VV, Mercadante AZ. 2005. Carotenoid composition of two Brazilian genotypes of acerola (*Malpighia punicifolia* L.) from two harvests. **Food Res Int** 38: 1073 - 1077.

Ruhomally Z, Somanah J, Bahorun T, Neergheen-Bhujun VS. 2015. *Morinda citrifolia* L. fruit extracts modulates H_2O_2-induced oxidative stress in human liposarcoma SW872 cells. **J Trad Complement Med http://dx.doi.org/10.1016/j.jtcme.2015.09.003**

Rukunga GM, Muregi FW, Omar SA, Gathirwa JW, Muthaura CN, Peter MG, Heydenreich M, Mungai GM. 2008. Anti-plasmodial activity of the extracts and two sesquiterpenes from *Cyperus articulatus*. **Fitoterapia** 79: 188 - 190.

Sá JC, Almeida-Souza F, Mondêgo-Oliveira R, Oliveira ISS, Lamarck L, Magalhães IFB, Ataídes-Lima AF, Ferreira HS, Abreu-Silva AL. 2016. Leishmanicidal, cytotoxicity and wound healing potential of *Arrabidaea chica* Verlot. **BMC Complement Alternat Med** 16: 1 - 11.

Saberi M, Rezvanizadeh A, Bakhtiarian A. 2008. The antiepileptic activity of *Vitex agnus castus* extract on amygdala kindled seizures in male rats. **Neuroscience Lett** 441: 193 - 196.

Sagradas J, Costa G, Figueirinha A, Castel-Branco MM, Cabrita AMS, Figueiredo IV, Batista MT. 2015. Gastroprotective effect of *Cymbopogon citratus* infusion on acute ethanol-induced gastric lesions in rats. **J Ethnopharmacol** 173: 134 - 138.

Salvador AC, Rocha SM, Silvestre AJD. 2015. Lipophilic phytochemicals from elderberries (*Sambucus nigra* L.): Influence of ripening, cultivar and season. **Ind Crops Prod** 71: 15 - 23.

Samuelsen AB. 2000. The traditional uses, chemical constituents and biological activities of *Plantago major* L. A review. **J Ethnopharmacol** 71: 1 - 21.

Sancho LEG, Yahia EM, González-Aguilar GA. 2011. Identification and quantification of phenols, carotenoids, and vitamin C from papaya (*Carica papaya* L., cv. Maradol) fruit determined by HPLC-DAD-MS/MS-ESI. **Food Res Int** 44: 1284 - 1291.

Sandjo LP, Foster AJ, Rheinheimer J, Anke H, Opatz T, Thines E. 2012. Coumarin derivatives from *Pedilanthus tithymaloides* as inhibitors of conidial germination in *Magnaporthe oryzae*. **Tetrahedron Lett** 53: 2153 - 2156.

Santos MAS, Kahwage CC, Coelho-Ferreira MR, Sampaio N. A. 2005. Medicinas Tradicionais no Vale do Rio Negro (Amazonas, Brasil). Observações sobre etnofarmacologia e o Uso da Planta Saracura-Mirá (*Ampelozizyphus amazonicus*): Atividade Farmacológica e/ou eficácia simbólica. **Bol Museu Paraense Emílio Goeldi** 1: 137 - 147.

Santos MRA, Lima MR. 2008. Levantamento dos recursos vegetais utilizados como fitoterápicos no município de Cujubim, Rondônia, Brasil. **Saber Científico** 1: 58 - 74.

Santos KKA, Matias EFF, Sobral-Souza CE, Tintino SR, Morais-Braga MFB, Guedes GMM, Rolón M, Vega C, Arias AR, Costa JGM, Menezez IRA, Coutinho HDM. 2012. Avaliação da atividade anti-*Trypanossoma* e anti-*Leishmania* de *Mentha arvenis* e *Turnera ulmifolia*. **Bol Latinoam Caribe Plant Med Aromat** 11: 147 - 153.

Santos P, Aguiar AC, Barbero GF, Rezende CA, Martinez J. 2015. Supercritical carbon dioxide extraction of capsaicinoids from malagueta pepper (*Capsicum frutescens* L.) assisted by ultrasound. **Ultrasonics Sonochemistry** 22: 78 - 88.

