

# Bioactivity of the Ferns of Moorea, French Polynesia

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**Abstract** – *The legitimacy of this article is to provide a head start for a reasonable future evaluation of clinical ethnobotany and bioactivity of pteridophytes in Moorea, French Polynesia. Pteridophytes join a small part of the Moorish pharmacopoeia; although it is a wonderfully abundant commodity on this tropical island. Important open information on the phytochemistry, bioactivity and clinical ethnobotany of the generally gigantic number of genera found on Moorea is collected here. It contains information from interviews with Moorish healers and more organized people, compiled in 2005.*

**Keywords** – Moorea, French Polynesia

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## INTRODUCTION

The settlement of Tahiti in its current form is a combination of neighborhood projects and activities to combat the deceptive and grandiose effect. Contamination considerations were provided prior to exposure to European diseases and drugs. In the first Polynesian model, infection is a continuation of one or another external force evident, for example, in the fight against injuries and work or in critical animals. The cause is fundamental in Western prescribing and is an impartial specialist in identifying the cause of the disease and solving this problem. Finally, given the ways in which uncovering internal contamination from outside the body can be dangerous, Tahitian healing is more fundamental to treatment. Different solutions are tried, as often as possible by different healers, until the individual is relieved. "The treatment that works will plan the type of infection the person may have suffered. The use of flavors in ancient Polynesia was limited to treating small children, cuts and wounds, intestinal remedies, and the noxious elixir model to scare ghosts. Since the old regular prescription was made for children, most of the healers were women, and this is quite clear today, however, the number of patients has increased. In recent cases, the pharmacopoeia has been exceptionally relaxed to address growing concerns. While most healers rely on blueprints inherited from the past (or from then), some healers actually try different things with new flavors. Today, Tahitian healers do not accept money for their affiliation and still recognize their ability to be handed down by God. Each healer has her own dispositions which are not shared quickly and is always an expert on express preparations. Several drugs of the Tahitian order examine a diuretic in the light of the belief that the problem with the help is to leave out

the generous poison". Cleansing the body with a diuretic is a regular routine in this way.

## Moorea Pteridophytes

Currently "there are 83 types of green spaces that make Moorea an island that offers alternative levels of habitat at short distances, from coastal areas to sea level and high mountain rainforests. Tahiti, essentially 14.5 km away, has around 200 species of pteridophytes in total, as the longest journeys found at Tahiti-2300m were different from Moorea's 1207m. When one thinks of the incarceration and the volcanic spring of Moorea, as is the case with several islands in the archipelago, the plant connection largely depends on introductions, whether or not they are branded or human guides. This description of colonization will result in the over-representation of some taxa willing to explore the regions indefinitely. The over-representation of pteridophytes on Moorea is striking. Of the 459 species of monocotyledons, dicots, gymnosperms and pteridophytes present on the island, about 18% are associated plants and plants (Moorea Digital Flora Project). From afar, most of Moorea's vegetation can be traced throughout Polynesia and other priority areas. Only eight species are considered endemic to the Society Islands and another eleven are found only in Polynesia and Fiji. The different species range from Moorea to India, Southeast Asia, Australia and Micronesia. Given that Moorea is a geographically energetic island that is incredibly close to Tahiti, a much more important and truly changing island, and given the size of the breeze planes in the South Pacific, it is not surprising that Moorea has such a green and unsurprising nature.

endemic fronts. The species has its own (Murdock and Smith 2003). With a standard recovery framework that scrutinizes the pharmacopoeia and relaxes it appropriately to handle a critical number and size of battles, an environment with an excellent functionality plan, and the risk of common data fading, this will be another period of documentation of the medicine man. Ignored information is requested. In-depth, standard affiliations require a resource that collects ethnobotanical data relevant to the phytochemistry and bioactivity of these pteridophyte species. With this information measured in one source, future evaluations of these pteridophytes can be more useful and performed. This article attempts to create this comprehensive data tool for a large green area in Moorea. For each type, applications are generally more likely to recognize and test the bioactivity of the phytochemistry. "

