

Bridging Institutional and Continental Gaps through Scientific Excellence

— An Interview with Dr. Abiodun Humphrey Adebayo at the
Institute of Microbiology

By XIN Ling (Staff Reporter)

The interview with Abio¹ and his supervisor Prof. ZHANG Lixin took place on a chilly December day towards the end of 2012, after a heavy snow had blanketed Beijing city. In Prof. Zhang's cozy office at the Institute of Microbiology, the Chinese Academy of Sciences (IMCAS), Abio welcomed the reporter with a firm handshake and a sunny smile. Three months after arriving in Beijing, this tall, outgoing and hard-working Nigerian has well adapted himself to the work and life here.



In front of his laboratory table, Abio holds a container of crude extract from some herbal formulated drug, which are ready for phytochemical analysis.

¹ Abio is Nigerian postdoc Abiodun Humphrey Adebayo's nickname in Beijing, pronounced similar to a common male name "A-Biao" in Chinese which means strong and energetic.

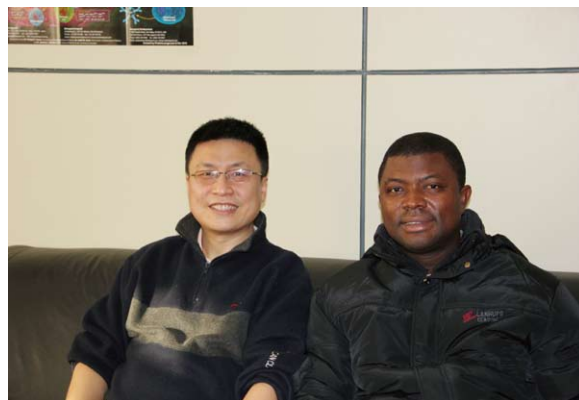
Back to China for Better Research

In the Department of Biological Sciences, Covenant University in Nigeria, Dr. Abiodun Adebayo is not only a well-received lecturer but a renowned researcher, the recipient of the University's High Impact Journal Publication Award for three consecutive years from 2010 to 2012.

As a plant researcher, he has been working on natural products by isolating bioactive compounds from medicinal plants for the treatment of major diseases like cancer, liver disorder, and bacterial and viral infections. "For instance, some phytochemical components isolated from *Ageratum conyzoides* L. may help us combat cancer diseases, while *Chrysophyllum albidum* has proved effective for liver protection," he explains.

Dr. Adebayo owes much of his achievement to a year of doctoral study, funded by the CAS-TWAS Fellowship Award, at the Kunming Institute of Botany (KIB) under CAS in southwest China's Yunnan Province between March 2008 and February 2009. During that period of time, under Prof. TAN Ninghua's supervision, he learnt to use some state-of-the-art experimental facilities and got to know what "an SCI journal" is for the first time.

For Abio, the research atmosphere and laboratory conditions at KIB were very good. He realized that if he wants to publish good papers in natural products research, he must first manage to isolate active compounds from plants. He also saw the importance of cooperation with pharmaceutical companies. When he returned to Nigeria in 2009, he had a different perspective and mentality about scientific research.



Dr. Abiodun Adebayo with his host supervisor, Prof. ZHANG Lixin (left), who is a leading scientist in natural products and marine drugs at IMCAS and Deputy Director of the CAS Key Laboratory of Pathogenic Microbiology and Immunology.

The study in Kunming gave Abio "leverage", as he called it, to dramatically raise the quality and quantity of his publications. Since then, he had managed to publish over a dozen papers, of which eight were co-authored with Chinese researchers. The research collaboration continued even after he returned to Nigeria.

Interestingly, although Abio and Prof. ZHANG didn't know each other at that time, ZHANG's name appeared actually in two of those papers thanks to the stable cooperation between his lab and KIB.

Neither of them realized that until when Abio decided to apply for the CAS-TWAS Fellowship Award again for his postdoctoral study. Searching on the internet for a host supervisor, Abio was immediately attracted

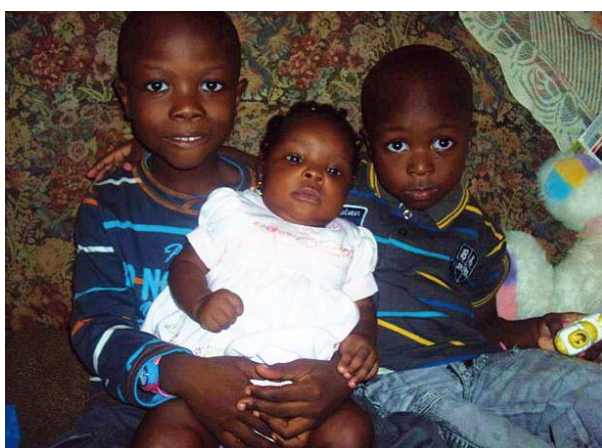


In another lab, Abio points at a column chromatography which serves as a separator and a centrifuge for biological experiments.