Sarac N, Ugur A, Sem B. 2015. *In vitro* antimutagenic activity of *Vitex agnus-castus*

L. essential oils and ethanolic extracts. **Ind Crops Prod** 63:100 - 103.

Sarikurkcu C, Arisoy K, Tepe B, Cakir A, Abali G, Mete E. 2009. Studies on the antioxidant activity of essential oil and different solvente extracts of *Vitex agnus castus* L. fruits from Turkey. **Food Chem Toxicol** 47: 2479 - 2483.

Sarker SD, Bartholomew B, Nash RJ, Robinson N. 2000. 5-*O*-methylhoslundin: An unusual from *Bidens pilosa* (Asteraceae). **Biochem Syst Ecol** 28: 591 - 593.

Sawada LA, Monteiro VSC, Rabelo GR, Dias GB, Cunha M, Nascimento JLM, Bastos GNT. 2014. *Libidibia ferrea* Mature seeds promote antinociceptive effect by peripheral and central pathway: Possible involvement of opioid and cholinergic receptors. **BioMed Res Int** 1: 1 - 11.

Scherer R, Lemos MF, Lemos MF, Martinelli GC, Martins JDL, Silva AG. 2013. Antioxidant and antibacterial activities and composition of Brazilian spearmint (*Mentha spicata* L.). **Ind Crops Prod** 50: 408 - 413.

Schweiggert RM, Vargas E, Conrad J, Hempel J, Gras CC, Ziegler JU, Mayer A, Jiménez V, Esquivel P, Carle R. 2016. Carotenoids, carotenoid esters, and anthocyanins of yellow-, orange-, and red-peeled cashew apples (*Anacardium occidentale* L.). **Food Chem** 200: 274 - 282.

Schweiggert U, Carle R, Schieber A. 2006. Characterization of major and minor capsaicinoids and related compounds in chili pods (*Capsicum frutescens* L.) by high-performance liquid chromatogram-phy/atmospheric pressure chemical ionization mass spectrometry. **Anal Chim Acta** 557: 236 - 244.

SEPOF - Secretaria de Estado de Planejamento, Orçamento e Finanças. 2011. **Estatística Municipal, Abaetetuba, Pará**. **http://www.idesp.pa.gov.br/paginas/produtos/EstatisticaMunicipal/pdf/Abaetetuba.pdf**

Sereniki A, Linard-Medeiros CFB, Silva SN, Silva JBR, Sobrinho TJSP, Silva JR, Alves LDS, Smaili SS, Wanderley AG, Lafayette SSL. 2016. *Schinus terebinthifolius* administration prevented behavioral and biochemical alterations in a rotenone model of Parkinson's disease. **Rev Bras Farmacogn** 1: 1 - 6.

Servat-Medina L, González-Gómez A, Reyes-Ortega F, Sousa IMO, Queiroz NCA, Zago PMW, Jorge MP, Monteiro KM, Carvalho JE, Román JS, Foglio MA. 2015. Chitosan–tripolyphosphate nanoparticles as *Arrabidae a chica* standardized extract carrier: synthesis, characterization, biocompatibility, and antiulcerogenic activity. **Int J Nanomed** 10: 3897 - 3909.

Shalabi M, Khilo K, Zakaria MM, Elsebaei MG, Abdo W, Awadin W. 2015. Anticancer activity of *Aloe vera* and *Calligonum comosum* extracts separetely on hepatocellular carcinoma cells. **Asian Pacific J Trop Biomed** 5: 375 - 381.

Shu JC, Liu JQ, Chou GX, Wang ZT. 2012. Two new triterpenoids from *Psidium guajava*. **Chin Chem Lett** 23: 827 - 830.

Siani AC, Tappin MRR, Ramos MFS, Mazzei JL, Ramos MCKV, Aquino Neto FR, Frighetto NL. 2002. Linalool from *Lippia alba*: Study of the teproducibility of the essential oil profile and the enantiomeric purity. **J Agric Food Chem** 50: 3518 - 3521.

Silva BP, Bernardo RR, Parente JP. 1999. A furostanol glycoside from rhizomes of *Costus spicatus*. **Phytochemistry** 51: 931 - 935.

Silva BP, Bernardo RR, Parente JP. 2000. Flavonol glycosides from *Costus spicatus*. **Phytochemistry** 53: 87 - 92.

Silva VA, Andrade LHC, Albuquerque UP. 2006. Revising the cultural significance index: The case of the Fulni-ô in Northeastern Brazil. **Field Methods** 18: 98 - 108.

Silva CN. 2008. Ocupação humana e modo de vida na Amazônia. **Vivência** 33: 121 - 127.

