

University Report

BBC AFRICAN SERVICE, LONDON

412 4/5/72

UNIVERSITY REPORT

No. 141

Broadcast 28th, 30th March & 1st April, 1971

COSMO PIETERSE: This week the on going search in Africa for sources of medical drugs and industrially viable pharmaceutical products. What local plants have medicinal value? What can universities do to apply old discoveries to local contexts. Two discussions from Ghana's University of Science and Technology at Kumasi, deal with these vital issues. But first to another Ghanaian university.

Professor Kwabena Nketia is Head of the Institute of African Studies at the University of Ghana, Legon. The institute is ten years old, has thirty members of staff, and covers a vast area of cultural interests. Up to now, its M.A. students have handed in fifty theses, of a variety that reflects the coverage of the Institute itself. And it's this Masters' Programme that Professor Nketia talks about first to Christine Oppong.

PROFESSOR NKETIA: Well, we have always looked at the Masters' Programme as an extension of our research programme. When you have fifty theses produced by students, this represents quite a sizable amount of work done by students from the institute, and we ~~think~~ think that this sort of programme should not only go on, but be expanded. There is a great deal of interest now in Ghana in post-graduate studies. In the past, many people went abroad to do their post-graduate studies. Since we now have facilities for post-graduate studies, especially in the social sciences and the arts,

PROFESSOR NKETIA: there is no reason why we should not concentrate on this area of study, and expand our facilities, so that we can have people who have done post-graduate work, and can contribute to the development programmes of Ghana.
(CONT'D.)

COSMO PIETERSE: The institute has had wide contact with Eastern European and Western European, with Indian and American and Japanese academics and students. But what about its African links?

PROFESSOR NKETIA: Now when it comes to Africa, unfortunately our contacts within Africa itself do not seem to be as strong as they should be because this is part of the paradox of the situation, when one wants to telephone to Nigeria, the most direct link is perhaps through London. This means that our contacts are rather like that. Fortunately, the African Universities' Association has been looking into this problem, and as a matter of fact, we've had contacts through the exchange of external examiners. I have invited a few people to the Institute from other parts of Africa as visiting research fellows, and I hope that this kind of exchange will continue, and that we'll work very closely together.

With regard to the kind of people who come to the Institute: well, we have scholars; we have research students. Then we have, what I may describe as, academic tourists, who come to Africa because it is an interesting place to visit, but who also find that there is a university in Legon, and they do take the opportunity to come and see us in the Institute. Now every summer we have quite a lot of visitors, and academic tourists ranging from about two hundred to three hundred of these, and what we do is to organise a Summer School for them.

PROFESSOR NKETIA: We give an introductory course, really, in African studies to them and I think they enjoy seeing Ghana and also listening to something on Africa, in Africa.

CHRISTINE OPPONG: As regards your own work Professor Nketia, we know that you were one of the earliest Ghanaian research workers in the University at Legon. Would you care to sketch briefly for us some of your own early career, and tell us about some of the work you have been doing more recently, since you became Director of the Institute?

PROFESSOR NKETIA: Yes, well, I was appointed to the University of Ghana in 1952 as a research fellow, and my assignment was to work in several fields, in linguistics, in music, in dance, in folklore. So I thought that I was to typify the concept of African studies, which is really an interdisciplinary kind of study. So starting off as a linguist and also as a musician, I thought I should go into the related fields. So in the early days I wasn't quite sure what I was doing, but I was in African studies anyway. I collected songs; naturally my musical interest made me do a lot of work in this area, but I also collected texts, because I was interested in the language and also in the literature. While I worked on music I observed the movement that went with the music, so I did some work on dance. My work in music naturally took me into the problem of a historical and cultural background and I found myself doing studies of music and culture. So this is how I've come to be interested in quite a number of the subjects, which we deal with in the Institute.

COSMO PIETERSE: Professor J. Kwabena Nketia of Legon talking to Christine Oppong about the Institute of African Studies which he leads. His own research has borne fruit in many publications. These range from fascinating and detailed

COSMO PIETERSE:
(CONT'D.)

studies, like that on "Akan Funeral Songs" to a delightful and instructive book for the young: "Our Drums and Drummers".

Now to Kumasi, and there chiefly pharmaceutical research of fundamental value. It is the search for local sources, especially, to supply well known medical drugs and chemical products. In Africa it is in many ways a crucial search. It has been going on in some parts for a long time and has been expensive.