Dr. Adebayo with colleagues in Prof. ZHANG's lab at the 2012 Annual Meeting of the CAS Key Laboratory of Pathogenic Microbiology and Immunology at Beijing Shunxin Green Resort in November 2012.

² They included High Performance Liquid Chromatography (HPLC), Nuclear Magnetic Resonance (NMR) and Mass Spectrometry (MS).



Mrs. Adebayo; their kids, six-year-old Daniel (left), three-year-old Joseph (right) and little angel Peace who was born three days after Dr. Adebayo came to Beijing.

by Prof. ZHANG's resume. He was excited to find that Prof. ZHANG has a lot of research experience on natural products, coinciding with his own interest. He was also impressed by the professor's expertise and massive patents. In his words, "I can't wait to see what kind of scientist could obtain so many patents as these!"

Before the arrival of Abio, Prof. ZHANG had supervised a number of foreign scientists from all over the world, including CAS-TWAS postdoc fellow Dr. Krishna Bolla from India. The professor said that he was glad to receive Abio's email and called Prof. TAN to ask about Abio's study in Kunming.

"Abio already had some working experiences in China, and since he came he has worked very hard. He showed strong passion and dedication to his research topics. With his diligence and coworkers' help, I'm sure he'll do a great job in Beijing," Prof. ZHANG encouraged Abio like an elder brother and a friend.

Showing the reporter his labs and tubes, Abio seemed to have well acquainted himself with all the colleagues and facilities in the laboratory.

"For somebody like me, the impetus behind returning to China is by no means only an enterprising spirit or the chance for promotion, but more importantly, the passion

for research," Abio walked fast and light-footedly, his face glowing with determination.

Abio's pregnant wife was at the point of delivery when he left for Beijing in September. Three days after his departure, his wife gave birth to a baby girl, Peace — their third child — and the 37-year-old father won't be able to hold his little daughter until next April.

To make good use of his stay in Beijing, Abio usually spends more than fourteen hours a day at the institute, leaving at midnight for home — an apartment within ten minutes' walk distance. On weekends, he may spare a few hours for domestic activities like washing and cooking, or going to attend church services, but as soon as he's done with these activities, he gets himself back into the lab again.

Dr. Adebayo is highly optimistic that when he returns back to Nigeria next year, he would set up his own laboratory at Covenant University. Currently, he's working towards that goal with Prof. ZHANG. "Prof. ZHANG and I are applying for research equipment from CASTEP initiative to get the same, or at least nearly same experimental facilities (as I'm working with here) for my future lab."

If Dr. Adebayo's dream comes true, it will definitely be a turning point in his research career.

Building New Bridges for Cooperation and Communication

During the interview, Dr. Adebayo expressed his gratitude and appreciation for the CAS-TWAS Fellowship initiative on many occasions. Indeed, the program has well linked him and many other scholars from developing nations to the international academic world; it has

sharpened their research perspectives and given them access to expensive experimental facilities which were hitherto inaccessible, and helped them publish papers in world-class journals.

"The Fellowship is like a bridge that leads us to a much



Dr. Adebayo gives a welcome remark during the 2012 World Malaria Day Celebration at Covenant University on April 25.

broader horizon in the scientific world,” he noted.

Today, this Nigerian who has benefited from the “bridge” is making efforts to building “new bridges” between his home institution and CAS.

As Chairman of his University’s Community Development Impact Initiative Committee, Dr. Adebayo has demonstrated outstanding leadership skills. Through this committee, Covenant University had successfully marked the 2012 World Health Day and World Malaria Day in two communities (Iyana-yesi and Ilogbo, Ogun State, Nigeria) where free medical services were provided for the people.

Before Dr. Adebayo left for China, his Vice-Chancellor and Director for International Office and Linkages gave him letters to the IMCAS Director-General and to the Director of the CAS Bureau of International Cooperation for possible collaboration opportunities.

In Beijing, Abio outperformed his mission: with the help of Mme. FU Shuqin, Director of TWAS Beijing office, he has submitted a draft proposal for collaboration between

Covenant University and the Chinese Academy Sciences. “The proposal involves, among others, the exchange of faculty and staff members, research facilities utilization, capacity enhancement and research. It also involves joint research grants initiative and a student exchange program,” Dr. Adebayo revealed.

Dr. Adebayo is eager to contribute to more of such collaborations. Not long ago he met with Prof. GAO Fu, a leading professor of IMCAS and Deputy Director of the Chinese Center for Disease Control and Prevention (CDC), and Prof. GAO told him that CDC is planning to set up key laboratories in Kenya and Nigeria. Hearing this, Dr. Adebayo jumped up with excitement, “my university would be too happy to give you the space and all support needed!”