Silva JB, Temponi VS, Gasparetto CM, Fabri RL, Aragão DMO, Pinto NCC, Ribeiro A, Scio E, Silva JPA, Sampaio LS, Oliveira LS, Reis LA. 2008. Plantas medicinais utilizadas por portadores de diabetes mellitus tipo 2 para provável controle glicêmico no Município de Jequié-BA. **Revista Saúde** 4: 10 - 18.

Silva LFR, Pinto ACS, Pohlit AM, Quignard ELJ, Vieira PPR, Tadei WP, Chaves FCM, Samonek JF, Lima CJA, Costa MGF, Alecrim MGC, Andrade-Neto VF. 2011. *In*

vivo and *in vitro* antimalarial activity of 4-nerolidylcatechol. **Phytother Res** 25: 1181 - 1188.

Silva LL, Parodi TV, Reckziegel P, Garcia VO, Bürger ME, Baldisserotto B, Malmann CA, Pereira AMS, Heinzmann BM. 2012. Essential oil of *Ocimum gratissimum* L.: Anesthetic effects, mechanism of action and tolerance in silver catfish, *Rhamdia quelen*. **Aquaculture** 350: 91 - 97.

Silva JB; Temponi VS; Gasparetto CM; Fabri RL; Aragão DMO; Pinto NCC; Ribeiro A; Scio E; Del-Vechio-Vieira G; Sousa OV; Alves MS. 2013a. *Vernonia condensata* Baker (Asteraceae): A Promising Source of Antioxidants. **Oxidative Medicine and Cellular Longevity. http://dx.doi.org/10.1155/2013/698018**

Silva RMF, Ribeiro JFA, Freitas MCC, Arruda MSP, Nascimento MN, Barbosa WLR, Rolim Neto PJ. 2013b. Caracterização físico-química e análises por espectrofotometria e cromatografia de *Peperomia pellucida* L. (H. B. K.). **Rev Bras Plant Med** 15: 717 - 726.

Silva AB, Wiest JM, Paim MP, Girolometto G. 2014a. Caracterização antibacteriana e fitoquímica de flores de *Hibiscus rosa-sinensis* L. (mimo-de-vênus) e *Hibiscus syriacus* L. (hibisco-da-síria). **Rev Inst Adolfo Lutz** 73: 264 - 271.

Silva AT, Lima EM, Caliman IF, Porto LLS, Nascimento AM, Kalil IC, Lenz D, Bissoli NS, Endringer DC, Andrade TU. 2014b. Hypotensive effesct and endothelium-dependente vascular action of leaves of *Alpinia purpurata* (Vieill.) K. Schum. **Braz J Pharm Sci** 50: 309 - 320.

Silva JB, Casalinho H, Lima AC, Schwengber JE. 2014c. Sistemas de manejo em transição agroecológica: Coerências e contradições na prática cotidiana de agricultores familiares. **Rev Bras Agroecol** 9: 98 - 113.

Silva ML, Luz DA, Paixão TP, Silva JPB, Belém-Filho IJA, Fernandes LMP, Gonçalves ACB, Fontes-Júnior EA, Andrade MA, Maia CSF. 2015. *Petiveria alliacea* exerts mnemonic and learning effects on rats. **J Ethnopharmacol** 169: 124 - 129.

Simas NK, Dellamora ECL, Schripsema J, Lage CLS, Filho AMO, Wessjohann L, Porzel A, Kuster RM. 2013. Acetylenic 2-phenylethylamides and new isobutylamides from *Acmella oleracea* (L.) R. K. Jansen, a Brazilian spice with larvicidal activity on *Aedes aegypti*. **Phytochem Lett** 6: 67 - 72.

Singh R, Singh SK, Maharia RS, Garg AN. 2015. Identification of new phytoconstituents and antimicrobial activity instem bark of *Mangifera indica* (L.). **J Pharm Biomed Anal** 105: 150 - 155.

Siraichi JTG, Felipe DF, Brambilla LZS, Gatto MJ, Terra VA, Cecchini AL, Cortez LER, Rodrigues-Filho E, Cortez DAG. 2013. Antioxidant capacity of the leaf extract obtained from *Arrabidaea chica* cultivated in Southern Brazil. **Plos One** 8: 1 - 9.

Siviero A, Delunardo TA, Haverroth M, Oliveira LC, Mendonça AMS. 2012. Plantas medicinais em quintais urbanos de Rio Branco, Acre. **Ver Bras Plant Med** 14: 598 - 610.