### Women's and children's health

Regarding wealth issues, the three elders spoke about the importance of safety drugs. For example, to further prevent yeast problems, so to speak, young women are given specific recipes right after giving birth. "The elders claimed that there are three guaranteed remedies ("Ira ", "He "and" Tui "), and each treatment is replaced by the" lunar cycle "to destroy various diseases. Some deterrent drugs, they explains, it starts when the baby is in the gut. "a pregnant woman will see a healer in early pregnancy, and that healer will prepare various teas and reactions for women to drink. just when presented to the newborn and only gender warns, it is He washes it in a support tea to channel it and the mother is given drugs to cleanse his body in the same way. These elderly people without being healers have shown a lot of data on their lifestyle in routine medicine. This shows the role of cultural organizers and curators who interpret these giant spaces. Rita you-Sing, a Moorish healer, knew and used various solutions to wealth problems of women. She explained that women have a very prosperous weight in the present, separate from the past, whereas women in the past have actually had solitary sexual enhancement, but at this point they are in an exceptional situation and infections are essentially transmitted one way. More complete. Furthermore, it is recommended that the use of tampons causes prolonged soiling. To treat yeast stains, You-Sing uses a blend of plants, including green coconut juice, boiled, separated and heated with alcohol for 1.5 hours. This tea is mashed one cup a day until passed to isolate the disease from within the body. This ambiguous equation can be squashed to eliminate a woman after considering a replacement. To treat an annoying rash in the groin, the seeds of Miro, *Thespesia populnea*, are pounded and placed on the rash next to the leaves of Ti, *Cordyline fruticosa*. When miro seeds are dried, they are also used as an anti-fever agent. The menstrual cycle can be the downside of defense and fire injury for all

women involved. To relieve "hard and stressful" periods (dysmenorrhea), two liters of water are mixed with an equation of guava and lemon leaves and reduced to one liter of tea. One liter of tea should be rinsed every day for three days. This is a plausible treatment, and by the way, it is done by the Tahitian women themselves without a healer". In any case, a healer will give a cure during an eccentric period, which must be hot ground to "expel" the more sociable blood. An exciting treatment for sophisticated back torture combines Hotu, Asian *Barringtonia*. This plant, which is used despite being unique to Tahiti, is crushed and placed in a shell of giant clams. The shell is then heated over the embers of a shoot and placed face up to relieve the torture (personal communication 2005). Perhaps it is the sheen of the shell that alleviates the problems of this treatment, however Hotu seeds can play an additional role in the substance. In dealing with children, You-Sing talked about cleaning showers. A cleansing shower with mango leaves helps calm a frisky baby with a "rage" infection. You can focus on a shower with "Tahitian Oil".

## LITERATURE REVIEW

### Ethnobotany of pteridophytes: women's health

The development of women is based on unique conditions for women and procreation. "These problems are limited by the growing overheads in different companies, possibly due to the no-nos and benefits normally associated with the monthly cycle. Aside from a woman's wealth and therefore her ability to have strong parents, this is generally essential to carry on any social relationship. Table 1 shows the pteridophytes that French Polynesian women can thrive on, including uses for the pteridophytes found on Moorea in various locations around the world. Four detectable pteridophytes, *Microsorium grossum*, *Microsorium commutatum*, *Ophioglossum reticulatum*, and *Davallia solid*, are used to treat women's weight gain in French Polynesia. *Microsorium grossum* is by far the most widely used pteridophyte: of the seven diseases that are treated with pteridophytes in French Polynesia, *Microsorium grossum* is used in five cases (Grepin and Grepin 1994, Petard 1972). Grunts (and eccentricities) in a woman's monthly cycle are among the problems that Tahitian treatments often face. One of the three reactions of amenorrhea, the lack of a monthly cycle, uses a pteridophyte (*Microsorium grossum*). In any case, the two reactions to dysmenorrhea, a cycle of rage month by month, consolidate a hot drink soaked in pteridophytes *Microsorium commutatum* (Petard 1972). With all aspects in mind, the four conditions that Grepin and Grepin encountered in Tahiti for the treatment of dysmenorrhea, pteridophytes (*Davalliaolid* and *Microsorium grossum*) (1994) were used in one condition. This mix is undoubtedly an inevitable