Prof. ZHANG placed high hopes on his student. “I hope Abio can bridge his university and CAS, and better contribute to the friendship between the two institutions as well as the two nations.”

In fact, China and Nigeria have many similarities. Both are populous and multiethnic countries with long histories; they even have the same national day celebrated on October 1. Since the two established diplomatic relations in 1971, China and Nigeria have carried out extensive cooperation in economy and industry. But in terms of science and technology, the cooperation is far from enough. The communication between the two nations has been insufficient, either.

Therefore, the proposed collaborations will be meaningful not only in a scientific sense, but for the friendship of the two nations. Just like the CAS-TWAS Fellowship Award: for Abio, “it is a very good opportunity to know Chinese people and Chinese culture”.

According to Dr. Adebayo, Chinese people are very hospitable, caring and diligent. His experience in Kunming has largely added to his friendly sentiments toward China.



(Left) In April 2008, Dr. Adebayo works at the Cancer Laboratory of KIB in Kunming and (right) posed with then host supervisor Prof. TAN Ninghua in front of the KIB-based State Key Laboratory of Phytochemistry and Plant Resources in West China.



“Prof. TAN treated me very nicely. She’s just like a mother.”

Dr. Adebayo has well adapted himself to many Chinese customs. For instance, he can now handle chopsticks and has learned to “eat food from the same plate” with Chinese friends, which he regarded as “a unique Chinese eating culture that implies unity”.

As a two-time winner of the CAS-TWAS Fellowship Award, the thoughtful Nigerian offered several constructive suggestions on the CAS-TWAS Fellowship program.

Firstly, he noted that as there are many more people who wish to benefit from the program, it will be a great opportunity if the scope of the program can be widened to accommodate more recipients. Secondly, he and other fellows do look forward to a family union arrangement by CAS and TWAS during their stay in China; in his words

“a short visit for few weeks may just be okay”. Thirdly, for the first-time recipients, it would be necessary to organize a language course before the commencement of their fellowship, as this will acquaint them with the Chinese norms and enable them to adapt to the environment. Lastly, a CAS-TWAS alumni network will be very important to strengthen the fellows’ communication and scientific exchange, especially via the construction of a common laboratory as center of excellence.

On the third floor of the Institute’s building, a ping-pong table is erected in the aisle. When spring comes, we can expect to see a fierce match between Dr. Adebayo and Prof. ZHANG in front of that desk — the superb serving skill is another thing Abio would like to learn from his warm host.

Acknowledgements

BCAS reporter XIN Ling greatly appreciates Prof. ZHANG Lixin’s kind help throughout the interview. She is also grateful to Ms. LI Shaofeng from IMCAS for providing some of the pictures.

Dr. Adebayo formally thanked TWAS and CAS for initiating the CAS-TWAS Fellowship Program and the subsequent award which have given him the opportunity to enhance his capacity for the betterment of humanity. He appreciated Ms. Cristina Simeos of TWAS Head Office, Italy for her immeasurable roles in seeing to the development of young scholars from developing countries. He expressed his appreciation to the Chancellor of Covenant University, Dr. David O. Oyedepo, the immediate past and present Vice-Chancellors, Professors Aize Obayan and C.K. Ayo and other management team members for their efforts in making sure that the Fellowship award is a huge success. He also thanked Mme. Fu, Director of the CAS Bureau for International Cooperation for her invaluable contributions — according to him “she is such a nice and wonderful woman who is always there for me”.

Dr. Adebayo expressed his gratitude to IMCAS leadership headed by Prof. HUANG Li, Director-General of IMCAS, Prof. GAO Fu, Director of the CAS Key Laboratory of Pathogenic Microbiology and Immunology and Ms. XU Lan, Deputy Director of the International Affairs, as well as a host of others for their kindness and love.

Dr. Adebayo thanked his host supervisor Prof. ZHANG Lixin who “has shown extreme support and care towards my welfare, acting not only as a senior brother but also as a friend”. He also thanked the scientists and scholars working in Prof. ZHANG’s team, including Profs. LIU Zhiheng, LIU Mei, LIU Xueting, SONG Fuhang and DAI Huanqin, and Dr. YING Zhuo, for always being there to assist him and to make his work in the lab very easy. Prof. ZHANG’s students and other staff also offered great assistance to Dr. Adebayo, including among others: WANG Luoqiang, HUANG Pei, WANG Qi, Drs. CHEN Caixia, ZHANG Jingyu, HE Wenni, REN Biao, WANG Qian, LI Shaofeng, SU Mengyi and JIA Xiuling.