



FAALAPOTOPOTOGA O SUESUEGA FAASAIENISI A SAMOA

Biodiscovering the Value of Samoan Medicinal Plants for Health, Heritage and Livelihoods

Tuesday 3rd March 2026

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Biodiscovery and Molecular Research Division

SROS

Why medicinal plants Matter to Samoa?



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- Part of daily life & culture
- Supports family health & wellbeing
- Affordable & locally available
- Protecting plants protects traditional knowledge
- Valuing plants encourages conservation

Why study natural products from plants & medicinal plant resources?



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- Natural products are a rich source of drugs and drug leads:
 - 1,562 newly approved drugs between **1981-2014**
 - 67% were either natural products, derived from natural products or based on natural products
 - 579 drugs approved globally from **2014–2024**, about 56 ($\approx 10\%$) were classified as natural products or NP-derived based drugs

Plants are an under-studied source of natural products



- Only an approximate 10% of the whole plant kingdom (~300,000 species) has been investigated for bioactivity

∴ There is great potential for more discoveries to be made from plant natural products

Plants with ethnobotanical background have higher rates of bioactivity



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- **Morphine:** isolated from *Papaver somniferum* used in BC period for pain
- **Digitoxin:** isolated from *Digitalis purpurea*, used in gypsy medicine for heart problems
- **Artemisinin:** isolated from *Artemisia annua* used in Chinese medicine for malaria



What is the potential of Samoan medicinal plants?



- 1973: Norton *et al.* studied 34 plants (58% rate)
- 1989: Cox *et al.* studied 74 plants (78% rate)
- 1992: Gustafson *et al.* studied *Homalanthus nutans* - Source of the anti-HIV compound prostratin
- 1997: Dunstan *et al.* studied 50 plants (32% rate)
- **Only findings from *H. nutans* have been explored further**

Soooo...



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- Samoan medicinal plants have shown potential but remain largely unexplored
- Aim: To investigate the bioactivity of Samoan medicinal plants

What we do?



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Scientific Research Organization of Samoa (SROS) is a National Research institution supporting Samoa's development through science and innovation.

Biodiscovery & Molecular Research Division

- Focused on medicinal plants and natural products.
- Researching plants, marine and soil resources found in Samoa.
- Exploring health-related properties of local biodiversity



Unlocking the value of Samoa's Natural Resources: Biodiscovery



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- Learning from plants, marine life, and soils
- Combining traditional knowledge with scientific research
- Identifying natural resources that support health
- Protecting biodiversity while creating opportunities

What SROS Is Doing?: Exploring Samoa's Biodiversity



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- Studying local plants, marine life, and soils
- Focusing on health challenges like diabetes, infections, and antimicrobial resistance



- Identifying natural resources that could improve health



- Samoa's biodiversity offers strong potential
- Supporting long-term benefits for communities and the nation

SROS work on Samoan Medicinal Plants- Our work so far.



PLANT COLLECTED

481

BIOACTIVE PLANTS

168

BIOACTIVITY RATE

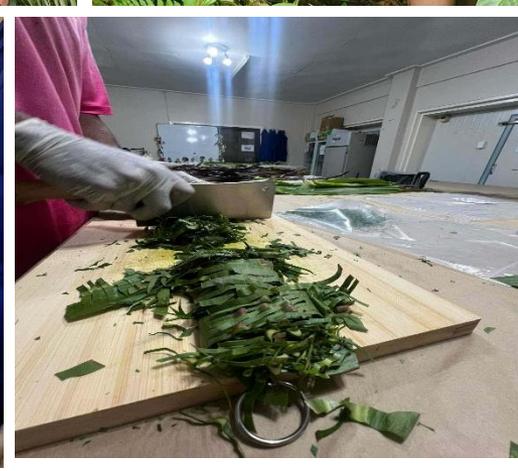
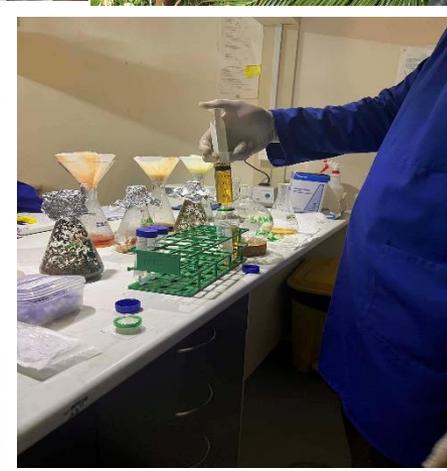
35%



Overview of our work



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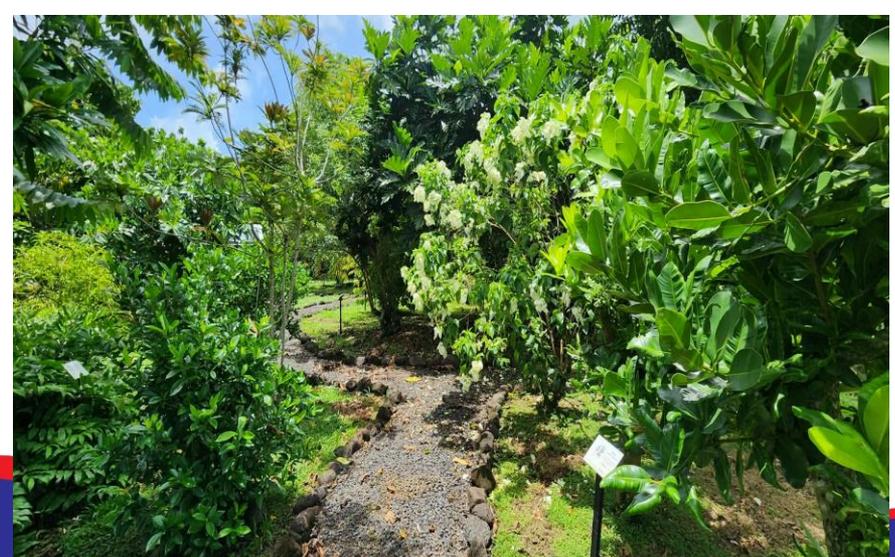
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SROS Medicinal Garden



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Early Milestones of the Project : Matalafi *Psychotria insularum*



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NZ news | Health

Traditional Samoan medicine found as effective as ibuprofen by scientists

Sapeer Mayron

November 2, 2021 - 8:00am

Copy Link

Just in

Emergency Services at scene of 'serious crash' in Christchurch

30 mins ago

After six straight losses the Phoenix coach calls it quits

30 mins ago

Concern for welfare of missing 10-year-old Northland boy

38 mins ago



Dr Seeseeli Molimau-Samasoni, senior research director at the Scientific Research Organisation of Samoa has helped prove the science behind a long-used medicinal plant in Samoa. Photo: Supplied / Supplied

A Samoan plant used for generations to reduce inflammation has been scientifically validated by researchers in New Zealand and Samoa.

Samoa biologist [Dr Seeseeli Molimau-Samasoni](#) and Cook Island Māori research fellow [Dr Helen Woolner](#) have found the leaves of the matalafi tree, or *psychotria insularum*, works as effectively as ibuprofen.

Their findings are being published in peer-reviewed journal, the [Proceedings of the National Academy of Sciences \[PNAS\] of the United States of America](#).

READ MORE:

* [Medicinal herb project gets underway in Taranaki](#)

* [Indigenous data protection system to branch out into Māori](#)

Connecting Science, Traditional Knowledge, and Community Development in Samoa



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THANK YOU!

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