Skaar I, Adaku C, Jordheim M, Byamukama R, Kiremire B, Andersen ØM. 2014. Purple anthocyanin colouration on lower (abaxial) leaf surfasse of *Hemigraphis colorata* (Acanthaceae). **Phytochemistry** 105: 141 - 146.

Smilin BAG, Shamna R, Sangeetha B, Sasikumar JM. 2012. In vivo antioxidant activity of bark extract of *Bixa orellana* L. against acetaminophen- induced oxidative stress. **Asian Pacific J Trop Biomed** 1: 700 - 705.

Soares AMS, Carvalho LP, Melo EJT, Costa HPS, Vasconcelos IM, Oliveira JTA. 2015. A protein extract and a cysteine protease inhibitor enriched fraction from *Jatropha curcas* seed cake have *in vitro* anti-*Toxoplasma gondii* activity. **Exp Parasitol** 153: 111 - 117.

Soman S, Rajamanickam C, Rauf AA, Indira M. 2013. Beneficial effects of *Psidium guajava* leaf extract on diabetic myocardium. **Exp Toxicol Pathol** 65: 91 - 95.

Soumya V, Muzib YI, Venkatesh P, Hariprasath K. 2014. GC-MS analysis of *Cocus nucifera* flower extract and its effects on heterogeneous symptoms of polycystic ovarian disease in female Wistar rats. **Chin J Nat Med** 12: 677 - 684.

Souza Filho APS, Guilhon, GMSP, Zoghbi MGB, Cunha RL. 2009a. Análise comparativa do

potencial alelopático do extrato Hidroalcoólico e do óleo essencial de folhas de cipó-d'alho (*Bignoniaceae*). **Planta Daninha** 27: 647 - 653.

Souza Filho APS, Vasconcelos MAM, Zoghbi MGB, Cunha RL. 2009b. Efeitos potencialmente alelopáticos dos óleos essenciais de *Piper hispidinervium* C. DC. e *Pogostemon heyneanus* Benth sobre plantas daninhas. **Acta Amazonica** 39: 389 - 396.

Souza PA, Silva CG, Machado BRP, Lucas NC, Leitão GG, Eleutherio ECA, Ortiz GMD, Benchetrit LC. 2010. Evaluation of antimicrobial, antioxidant and phototoxic activities of extracts and isolated compounds from *Stachytarpheta cayennensis* (Rich.) Vahl, Verbenaceae. **Rev Bras Farmacogn** 20: 922 - 928.

Souza PA, Rodrigues C, Santiago APSA, Lucas NC, Leitão GG, Galina Filho A. 2011. Antioxidant activity of natural compounds of *Stachytarpheta cayennensis* by scavenger of mitochondrial reactive oxygen species. **Rev Bras Farmacogn** 21: 420 - 426.

Souza-Monteiro JR, Hamoy M, Santana-Coelho D, Arrifano GPF, Paraense RSO, Costa-Malaquias A, Mendonça JR, Silva RF, Monteiro WSC, Rogez H, Oliveira DL, Nascimento JLM, Crespo-López ME. 2015. Anticonvulsant properties of *Euterpe oleracea* in mice. **Neurochem Int** 90: 20 - 27.

Sre PRR, Sheila T, Murugesan K. 2012. Phytochemical screening and "*in-vitro*" anti-oxidant activity of methanolic root extract of *Erythrina indica*. **Asian Pacific J Trop Biomed** 1: 1696 - 1700.

Sre PRR, Reka M, Poovazhagi R, Kumar MA, Murugesan K. 2015. Antibacterial and cytotoxic effect of biologically synthesized silver nanoparticles using aqueous root extract of *Erythrina indica* Lam. **Spectrochim Acta Part A: Mol Biomol Spectroscopy** 135: 1137 - 1144.

Stojkovic D, Sokovic M, Glamoclija J, Dzamic A, C iric A, Ristic M, Grubišic D. 2011. Chemical composition and antimicrobial activity of *Vitex agnus-castus* L. fruits and leaves essential oils. **Food Chemistry** 128: 1017 - 1022.

Sun J, Gu YF, Su WQ, Li MM, Huo HX, Zhang J, Zeng KW, Zhang Q, Zhao YF, Li J, Tu PF. 2014a. Anti-inflammatory lignanamides from the roots of *Solanum melongena* L. **Fitoterapia** 98: 110 - 116.

