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MENTORING WOMEN IN SCIENCE

Young and early career scientists have a great deal of potential to impact the future in terms of their talent, knowledge and potential for innovation. However, there is a vital resource that is absolutely needed as they prepare for leadership positions: a mentor.

A mentor is that knowledgeable, skilled and experienced person, who is open to offer advice and guidance to a less experienced colleague, the protégé. An experienced mentor has already gone through the ropes and hurdles in the field. She knows where the obstacles are and understands how to overcome them. A mentor takes a personal interest in the protégé and helps by serving as a role model, coach, and confidante.

Before selecting a mentor, it is important to determine one's own goals. For example, if the protégé is lacking abilities in writing articles and publishing, she should be matched with a mentor who has mastered and proven those skills. The protégé ought to openly discuss the mentoring relationship and goals with the potential mentor. It is important to note that these relationships are driven by the protégé. The relationship can only be successful if the protégé is pro-active and seeks the mentor.

Mentoring should be directed towards the whole person, that is the woman, the daughter, the wife, the scientist, the mother. As a mentor, I show the protégés how, with a great deal of planning and coordination, I manage to balance family, children, profession, church and other activities. Basically, I show them how all these aspects of my life come together and enable me to contribute my best as a scientist.

I really encourage experienced scientists to open up to mentoring as they also can reap rewards. Protégés often offer new information and perspectives. And, much can be said for the pleasure we receive in helping someone else. Mentors are respected and appreciated by fellow scientists. They also earn the gratitude of their protégés.

For young women scientists, mentoring is imperative as they face different challenges from their male counterparts. Young women scientists are less likely to reach leadership positions and more likely to stagnate or leave their career path. In higher education, there are more female lecturers at the bottom of the career ladder but this number considerably slims down going up and becomes a pyramid. Studies show that women with mentors have more publications in peer-review journals, spend more time on research, and have greater career satisfaction (Levinson, Kaufman, Clark, & Tolle, 1991). Since women scientists tend to have slower academic promotion rates and leave the academic path more frequently than men, they can only benefit from a good relationship with a mentor.

After my 2011 African Union Scientific award for women, I took on the mission to help young women to go into and have a sustainable scientific career. In 2014, a group of women researchers got together and formed the HIGHER Institute for Growth in Health Research for Women, HIGHER Women Cameroon. I led the HIGHER Women consortium in securing grants from WHO/TDR and IDRC for a mentoring and research career development program. Since then, we have matched about 70 mentor-protégé couples. In 2015-2016, we organized two workshops with about 80 early career women where we focused on building skills in grant writing, research methodology, leadership, management, ethics in biomedical research, time management among others. Additional information can be found on the consortium website (www.higherwomencam.org). We have also been featured on the WHO/TDR and IDRC websites.

One of the most acclaimed activities of the workshops was the "Fireside conversations", mimicking an old African tradition where the young children gathered around a fire in the evenings and listened to the matriarchs and patriarchs. For our "fireside conversations", the mentors discussed the obstacles faced in their career journey and how they were able to overcome them while the protégés shared their ambitions and aspirations. Sitting and talking around the fire created an intimate, trusting environment fostering open exchange.

Mentoring should be promoted by universities, research organizations and government institutions by implementing formal mentorship programs and rewarding experienced professionals for participating. They ought to bring senior scientists to see the value of the road they traveled and the importance of sharing lessons learned with their junior colleagues.

Recently, I was profiled in TRENDS IN PARASITOLOGY (Leke, 2016) where I spoke about how I was motivated to be a mentor, strategies for setting up a mentoring relationship and how women can best confront the hurdles encountered as they are building their scientific career.

The bottom line is that we live in the best of times for women scientists. The younger women scientists are now presented with opportunities that were not available 30 or 40 years ago. Thus, they need to acquire skills, tools and guidance to grab onto prospects that are now reachable.

Prof. Rose Gana Fomban Leke

Addressing Environmental Problems

- In collaboration with the Academy of Sciences of South Africa (ASSAf), SNAS organized in Khartoum (Sept. 2014) Khartoum a highly successful workshop addressing the impact of mining activities, especially artisanal gold mining on the environment and health, in Sudan and Africa.

- In collaboration with the UNESCO Chair for Environment, Future University, SNAS organized a local workshop (March 2016) to address the problems of electronic and electrical waste in Khartoum. A survey to assess the extent of the problem was conducted and several dumping areas and academic institution were surveyed. A regional workshop is planned to follow the results and recommendations and execute plans for collection and recycling.

Participation in international meetings and forums:

Members of SNAS council attend most of the gatherings held in Africa and outside. Other members are also nominated to attend meetings relevant to their specializations.

Collaboration with other Academies:

SNAS has signed memoranda of understanding with Academy of Science of South Africa (ASSAf), Swiss Academy of Natural Sciences (SCNAT) and the Turkish Academy of Sciences (TÜBA).

Financial resources:

SNAS, being registered as an NGO since establishment, was not supported or recognized by the government. SNAS activities were mostly conducted with external funding through NASAC. Due to the political sanctions imposed on the country since 1997, direct funding from agencies was very much reduced and money transfer through the banking system became very complicated and impossible.

To fulfill its ambitious objectives, SNAS must seek and explore funding opportunities at home and abroad to cover the operational costs of the secretariat and implement the programs.

The Network of African Science Academies (NASAC) was established on 13th December 2001 in Nairobi, Kenya, under the auspices of the African Academy of Sciences (AAS) and the InterAcademy Panel (IAP)

NASAC is a consortium of merit-based science academies in Africa and aspires to make the "voice of science" heard by policy and decision makers within Africa and worldwide. NASAC is dedicated to enhancing the capacity of existing national science academies and champions in the cause for creation of new academies where none exist.

As at November 2016, NASAC comprised of the following twenty four members:

- Académie des Sciences et Techniques du Sénégal (ANSTS)
- Académie Nationale des Sciences du Burkina (ANSB)
- Académie Nationale des Sciences et Technologies du Congo (ANSTC)
- Académie Nationale des Sciences, Arts et Lettres du Benin (ANSALB)
- Académie Nationale Des Sciences, Arts Et Lettres Du Togo (ANSALT)
- Academy of Science of South Africa (ASSAf)
- Academy of Sciences of Mozambique (ASM)
- African Academy of Sciences (AAS)
- Algerian Academy of Science and Technology (AAST)
- Botswana Academy of Sciences (BAS)
- Cameroon Academy of Sciences (CAS)
- Ethiopian Academy of Science (EAS)
- Ghana Academy of Arts and Sciences (GAAS)
- Hassan II Academy of Science and Technology in Morocco
- Kenya National Academy of Sciences (KNAS)
- Madagascar's National Academy of Arts Letters and Sciences
- Mauritius Academy of Science and Technology (MAST)
- National Academy for Cote d'Ivoire
- Nigerian Academy of Science (NAS)
- Sudanese National Academy of Science (SNAS)
- Tanzania Academy of Sciences (TAS)
- The Uganda National Academy of Sciences (UNAS)
- Zambia Academy of Sciences (ZaAS)
- Zimbabwe Academy of Sciences (ZAS)

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