Now William Sam, our man in Kumasi, has been talking to two of the researchers from the University of Science and Technology's Faculty of Pharmacy. First Dr. Ofori Gyane. Dr. Gyane's research is aimed at using locally available pharmaceutical substances, in industry. William Sam wanted to know first, was there a real need for this type of research?

DR. GYANE:

Yes, because firstly, we have found that the country has a lot of pharmaceutically useful substances which can be used in place of the official substances. Secondly, the country at the present stage of economical reconstruction needs to conserve its foreign exchange, hence, when our search proves successful, and our local materials are used in place of the imported ones, we would have helped the Government in achieving its aim.

WILLIAM SAM:

I understand you've worked on disinfectants. Can you tell us what work you've been doing in this field?

DR. GYANE:

Yes, in the search for suitable materials for the preparation of lysol, palm kernel oil and cocoa butter have been successfully used. The cocoa butter, the quality of which is very high, was not imported, but manufactured

DR. GYANE:
(CONT'D.)

in the department. Should the Government decide to produce cocoa butter on a large scale for export to be used abroad for pharmaceutical preparations, this could earn quite a lot of foreign exchange.

WILLIAM SAM:

What other interesting alternatives have you found in your search?

DR. GYANE:

Abisia gum obtained from a local plant called Okro has been used as a binding agent in the preparation of tablets in place of the imported Acasia gum. The same Abisia gum has been found to be about sixteen times as powerful as Acasia, when used in the preparation of the emulsions.

WILLIAM SAM:

Tell me, what exactly are emulsions?

DR. GYANE:

Emulsions are preparations containing oil and water, and since these do not normally mix, a third substance must be used to get them to mix. The third substance is called "emulsifying agent" an acasia for which a substitute has been found as abisia has been used very much.

WILLIAM SAM:

I understand that you've been working also on creams and ointments, is this true?

DR. GYANE:

Yes, this is true. We have been working on shea butter, purified local shea butter has been used in the preparation of creams and ointments which are pharmaceutically comparable to imported ones.

- WILLIAM SAM: Dr. Gyane, how far are you co-ordinating your activities with drug manufacturing companies in this country, with particular reference to the State Pharmaceutical Division of the Ghana Industrial Holding Corporation - GIHOC?
- DR. GYANE: We are getting in touch with GIHOC so that if they should decide to put to use the fruit of our research we can act as consultants.
- COSMO PIETERSE: Dr. Daniel Ofori Gyane of the Faculty of Pharmacy at Kumasi, talking to William Sam about the rich fruits of some of Kumasi's research. As additional witness to the value of Kumasi's work, William Sam has also been talking to Dr. Dwumah Badu of the Faculty of Pharmacy. Dr. Badu's work is concerned with the search for drugs in Ghanaian herbs in their pure chemical form, and William Sam asked him first, how much success they have had.
- DR. BADU: We have isolated some new alkalis which are being investigated for possible biological activities. Recently we have also designed two simpler methods for isolating recepin in the pure chemical form from the roots of a local plant which is called 'Kakapempe' in Akan. Both the tablets and injections of recepin have been manufactured in the Faculty. The methods of isolating the pure recepin and its formulations were demonstrated and exhibited at the second Ghana International Trade fair held recently.
- WILLIAM SAM: What exactly is recepin?

DR. BADU: Receptin is an alkali manufactured from the roots of a plant. It can also be manufactured by synthesis, but I suspect that the synthetic method may be rather tedious. It is used in medicine for controlling high blood pressure, and in the treatment of certain mental illness. Though it is an old drug, it is still being prescribed in our hospitals.

WILLIAM SAM: What has been your special contribution which awakened so much interest in the country at the second Ghana International Trade Fair?

DR. BADU: The Ghana State Pharmaceutical Corporation imports receptin powder for making the tablets. We in this Faculty feel that importing receptin into the country was merely a waster of our foreign exchange. The reason is this: We are blessed in Ghana with a abundance of Kakapempe and, therefore, we can produce large amounts of receptin by making use of some simpler methods.

WILLIAM SAM: Has this experiment of yours aroused interest internationally?

DR. BADU: Yes, we have had offers from foreign drug councils who would like to import some of our preparations.

COSMO PIETERSE: Dr. Dwumah Badu of the Faculty of Pharmacy at Kumasi's University of Science and Technology talking there to William Sam. And so on this happy note of waste not and co-ordination and scientific plus industrial development from Kumasi, it is goodbye for now, from me, Cosmo Pieterse.