Sun J, He XM, Zhao MM, Li L, Li CB, Dong Y. 2014b. Antioxidant and nitrite-scavenging capacities of phenolic compounds from sugarcane (*Saccharum officinarum* L.) tops. **Molecules** 19: 13147 - 13160.

Sun S, Liu J, Kadouh H, Sun X, Zhou K. 2014c. Three new anti-proliferative Annonaceous acetogenins with mono-tetrahydrofuran ring from graviola fruit (*Annona muricata*). **Bioorg Med Chem Lett** 24: 2773 - 2776.

Sun J, Huo HX, Zhang J, Huang Z, Zheng J, Zhang Q, Zhao YF, Li J, Tu PF. 2015a. Phenylpropanoid amides from the roots of *Solanum melongena* L. (Solanaceae). **Biochem Syst Ecol** 58: 265 - 269.

Sun J, Huo, HX, Huang Z, Zhang J, Ju L, Peng-Fei T. 2015b. A new *γ*-alkylated-*γ*-butyrolactone from the roots of *Solanum melongena*. **Chin J Nat Med** 13: 699 - 703.

Sun S, Liu J, Zhou N, Zhu W, Dou QP, Zhou K. 2015c. Isolation of three new Annonacous acetogenins from Graviola fruit (*Annona muricata*) and their anti-proliferation on human prostate cancer cell PC-3. **Bioorg Med Chem Lett http://dx.doi.org/10.1016/j.bmcl.2015.06.038**

Svecová E, Proietti S, Caruso C, Colla G, Crinò P. 2013. Antifungal activity of *Vitex agnus-castus* extract against *Pythium ultimum* in Tomato. **Crop Protection** 43: 223 - 230.

Swarna J, Lokeswari TS, Smita M, Ravindhran. 2013. Characterization and determination of in vitro antioxidant potential of betalains from *Talinum triangulare* (Jacq.) Willd. **Food Chemistry** 141: 4382 - 4390.

Tabandeh MR, Orian A, Mohammadalipour. 2014. Polysaccharides of *Aloe vera* induce MMP-3 and TIMP-2 gene expression during the skin wound repair of rat. **Int J Biol Macromolecules** 65: 424 - 430.

Takemura OS, Iinuma M, Tosa K, M1guel OG, Moreirat EA, Nozawa Y. 1995. A flavone from leaves of *Arrabidaea chica* f. Cuprea. **Phytochemistry** 38: 1299 - 1300.

Tan YP, Chan EWC. 2014. Antioxidant, antityrosinase and antibacterial properties of fres hand processed leaves of *Anacardium occidentale* and Piper betle. **Food Bioscience** 6: 17 - 23.

Tavares ES, Julião LS, Lopes D, Bizzo HR, Lage CLS, Leitão SG. 2005. Análise do óleo essencial de folhas de três quiotipos de *Lippia Alba* (Mill.) N. E. Br. (Verbenaceae) cultivados em condições semelhantes. **Rev Bras Farmacogn** 15: 1 - 5.

Tchegnitegni BT, Teponno RB, Tanaka C, Gabriel AF, Tapondjou LA, Miyamoto T. 2015. Sappanin-type homoisoflavonoids from *Sansevieria trifasciata* Prain. **Phytochem Lett** 12: 262 - 266.

Telci I, Demirtas I, Bayram E, Arabaci O, Kacar O. 2010. Environmental variation on aroma components of pulegone/piperitone rich spearmint (*Mentha spicata* L.). **Ind Crops Prod** 32: 588 - 592.

Thangam R, Sureshc V, Kannana S. 2014. Optimized extraction of polysaccharides from *Cymbopogon citratus and* its biological activities. **Int J Biol Macromol** 65: 415 - 423.

The Plant List. 2013. **Version 1.1 Published on the Internet**. **http://www.theplantlist.org**

Theiler BA, Revoltella S, Zehl M, Dangl C, Caisa LOE, König JR, Winkler J, Urban E, Glasl S. 2014. Secundarellone A, B, and C from the leaves of *Justicia secunda* Vahl. **Phytochem Lett** 10: 1 - 4.

Thomas R, Jebin N, Saha R, Sarma DK. 2016. Antioxidant and antimicrobial effects of kordoi (*Averrhoa carambola*) fruit juice and bamboo (*Bambusa polymorpha*) shoot extract in pork nuggets. **Food Chem** 190: 41 - 49.