consequence of the seemingly active time and the driven viewer. However, pteridophytes affect the refined cycle of Tahitian women. The refined cycle of the past, pregnancy and childbirth are several basic thought spaces". To maintain a healthy pregnancy and prevent premature end, Tahitian healers can recognize a pregnant woman as a contaminating drink called "Raau Haamau Tamarii". "Three designs have been registered for this patch, two of which use rhizomes related to *Microsorium grossum* (Metuapuaa) and *Davallia solid* (Tiatiamoua) (Petard 1972). Overall, Grepin and Grepin recommend the use of pteridophytes in seven of the 20 responses examined for various gynecological and obstetric problems (1994). Thirteen of the pteridophytes found in Moorea are used by people around the world to treat women's struggles, although they are not listed here as a remedy, and *Microsorium grossum* is used in both Tahitian medicine and abroad. For example, Tahitian healers use a mixture of ground sugar bars, *M. Grossum* and *Gardenia tahitensis* to treat infertility (Petard 1972). *Microsorium grossum* is similarly used in Fiji for post-pregnancy care and support (Cambie and Ash 1994). By reflecting on the positions of these environmentalists around the world, the studies could be tailored to shed light on the potential bioactivity of these plants. Reporting the use of a creature or genus that starts with a section and then goes beyond the accompaniment would suggest the presence of a particular paralyzing ace much more strongly". Such coverage is not included in these requirements; In any case, this can be the inevitable consequence of the transfer of the permit to the factories, of different acts of use or of different factory fairs.

#### **Ethnobotanical pteridophyte: infant and child health**

Adolescent drugs are isolated from the rest of the "Tahitian disposition, and only three explicit pteridophytes are used for them (*Microsorium grossum*, *Davalliaolid*, and *Ophioglossum reticulatum*). See Table 2 for information on the pteridophyte problem and how to correct the messages. *Ophioglossum reticulatum* and *M. grossum* were recorded by Arthur Whistler for their laxative value (1992). Its use in the treatment of various diseases could demonstrate the importance of Tahitians in unleashing the range of horribly willing specialists (Whistler 1992). *Microsorium Grossum* (Metuapuaa) is used in medications for adults and young children. In any case, the system of using contrasts. One healer, Rita You-Sing of Moorea, explained that although it is not made into an elixir", Metuapuaa is used by young people to clean showers because "the poison is incredibly powerful" (Personal Correspondence 2005). "Solid *Davallia* is not transmitted because it has these diuretic properties, in any case it is sometimes used identified with *M. grossum* and can have synergistic

or refreshing effects in this mixture. It is undeniable that Rita You-Sing uses solid *Davallia* leaves to treat anger disorders in young children. The disadvantages of Ira and "He'a" are "various problems or misrepresented signs that affect young children (Whistler 1992). Absolutely, when a young man who is truly mistaken for a baby wakes up at night, animated, shaking and unacceptable to rest, he prepares for a shower. Solid *Davallia* leaves are pink in water, and the young are washed in this iced tea until he calms down (personal correspondence 2005). Three of the pteridophyte species found on Moorea are particularly used outside French Polynesia: *Blechnum Orientale*, *Microsorium membranifolium*, and *Sphenomeris chinensis*". There is no interspecies coverage and unrest often occurs between districts.

#### **Ethnobotany of pteridophytes: human health**

The men's performance problems listed in Appendix Table 3 do not generously apply to the Tahitian drug. In Tahiti, testicular disease is the only problem with pteridophyte spots. This is perhaps a possible consequence of the fact that most healers are women and may not address the concerns raised by men (Whistler 1993). However, it is almost certain that the consequence of less satisfying concerns on the part of men is not quite the same as concerns expressed by women. The pteridophyte species found on Moorea often have only three problems: spermatrearehea, testicular despair, and vanity. Furthermore, many of the clinical problems faced by men can affect women in similar ways. They would circulate as a flourishing general concern and discussed in the annex.

