

#### Contents lists available at ScienceDirect

# Data in brief





# Data Article

# Data on medicinal plants used by herbalists for boosting immunity in people living with HIV/ AIDS in Uganda



Godwin Anywar <sup>a, d, \*</sup>, Esezah Kakudidi <sup>a</sup>, Robert Byamukama <sup>b</sup>, Jackson Mukonzo <sup>c</sup>, Andreas Schubert <sup>d</sup>, Hannington Oryem-Origa <sup>a</sup>

#### ARTICLE INFO

Article history:
Received 4 December 2019
Received in revised form 19 December 2019
Accepted 27 December 2019
Available online 8 January 2020

Keywords:
Medicinal plants
Immunostimulants
Immunity
Traditional medicine practitioners
Herbalists
HIV/AIDS

#### ABSTRACT

This Data in Brief article provides supplementary information to or earlier Ethnobotanical survey on medicinal plants used by traditional medicine practitioners to boost the immune system in people living with HIV/AIDS in Uganda [1]. We identified 71 medicinal plant species from 37 families and 64 genera. The data were analysed using descriptive statistics such as frequencies and percentages. Most of the plant species used were trees (27) and herbs (25) from the Fabaceae (15.7%) Asteraceae Phyllanthaceae (8.6%), Rubiaceae (5.7%) and Rubiaceae (5.7%) families. Additionally, we conducted a detailed literature review of the documented species to justify their use as immunostimulants. This data is derived from a larger survey to document the use of medicinal plant species in treating opportunistic infections in Uganda by Anywar et al. [2]. © 2020 The Author(s). Published by Elsevier Inc. This is an open

access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

E-mail addresses: godwinanywar@gmail.com, ganywar@cns.mak.ac.ug (G. Anywar).

<sup>&</sup>lt;sup>a</sup> Department of Plant Sciences, Microbiology & Biotechnology, College of Natural Sciences, Makerere University, P.O.Box 7062, Kampala, Uganda

<sup>&</sup>lt;sup>b</sup> Department of Chemistry, College of Natural Sciences, Makerere University, P.O.Box 7062, Kampala, Uganda

<sup>&</sup>lt;sup>c</sup> Department of Pharmacology & Therapeutics, College of Health Sciences, Makerere University, P.O.Box 7062, Kampala, Uganda

<sup>&</sup>lt;sup>d</sup> Fraunhofer Institute for Cell Therapy & Immunology (IZI), Perlickstraße 104103, Leipzig, Germany

DOI of original article: https://doi.org/10.1016/j.eujim.2019.101011.

<sup>\*</sup> Corresponding author. Department of Plant Sciences, Microbiology & Biotechnology, College of Natural Sciences, Makerere University, P.O.Box 7062, Kampala, Uganda.

#### Specifications Table

Subject	Plant science, Biology, Pharmacology
Specific subject area	Ethnobotany, Ethnopharmacology
Type of data	Table
How data were acquired	Ethnobotanical survey, Microsoft Excel 2011.
Data format	Raw, analysed, graphs
Parameters for data collection	Herbalists who had at least a 5 years experience in treating people living with HIV/AIDS
Description of data collection	An Ethnobotanical survey was conducted in eight districts in Uganda. The documented
	medicinal plants were checked against what is already known about them with regards
	to improving immunity from the literature
Data source location	Makerere University
	Kampala/Town/Region:
	Country: Uganda
	Luweero District 0.8271° N, 32.6277° E,
	Rakai District 0.7069° S, 31.5370° E
	Bushenyi District 0.4871° S, 30.2051° E
	Iganga District 0.6600° N, 33.4832° E
	Mbale District 1.0344° N, 34.1977° E
	Kabong District 3.5126° N, 33.9750° E
	Dokolo District 1.9636° N, 33.0339° E
	Arua District 2.9960° N, 31.1710° E
Data accessibility	Raw data was deposited in the Mendeley repository as Data, v1, 2019. DOI: 10.17632/
	z8sg9yj4x3.1 https://data.mendeley.com/datasets/z8sg9yj4x3/1
Related research article	G. Anywar, E. Kakudidi, R. Byamukama, J. Mukonzo, A. Schubert, H. Oryem-Origa
	Medicinal plants used by traditional medicine practitioners to boost the immune system
	in people living with HIV/AIDS in Uganda
	Journal: European Journal of Integrative Medicine (2029) 101011. DOI, https://doi.org/
	10.1016/j.eujim.2019.101011 [1]

#### Value of the Data

- These data point to the fact that several plant species are used by herbalists to boost immunity in people living with HIV/ AIDS.
- These data can be of benefit to other researchers and policy makers.
- These data can be useful in understanding the use patterns and dynamics of herbal medicines and antiretroviral drugs among people living with HIV/AIDS.
- The data provide a basis for further investigation of these plant species as potential drug candidates for modulating the immune system in people who are immunocompromised.

#### 1. Data

This section consists of analysed data on medicinal plant species used by herbalists for boosting immunity in people living with HIV/AIDS in Uganda. The raw data files were deposited in the Mendeley data repository DOI: 10.17632/z8sg9yj4x3.1 https://data.mendeley.com/datasets/z8sg9yj4x3/1 [2,3]. Information on the life forms of the medicinal plant species used in presented in Fig. 1, whereas the parts of the plant species used are shown in Fig. 2. In Fig. 3, the methods used for preparing and administering the respective herbal medicines are given.

