

GA2021 – African Research Network: Panel Discussion “Key challenges for Natural Products Research”

Some notable comments/statements that were made during this session include:

Bioprospecting/ intellectual property:

- Patenting is an expensive and very lengthy process and should absolutely be reserved in those instances where a remarkable discovery has been made. Care should be taken in this instance to ensure that the idea/invention does not fall in the public domain so that the patent can be initiated further into the future when all claims can be sufficiently be substantiated.
- Bypassing bioprospecting applications on a provincial and national level and incorporate the prospecting on a continental basis as to include populations of medicinal plants that stretch across several countries and boundaries
- Correct identification by herbariums are important as to ensure correct procedures are followed as many plants are known to many with different common names (indigenous and non-indigenous plants)
- Bioprospecting permits in South Africa should also rather be considered as a national application as this is regulated on a national level, rather than provincial as this may speed up the process.
- Scenarios where multiple communities use one specific indigenous plant, the percentage of royalty needs to be paid into a trust fund or a local establishment should be identified and negotiated with the relevant government department, the percentages if paid into a trust fund should also be negotiated with the different communities identified.

e.g *Bulbine frutescens*, the permit was delayed due to many communities that use the plant for different applications. A compromise was made with the government to share the benefits with the closest local community identified to use the plant and, in this case, a local school. The benefits included monetary benefits but also non-monetary benefits such as training and workshops to the local community. Yearly reports should be submitted on what turnover was and also what was paid to the establishment/community identified.

- African herbs can be used as complimentary medicine without clinical trials depending on the claims to be made. If very strong claims such as a cure for cancer is made, this claim needs to be supported by clinical studies to substantiate the claim. This was acknowledged to be the situation in both Ghana and South Africa
- Evidence from use in traditional medicine & emergencies such as COVID-19 have fast tracked the commercialization of various herbal medicines in Uganda without having to conduct clinical trials
- There is a need to identify and note the different best practices from the different regions of Africa and also to identify the value chain process in use and who the role players involved are. The private sector plays a fundamental role as they have the funding that enable more communities and people to gain access to the invention. They may play big roles in further, much needed research (stability, standardization, clinical trials and patenting) and marketing the invention.
- Regarding commercialization of a final product instead of a semi-commercialized product: The contribution to be paid by the different formulators are not directly to the community but there can be a taxable amount on the final selling price that go back to the permit holder that ensures that all role players contribute to the knowledge holders (community)

- Universities and researchers who are directly involved in the permit processes have the influence to change the current policies in place to ensure that all role players benefit and no short cuts are made due to the lengthy processes and legalities involved.

Funding:

- Proposal writing and networking are important aspects to consider funding opportunities.
- Networking is necessary to ensure that many collaborators can be part of a funding application all necessary to complete the objectives of the proposal. These collaborators may also initiate equipment sharing/training and exchange of researchers.
- Proposal/grant writing is a necessary skill for all researchers especially those that are early-to mid-career researchers looking for project funding.
- Initiatives on mentoring and proposal writing workshops should be embraced to support future African research on the continent.
- Proposal writing: Identify the goals of the funding agency, list the objectives that are relevant to the proposal and align these to the country's national priorities. Identifying important overlaps with the Sustainable Development Goals are also of importance.
- Female researchers have been identified as being limited in their funding opportunities due to the social acceptance of females bearing and taking care of children and not being able to foster their research careers.
- There are specific funding agencies that enable female researchers to continue their research through funding for caretakers and also the extension of the age limit, due to absence taken for giving birth and maternity leave.

Funding Organizations that were highlighted during the discussion panel:

- ISP- Sweden (Symposia- 2 years, workshops) (*in vitro, in vivo, in silico* methods)
- SEDA agency
- IFS- funding for equipment and grants
- The African Research Network for Neglected Tropical Diseases (ARNTD)
- African Academy of Sciences- fellowships
- Consortium for Advanced Research Training in Africa (CARTA) (in particular cater for all expenses for child attendants for female candidates who give birth during the training duration. These include 1 four one-month long training sessions over the 4-year training period. This allows the female candidates to concentrate & excel)
- African population Research Centre (APHRC),
- DAAD