#### **Ethnobotany of pteridophytes: general health**

Eleven rare pteridophytes, see Table 4, are used "to treat the overall flower weight in the Tahitian drug. Four of these eleven are for indefinite use. *Microsorium grossum* is used in 24 recipes; Solid *Davallia* is used in 14, *Ophioglossum reticulatum* in 9, *Microsorium commutatum* in 3 and *Asplenium australasicum*, *Nephrolepis hirsutula* and *Psilotum nudum* in one treatment each. The use of green products is generally not selected in detail: *Bolbitis lonchophora*, *Lycopodiella cernua*, *Dicranopteris linearis* and *Angiopteris evecta*. Some pteridophytes are believed to have expressed properties: astringency, laxative, fever, analgesic and antibacterial. These biological products can be combined into a group of medicines. These distinct divided pteridophytes are listed in Table 5. The use of *Microsorium* in the treatment of problems ranging from gonorrhea to tuberculosis to fractures, as well as in the beginning as a thriving wholesale tonic, is amazing from the start. Whistler suggests *M. Grossum* (and

certainly *Ophioglossum reticulatum*) for its possible diuretic properties, which would explain its use as a panacea. Tahitians view the few sides of the disease as harmful to the body by physical or powerful experts in the field (Whistler 1992). Also, using a diuretic to cleanse the body would certainly be great in any recreational game. In other repair facilities using the greens found in Moorea, *Microsorium grossum* does not regulate pharmacopoeia and occurs in only 15 treatments. The plants they produce in Moorea, including *M. Grossum*, are used to treat the stresses common to success in various parts of the world, including India, China, Meghalaya and Fiji. 47 species of 24 genera, which however are not used in the Tahitian drug, are used elsewhere. Identical attributes in the use of classes or genera of pteridophytic creatures in social spaces and orders can maintain the presence of new mixtures expressed in these plants, which may be essential for scientists seeking answers to various problems. Here you can find patterns expressed in the reactions of some fights. For example, *Angiopteris evecta* is used in the treatment of headaches in both Yap and Meghalaya. *Microsorium grossum* is also used in the treatment of brain distress in Moorea and Palau (personal correspondence 2005, Defilippis et al. 1988). In the treatment of piracy, *Microsorium grossum* is used in both Tahiti and Rotuma. Solid *Davallia* is used in the treatment of asthma in two contexts: in Tahiti and in Fiji (Grepin and Grepin 1984, Cambie and Ash 1994). *M. Grossum* in Tahiti and *M. membranifolium* in Fiji are used for air inclusions and related ailments, such as the treatment of fractures and wounds. For really heavy wounds, *M. Grossum* is used in Tahiti and Rotuma. Only six) between the therapeutic plant and the pathologies treated in different areas can surprise from a normal point of view. This could indicate that the plants do not have an expressed new development and will continue to be commercialized. Either way, it appears to be a side effect of divisions in plant resource availability and standard and drug-intensive sections moving significantly between districts. Collecting ethnobotanical clinical information from different societies could shed light on all of these plant usage patterns and help focus an informed study. It is ineffective to ruthlessly examine plants for their healing properties". The assistance of standard healers can help practitioners become capable and the development of solutions from preserved blends, as the connection between the source and the master healer is significant and does not go unnoticed, it can be valuable to everyone.

#### **Phytochemistry of the genera of pteridophytes present in Moorea, French Polynesia**

The plants for which data were collected can fall into four new orders: those containing alkaloids, terpenoids, flavonoids and various mixtures. "Of the species for which compound evaluations were performed, ten contain alkaloids, seven of which