Tintino SR, Neto AAC, Menezes IRA, Oliveira CDM, Coutinho HDM. 2015. Atividade antimicrobiana e efeito combinado sobre Drogas antifúngicas e antibacterianas do fruto de *Morinda citrifolia* L. **Acta Biol Colombiana** 20: 193 - 200.

Torres RC, Garbo AG, Walde RZML. 2014. Larvicidal activity of *Persea americana* Mill. against *Aedes aegypti*. **Asian Pacific J Trop Med** 7: 167 - 170.

Tremonte P, Sorrentino E, Succi M, Tipaldi L, Pannella G, Ibañez E, Mendiola JA, Renzo TD, Reale A, Coppola R. 2016. Antimicrobial Effect of *Malpighia punicifolia* and Extension of Water Buffalo Steak Shelf-Life. **J Food Sci** 81: 97 - 105.

Troter R, Logan M. 1986. **Informant consensus: a new approach for identifying potentially effective medicinal plants**. In: Etkin NL. Indigenous medicine and diet: biobehavioural approaches. Redgrave Bedford Hills, New York, USA.

Trotta J, Messias PA, Pires AHC, Hayashida CT, Camargo C, Futemma C. 2012. Análise do conhecimento e uso popular de plantas de quintais urbanos no estado de São Paulo, Brasil. **Rev Est Ambientais** 14: 17 - 34.

Ueda-Nakamura T, Mendonça-Filho RR, Morgado-Díaz JA, Maza PK, Filho BPD, Cortez DAG, Alviano DS, Rosa MSS, Lopes AHCS, Alviano CS, Nakamura CV. 2006. Antileishmanial activity of Eugenol-rich essential oil from *Ocimum gratissimum*. **Parasitol Int** 55: 99 - 105.

Ueng YF, Chen CC, Huang YL, Lee IJ, Yun CH, Chen YH, Huang CC. 2015. Effects of aqueous extract of *Ruta graveolens* and its ingredients on cytochrome P450, uridine diphosphate (UDP) glucuronosyltransferase, and reduced nicotinamide adenine dinucleotide (phosphate) (NAD(P)H) quinone oxidoreductase in mice. **J Food Drug Anal** 23: 516 - 528.

Uliana MP, Fronza M, Silva AG, Vargas TS, Andrade TU, Scherer R. 2016. Composition and biological activity of Brazilian rose pepper (*Schinus terebinthifolius* Raddi) leaves. **Ind Crops Prod** 83: 235 - 240.

Valadares MC, Carrucha SG, Accorsi W, Queiroz MLS. 2006. *Euphorbia tirucalli* L. modulates myelopoiesis and enhances the resistance of tumour-bearing mice. **Int Immunopharmacol** 6: 294 - 299.

Vanderlinde FA, Rocha FF, Malvar DC, Ferreira RT, Costa EA, Florentino IF, Guilhon GMSP, Lima TCM. 2012. Anti-inflammatory and opioid-like activities in methanol extract of *Mikania lindleyana*, sucuriju. **Braz J Pharmacogn** 22: 150 - 156.

Vásquez SPF, Mendonça MS, Noda SN. 2014. Etnobotânica de plantas medicinais em comunidades ribeirinhas do Município de

Manacapuru, Amazonas, Brasil. **Acta Amazonica** 44: 457 - 72.

Vatta AF, Kandu-Lelo C, Ademola IO, Eloff JN. 2011. Direct anthelmintic effects of *Cereus jamacaru* (Cactaceae) on trichostrongylid nematodes of sheep: **Vet Parasitol** 180: 279 - 286.

Veberic R, Jakopic J, Stampar F, Schmitzer V. 2009. European elderberry (*Sambucus nigra* L.) rich in sugars, organic acids, anthocyanins and selected polyphenols. **Food Chemistry** 114: 511 - 515.

Vendruscolo GS, Mentz LA. 2006. Estudo da concordância das citações de uso e importância das espécies e famílias utilizadas como medicinais pela comunidade do bairro Ponta Grossa, Porto Alegre, RS, Brasil. **Acta Bot Bras** 20: 367 - 382.

Venuprasad MP, Kandikattu HK, Razack S, Khanum F. 2014. Phytochemical analysis of *Ocimum gratissimum* by LC-ESI–MS/MS and its antioxidant and anxiolytic effects. **South African J Bot** 92: 151 - 158.