#### 2. Experimental design, materials, and methods

# 2.1. Ethical considerations

Ethical approval was obtained from the Higher Degrees Research and Ethics Committee of the School of Biomedical Sciences, College of Health Sciences, Makerere University, and the Uganda

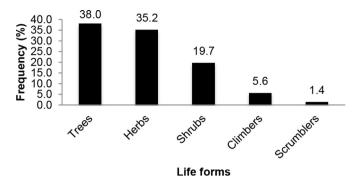


Fig. 1. Life forms of medicinal plant species used for boosting the immune system in people living with HIV/AIDS.

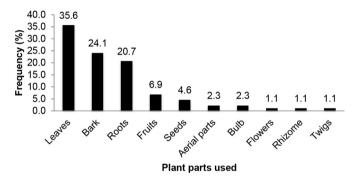


Fig. 2. Parts of medicinal plants used for boosting immunity in people living with HIV/AIDS.

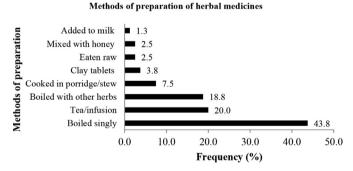


Fig. 3. Methods of preparation of medicinal plants used for boosting immunity in people living with HIV/AIDS.

National Council of Science and Technology (UNCST). Written Prior Informed Consent (PIC) was also obtained from the TMP before interviewing the herbalists.

#### 2.2. Ethnobotanical survey

An ethnobotanical survey was conducted on 90 TMP across the country, between March and September 2017. Different local languages were spoken in the selected districts surveyed. Only TMP who had experience of at least five years and were members of local herbalists' associations in their

districts were selected. This was done to minimise chances of dealing with quacks. Semi-structured interviews were conducted using questionnaires to gather the requisite information. Field guides and interpreters were used to help in locating the TMP and offering translation services [3].

### 2.3. Voucher specimen collection and identification

Collection of plant specimens: Field excursions with the TMP were conducted to collect voucher specimens of the plant species following standard procedures described in Martin [4]. The plant specimens were deposited at the Makerere University Herbarium for identification and classified according to the Kew database at <a href="http://www.theplantlist.org">http://www.theplantlist.org</a> accessed on 4thJanuary-March 2018 at 18: 09 EAT. The plant families were checked against the Angiosperm Phylogeny Group IV.

# 2.4. Data analysis

Ethnobotanical data obtained were analysed and presented using descriptive statistics such as percentage frequencies. Fig. 1 represents the life forms of the medicinal plant species used to boost immunity among people living with HIV/AIDS in Uganda. On the other hand, Fig. 2 shows the plant parts of the medicinal plant species used to boost immunity among people living with HIV/AIDS in Uganda, whereas Fig. 3 shows the methods of preparation and administration the medicinal plant species used to boost immunity among people living with HIV/AIDS in Uganda.

# Acknowledgments

This research was supported by the Consortium for Advanced Research Training in Africa (CARTA), Kenya. CARTA is jointly led by the African Population and Health Research Center, Kenya and the University of the Witwatersrand, South Africa and funded by the Carnegie Corporation of New York, United States (Grant No–B 8606.R02), Sida, Sweden (Grant No: 54100113), the DELTAS Africa Initiative, Kenya (Grant No: 107768/Z/15/Z) and Deutscher Akademischer Austauschdienst, Germany. The DELTAS Africa Initiative is an independent funding scheme of the African Academy of Sciences's, Kenya Alliance for Accelerating Excellence in Science in Africa (AESA), Kenya and supported by the New Partnership for Africa's Development Planning and Coordinating Agency (NEPAD Agency), South Africa with funding from the Wellcome Trust, United Kingdom and the UK Government, United Kingdom. The statements made and views expressed are solely the responsibility of the Fellow.

We also acknowledge and thank the research assistants Kasozi Dauda, Kibuuka Sserwano Moses, Kizito Medi, Onenarach Walter & Opio Henry, for their dedicated work. We are also grateful to the TMP who gave their consent and to share their knowledge with us.

# **Conflict of Interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### References

- [1] G. Anywar, E. Kakudidi, R. Byamukama, J. Mukonzo, A. Schubert, H. Oryem-Origa, Medicinal plants used by traditional medicine practitioners to boost the immune system in people living with HIV/AIDS in Uganda, J.: Eur. J. Integr. Med. (2020) 101011, https://doi.org/10.1016/j.eujim.2019.101011.
- [2] G. Anywar, E. Kakudidi, R. Byamukama, J. Mukonzo, A. Schubert, H. Oryem-Origa, Indigenous traditional knowledge of medicinal plants used by herbalists in treating opportunistic infections among people living with HIV/AIDS in Uganda, J. Ethnopharmacol. 246 (2020) 112205, https://doi.org/10.1016/j.jep.2019.112205.
- [3] G. Anywar, E. Kakudidi, R. Byamukama, J. Mukonzo, A. Schubert, H. Oryem-Origa, Data on Medicinal Plants Used to Boost Immunity in People Living with HIV/AIDS in Uganda. Data, vol. 1, 2019, https://doi.org/10.17632/28sg9yj4x3.1.
- [4] G.J. Martin, Ethnobotany: A Methods Manual, Hall, London, 1995.