contain lycopod alkaloids (see Table 6 for nuances). Alkaloids are a social proposition of substitute blends and are known to have a game plan with proven effects on animals. Alkaloids reliably return to the material structure as primers and a touch of time as toxic substances. Most of the alkaloids are cocaine (which shows a calming influence), atropine (which affects the motor nerves) and curare (which was used by people close to South America to fuel the loss of prey) (Kretovich 1966). Some lycopod alkaloids found classically in *Lycopodium* and various pteridophytes have been studied for their healing properties. For example, alpha-onokerine and lycopene A show a preventive effect on acetylcholinesterase. Huperzine A, a lycopod alkaloid isolated from the *Huperzia* species, among others, appears to refresh memory in animals, and further research is currently underway for the treatment of Alzheimer's disease. Terpenoids are the essential component of many central plant oils. This social encounter is based on a single unit, isoprene, and hence monoterpenoids, diterpenoids and triterpenoids, all of which differ proportionally to the isoprene units (Kretovich 1966). Terpenoids are an almost incredibly extraordinary encounter, and the 40 species of pteridophytes present here include: triterpenoids (hopane-triterpenoid, epoxy-triterpenoid, and serrate-triterpenoid), diterpenoids, hemiterpene glycosides, and clerodanditerpene glycosides. Terpenoids have also been the subject of numerous reviews and many of them are immensely repairers for a wide range of arrangements. For example, the triterpenoids associated with *Erica andevalensis* are cytotoxic to dangerously progressing human cell lines. Furthermore, the terpenoids of *Calendula officinalis* flowers show a strong calming progression. Terpenoids are a particularly potent class of blends and further evaluations will fundamentally add to the compelling data actually collected. Flavonoids are not exactly an ideal class of these pteridophytes. 25 of the 48 species presented here contain flavonoids. Flavonoids, such as alkaloids and terpenoids, are another social event. Basically an irrelevant chunk of flavonoid zones is contaminated in these pteridophytes: biflavonoids, homoflavonoids, flavon glycosides and flavonol glycosides. Several flavonoids have restorative properties. Mentoflavone and ginkgetins, flavonoids in *Selaginella*, show neuroprotective activity against cytotoxic stressors. This property suggests its possible use in the treatment of neurodegenerative contamination such as stroke and Alzheimer's disease (Kang et al. 2005). Another flavonoid, mangiferin (found in *Trichomanes reniforme*), exhibits antiviral and destructive effects on tumors in mice. Mangiferin enhances the normal ability of the invulnerable plane to conduct dangerous cells and also exhibits an inhibitory effect on HIV (Guha et al. 1996). The final harvest of plants is associated with green plants, from which elevations other than



terpenoids, flavonoids or alkaloids have recently been removed. There are only three types that correspond to this representation. Of these plants, benzophenones, ent-pimaren-type glycosides, and lactone glycosides are the observed mixtures. Perhaps the most exciting is benzophenone, which in the solid *Davallia* benzophenone problem was limited to P-glycoproteins, which are the carriers of output in the body. Therefore, benzophenones are related to the release of P-glycoprotein from harmful substances in the body. Solid *Davallia* can also act on the extreme limits of detoxification of the organism. The mixtures found in the pteridophyte genera on Moorea are new and changed. However, creation dates are only available for 19 of the 53 genera present, and only 9 of the 83 pteridophyte species on Moorea were poor. 19 It certainly is inefficient to conduct in-depth assessments of every asset, so accumulating standard data can help businesses function". Useful and practical bioassays can be used for the proposed species and their close relatives. Compound evaluation would then make the decision to use after the base plants have been seen.

### Strategies

To verify the local use of pteridophytes in drug interviews, two healers were found next to three other sedentary people (Papa Matarau, Papa Mehahi and Papa Mape) where the elders gathered. A selection of pteridophytes was shown and asked: 1) Can you see this plant? What's his name in Tahiti? 2) Is this plant used for installations? Rita You-Sing received data on 20 green species, while various sources received data on 12 new species. Viewers could also see if they were using or studying the uses of certain plants in standard medicine. The healers and most helpful people were different from those who were most interested in their clear use of data and their orders for women and adolescents. Mother Lucia did not receive any data on her understanding in this area because she was reluctant to see her specific corrections and was in a hurry. This accumulated information is not affected by explicit consideration of the use of pteridophytes, as it consolidates medicines without plant parts.