Viana GSB, Vale TG, Pinho RSN, Matos FJA. 2000. Antinociceptive effect of the essential oil from *Cymbopogon citratus* in mice. **J Ethnopharmacol** 70: 323 - 327.

Victório CP, Kuster RM, Moura RS, Lage CLS. 2009a. Vasodilator activity of extracts of field *Alpinia purpurata* (Vieill.) K. Schum and *A. zerumbet* (Pers.) Burtt *et* Smith cultures *in vitro*. **Braz J Pharm Sci** 45: 507 - 514.

Victório CP, Kuster RM, Lage CLS. 2009b. Detection of flavonoids in *Alpinia purpurata* (Vieill.) K. Schum. leaves using highperformance liquid chromatography. **Rev Bras Plant Med** 11: 147 - 153.

Vidotti GJ, Zimmermann A, Sarragiotto MH, Nakamura CV, Filho BPD. 2006. Antimicrobial and phytochemical studies on *Pedilanthus tithymaloides*. **Fitoterapia** 77: 43 - 46.

Vieira MN, Costa FN, Leitão GG, Garrard L, Hewitson P, Ignatova S, Winterhalter P, Jerz G. 2015. *Schinus terebinthifolius* scale-up countercurrent chromatography (Part I): High performance countercurrent chromatography fraction ation of triterpene acids with off-line detection using atmospheric pressure chemical ionization mass spectrometry. **J Chromatography A** 1389: 39 - 48.

Vila-Nova NS, Morais SM, Falcão MJC, Alcantara TTN, Ferreira PAT, Cavalcanti ESB, Vieira IGP, Campello CC, Wilson M. 2013. Different susceptibilities of *Leishmania* spp. promastigotes to the *Annona muricata* acetogenins annonacinone and corossolone, and the *Platymiscium floribundum* coumarin scoparone. **Exp Parasitol** 133: 334 - 338.

Wang C, Xu FQ, Shang JH, Xiao H, Fan WW, Dong FW, Hua JM, Zhou J. 2013. Cycloartane triterpenoid saponins from water soluble of *Passiflora edulis* Sims and their antidepressant-like effects. **J Ethnopharmacol** 148: 812 - 817.

Wang J, Qin X, Chen Z, Ju Z, He W, Tan Y, Zhou X, Tu X, Lu F, Liu Y. 2016a. Two new anthraquinones with antiviral activities from the barks of *Morinda citrifolia* (Noni). **Phytochem Lett** 15: 13 - 15.

Wang L, Chen C, Su A, Zhang Y, Yuan J, Ju X. 2016b. Structural characterization of phenolic compounds and antioxidant activity of the phenolic-rich fraction from defatted adlay (*Coix lachryma-jobi* L. var. *ma-yuen* Stapf) seed meal. **Aquatic Botany** 120: 193 - 200.

Wei LS, Wee W, Siong JYF, Syamsumir DF. 2011. Characterization of anticancer, antimicrobial, antioxidant properties and chemical compositions of *Peperomia pellucida* leaf extract. **Acta Med Iranica** 49: 670 - 674.

Wei SD, Chen H, Yan T, Lin YM, Zhou HC. 2014. Identification of antioxidant components and fatty acid profiles of the leaves and fruits from *Averrhoa carambola*. **LWT - Food Sci Technol** 55: 278 - 285.

Wei Z, Qi X, Li T, Luo M, Wang W, Zu Y, Fu Y. 2015. Application of natural deep eutectic solvents for extraction and determination of phenolics in *Cajanus cajan* leaves by ultra performance liquid chromatography. **Separation and Purification Technology** 149: 237 - 244.

Williams AR, Ramsay A, Hansen TVA, Ropiak HM, Mejer H, Nejsum P, Mueller-Harvey I, Thamsborg SM. 2015. Anthelmintic activity of *trans*cinnamaldehyde and A- and B-type proanthocyanidins derived from cinnamon (*Cinnamomum verum*). **Scientific Reports** 1:

1 - 12.

Winkler Prins A, Oliveira PSS. 2010. Urban agriculture in Santarém, Pará, Brazil: diversity and circulation of cultivated plants in urban homegardens. **Bol Museu Paraense Emílio Goeldi** 5: 571 - 585.

Wong H, Tsai K, Liu Y, Yang S, Chen T, Cherng J, Chou K, Chang C, Yao BT, Cherng J. 2016. *Cinnamomum verum* component 2-Methoxycinnamaldehyde: A novel anticancer agent with both anti-topoisomerase I and II activities in human lung adenocarcinoma A549 cells *in vitro* and *in vivo*. **Phytother Res** 30: 331 - 340.