### RESULTS

The correspondence between French Polynesian healers miraculously lacks an immediate consequence of their separation, and given the belief that certain plans will work primarily for the healers who "own" them. "However, healers close to Moorea will certainly offer Paul Petard's book. Useful plants of the Polynesiesie Raau Tahiti for information on the trade of healing plants. When Rita You Sing, Mama Lucie and Elderly Social Affair clearly became aware of the use of pteridophytes in the settlement of Tahiti,

they encouraged this clue (personal correspondence 2005). So the requirement for a global and extensive resource is clear. Ideally, a resource that can be distributed and restarted from time to time, possibly a brochure. Rita You-Sing identifies twelve of the twenty exceptional green products widely used for decoration. Two ecological products, *Davallia* and *Microsorium grossum*, have just been used in their solutions. However, he suggested that two others, *Asplenium caudatum* and *Antrophyum plantagineum*, could have been used by different healers (Baltrushes 2005). Mother Lucia received data on 12 plants, eight of which (*Microsorium grossum*, *Davallia*, *Nephrolepis hirsutula*, *Microsorium commutatum*, *Lycopodiella cernua*, *Bolbitis lonchophora*, *Asplenium caudatum* and *Dicranopteris linearis*) were used by her or in medicine". Mother Lucia, a respected daily healer in Moorea, tries different things with new plans and flavors and from there mixes the amazing herbs in her answers (personal correspondence 2005). This could explain the true level of green she wears, separated from Rita You-Sing. In any case, the pharmacopoeia expands in this way. At the gathering of three elders, five of the twelve species examined were used for support (Baltrushes 2005). In the appendix you will find the composite applications of these healers and more sedentary people.

### CONCLUSION

The journey to find new bioactive mixtures in plants is a promising undertaking. When 60% of stiff people rely on herbs for their clinical thinking and there are loud people all around, there is no downside that these herbs are amazing and need to be used much more effectively. There are several approaches to addressing these assessments, and perhaps the most useful is an ethnobotanical and ethno-pharmacological question. The collection and use of standard data can be endless and consistently unsuccessful in phytochemical evaluations and biological tests. "Standard data is not useful for seeing all the things that potentially astound plants as light conditions, such as coronary difficulties, are quirky and somewhat obscure for non-Western developments. However, as Cox (1994) aptly summarized, ethnopharmacological data can be used to give three degrees of purpose to the mission of new drugs: (1) as a general indicator of reasonably cloudy bioactivity for a large scanning screen; (2) as an indicator of expressed bioactivity suitable for clearly critical standard bioassays; (3) as an indicator of pharmacological progress, for which structure-based bioassays cannot ultimately be performed".

## REFERENCES

1. Alam MS, Chopra N., Ali M., Niwa M. 2000. Normethylpentacyclic and Lanostan-type triterpenes from *Adiantum venustum*. *Phytochemistry*. 54 (2): pp. 215-2. Twentieth
2. Benoit, Evelyne; Laurent, Dominica; Mattei, Cesar et al. 2000. Reversal of the effects of Pacific ciguatoxin-1B on myelinated axons by agents used in the treatment of Ciguatera *Cybiu* 24 (Supplement 3): pp. 33-40 15
3. Change RC, Ferguson LR. 2003. Potential functional foods in the traditional Maori diet. *Research on mutations*. 523-524: 109-17.
4. Christensen, Hanne. (1997) Use of fern in two indigenous communities in Sarawak, Malaysia. In Johns, RJ (editor). *Holtum Commemorative Volume*, pp. 177-192. Royal botanical garden.
5. Cox, PA. 1994. The ethnobotanical approach to drug discovery: strengths and limitations. *Symposium of the Ciba Foundation*. 185: from 25 to 36; Discussion pp. 36-41
6. Deng YF, Liang NC, Liang T. 2002. [Analysis of diterpenoids in *Pteris semipinnata* L extract by HPLC-APCI-MS]. *Yao Xue Xue Bao*. 37 (6): 444- Sixth
7. Gogoi, R. 2002. Ethnobotanical studies of some ferns used by the Garo tribes of Meghalaya. *Advances in Plant Sciences* 15 (II) pp. 401-405
8. Hirasawa Y., Kobayashi J., Morita H. 2006. Lycoperin A, a new pentacyclic alkaloid of type C27N3 from *Lycopodium hamiltonii* that inhibits acetylcholinesterase. *Bio letters*. January 5th; 8 (1): pp. 123-6.
9. Hirasawa Y., Morita H., Shiro M., Kobayashi J. 2003. Sieboldine A, a new tetracyclic alkaloid from *Lycopodium Sieboldii* that inhibits acetylcholinesterase. *Bio letters*. October 16; 5 (21): pp. 3991-3.

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