World Health Organization. 2008. **International Statistical Classification of Diseases and Related Health Problems**. 10th revision. **Http://www.who.int/classifications/apps/icd/icd10online/**

Wu WH, Chen TY, Lu RW, Chen ST, Chang CC. 2012. Benzoxazinoids from *Scoparia dulcis* (sweet broomweed) with antiproliferative activity against the DU-145 human prostate cancer cell line. **Phytochemistry** 83: 110 - 115.

Xu F, Wang C, Yang L, Luo H, Fan W, Zi C, Dong F, Hua J, Zhou J. 2013. *C*-dideoxyhexosyl flavones from the stems and leaves of *Passiflora edulis* Sims. **Food Chemistry** 136: 94 - 99.

Xu H, Wang W, Liu X, Yuan F, Gao Y. 2015. Antioxidative phenolics obtained from spent coffee grounds (*Coffea arabica* L.) by subcritical water extraction. **Ind Crops Prod** 76: 946 - 954.

Yakubu MT, Salimon SS. 2015. Antidiarrhoeal activity of aqueous extract of *Mangifera indica* L. leaves in female albino rats. **J Ethnopharmacol** 163: 135 - 141.

Yang Q, Yao C, Fang W. 2010. A new triglucosylated naphthalene glycoside from *Aloe vera* L. **Fitoterapia** 81: 59 - 62.

Yuliana M, Nguyen-Thi BT, Faika S, Huynh LH, Soetaredjo FE, Ju Y. 2014. Separation and purification of cardol, cardanol and anacardic acid from cashew (*Anacardium occidentale* L.) nut-shell liquid using a simple two-step column chromatography. **J Taiwan Inst Chem Eng** 45: 2187 - 2193.

Zaidi F, Voirin B, Jay M, Viricel MR. 1998. Free flavonoid aglycones from leaves of *Mentha pulegium* and *Mentha suaveolens* (Labiatae). **Phytochemistry** 37: 880 - 883.

Zantar S, Haouzi R, Chabbi M, Laglaoui A, Mouhib M, Boujnah M, Bakkali M, Zerrouk MH. 2015. Effect of gamma irradiation on chemical composition, antimicrobial and antioxidant activities of *Thymus vulgaris* and *Mentha pulegium* essential oils. **Rad Phys Chem** 115: 6 - 11.

Zarrad K, Hamouda AM, Chaieb I, Laarif A, Jemâ JMB. 2015. Chemical composition, fumigant and anti-acetylcholinesterase activity of the Tunisian *Citrus aurantium* L. essential oils. **Ind Crops Prod** 76: 121 - 127.

Zeraik ML, Yariwake JH. 2010. Quantification of isoorientin and total flavonoids in *Passiflora edulis* fruit pulp by HPLC-UV/DAD. **Microchem J** 96: 86 - 91.

Zhao D, Y Xu W, Yang GL, Husaini AM, Wu W. 2013. Variation of essential oil of *Mentha haplocalyx* Briq. and *Mentha spicata* L. from China. **Ind Crops Prod** 42: 251 - 260.

Zheng N, Lin X, Wen Q, Kintoko, Zhang S, Huang J, Xu X, Huang R. 2013. Effect of 2-dodecyl-6-methoxycyclohexa-2,5-diene-1,4-dione, isolated from *Averrhoa carambola* L. (Oxalidaceae) roots, on advanced glycation end-product-mediated renal injury in type 2 diabetic KKAy mice. **Toxicol Lett** 219: 77 - 84.

Zimmer AR, Bruxel F, Bassani VL, Gosmann G. 2006. HPLC method for the determination of ecdysterone in extractive solution from *Pfaffia glomerata*. **J Pharm Biomed Anal** 40: 450 - 453.

Zorn B, García-Piñeres AJ, Castro V, Murillo R, Mora G, Merfort I. 2001. 3-Desoxyanthocyanidins from *Arrabidaea chica*. **Phytochemistry** 56: 831 - 835.

Zunjar V, Dash RP, Jivrajani M, Trivedi B, Nivsarkar M. 2016. Antithrombocytopenica ctivity of carpaine and alkaloidal extract of *Carica papaya* Linn. Leaves in busulfan induced thrombocytopenic Wistar rats. **J Ethnopharmacol** 181: 20 - 25.