

LABORATORY	TECHNOLOGIST IN-CHARGE	ROUTINE MAINTENANCE ENGINEER	OVERSIGHT TEAM /USER COMMITTEE
1a. Nuclear Magnetic Resonance Laboratory 1 1b. Nuclear Magnetic Resonance Laboratory 2 1c. Infra-Red Spectroscopy Laboratory	Silas Ekwuribe, Muazu Mohammed	Zubairu Inusa, Yau Mukhtar Sunday Okoh Yaro	Prof. Abdullahi Y. Idris, (Pharm Chemistry) Dr James Habilla, (Chemistry) Dr (Mrs) Asmau N. Hamza (Pharm Chemistry)
2a. Single crystal X-Ray Diffraction and Scanning Electron Microscopy Laboratory 2b. Particle analysis and Atomic Force/Phase Contrast Microscopy Laboratory.	Silas Ekwuribe, Muazu Mohammed	Emmanuel Madah Yaro Sunday Okoh, Zubairu Inusa,	Dr. Abdulkadir Ibrahim (Chemistry) Dr. Abdullazeez. Y. Atta (Chemical Engineering)
3a. Inductively Coupled Plasma Laboratory 3b. Microwave Plasma Atomic Emission Spectroscopy Laboratory.	Muazu Mohammed, Kabir Isah	Emmanuel Madah, Abdullahi Bukar, Zubairu Inusa, Maryam Abubakar	Prof. Abdulhamid Hamza (Chemical Engineering) Dr Abubakar A Khaleed (Physics). Dr Z. N Garba (Chemistry)

4a. Liquid Chromatography Mass Spectroscopy Laboratory. 4b. High Performance Liquid Chromatography and Amino Acid Analysis Laboratory. 4c. Gas Chromatography Laboratory	Kabir Isah, Murjanatu Abdulrasheed Abdullahi Abdulhamid,	Abdullahi Bukar, Mohammed Bashir Sani, Maryam Abubakar Yaro	Prof. Amapu Y. Ishaku (Soil Science) Dr Mohamed Auwal Ibrahim (Biochemistry)
5a. Atomic Absorption and Environmental Analysis Laboratory. 5b. X-ray Fluorescence Spectroscopy Laboratory 5c. UV/VIS/ Fluorescence Spectroscopy Laboratory	Abdullahi Abdulhamid, Murjanatu Abdulrasheed	Mohammed Bashir Sani, Sunday Okoh, Yau Mukhtar, Emmanuel Madah	Dr. Friday Okibe (Chemistry)) Prof. B. Yakubu (Chemical Engineering) Prof. Maryam Aminu (Microbiology)
6. Liquid Nitrogen Production Facility and Sample Preparation Laboratory.	Murjanatu Abdulrasheed, Muazu Mohammed	Yau Mukhtar Abdullahi Bukar Mohammed Bashir Sani, Maryam Abubakar	Prof. Fatai A. Anafi (Engineering) Prof. Pau. Ogunleye (CERT)

1. Nuclei Magnetic Resonance Laboratory 1
2. Nuclei Magnetic Resonance Laboratory 2
3. Single crystal X-Ray Diffraction and Scanning Electron Microscopy Laboratory

4. Particle analysis and Atomic Force/Phase Contrast Microscopy Laboratory
5. Infra-Red Spectroscopy Laboratory
6. Inductively coupled Plasma and Microwave Plasma Atomic Emission Spectroscopy Laboratory
7. Liquid Chromatography Mass Spectroscopy Laboratory
8. High Performance Liquid Chromatography and Amino Acid Analysis Laboratory
9. Atomic Absorption and Environmental Analysis Laboratory
10. Gas Chromatography Laboratory
11. Liquid Nitrogen Production Facility
12. Sample Preparation Laboratory

<u>Introduction</u>	<u>Research Laboratories</u>	<u>Facilities</u>	<u>Contacts</u>	<u>Galleries</u>	<u>Library</u>	<u>Events</u>	<u>People</u>
History	Nuclei Magnetic Resonance Laboratory 1						
Vision and Mission	Nuclei Magnetic Resonance Laboratory 2						
Our Mandate	Single crystal X-Ray Diffraction and Scanning Electron Microscopy Laboratory						
Organizational Structure	Particle analysis and Atomic Force/Phase Contrast Microscopy Laboratory						
	Infra-Red and X-Ray Fluorescence Spectroscopy Laboratory						
	Inductively coupled Plasma and Microwave Plasma Atomic Emission Spectroscopy Laboratory						
	Liquid Chromatography Mass Spectroscopy Laboratory						
	High Performance Liquid Chromatography and Amino Acid Analysis Laboratory						
	Atomic Absorption and Environmental Analysis Laboratory						
	Gas Chromatography Laboratory						
	UV-Visible and Fluorescence Spectroscopy Laboratory						
	Liquid Nitrogen Production Facility						
	Sample Preparation Laboratory						

THE MULTI-USER SCIENCE RESEARCH LABORATORY (MUSRL) AHMADU BELLO UNIVERSITY, ZARIA

INTRODUCTION: The Multi-User Science Research Laboratory in the faculty of Science is a two floor story building located within the Department of Chemistry complex and adjacent to the Department of Biological Sciences. The ground floor of the Laboratory is divided into two sections namely:

- a. Administrative office
- b. General work space for teaching, sample preparation and routine analysis.

The 1st floor consists of:

- a. Six rooms, each housing specialized piece of analytical equipment like AAS, GC-MS, XRF, DSC, etc
- b. Central area suitable for workshops, group discussions and seminar presentations.

The vision and mission of the Multi-User Science Research Laboratory is stated below:

VISION: To promote inter-disciplinary research using state of the art equipment in generating qualitative and reliable results comparable with that of any world class laboratory.

MISSION: To produce a new breed of highly skilled scientists and establish standards which do not only serve as a template for other Laboratories in Nigeria but equally meet International Standards.

HISTORICAL BACKGROUND: The idea to establish a central laboratory in Ahmadu Bello University started as far back as pre-1988. By this time, it was obvious that state-of-the-art equipment and facilities for quality research output have significantly depreciated in the University. Some have become obsolete and unreliable, others completely irreparable. As it were then, the dwindling funding of the Universities coupled with the global economic meltdown made replacement of these equipment a very difficult task. Consequently, multiplication of equipment to various departmental laboratories and units ceased to be an option. Hence the need to centralize key laboratory equipment, It was envisaged that this will be maintenance and cost effective.

This situation prompted a former Deputy Vice-Chancellor (academic) 2004-2007 Prof. Shock (late) alongside Prof. A.O Oyewale to kick –start a process whereby the University sets aside from time to time a certain amount of money through a technical committee for the procurement of specialized equipment of central significance to science based faculties.

In the light of all the above, the University took positive steps to address the problem and had earlier constituted a technical committee for procurements of equipment. This committee was in 2006 reconstituted into the committee on Teaching and Research Equipment with its secretariat at the Equipment Maintenance and Development Center ABU. Matters concerning the Multi-User Science Research Laboratory were handled by this committee. Members include the following.

1. Prof. J. F Iyun.	Dean Faculty of Science	Chairman
2. Dr. YKE Ibrahim.	Dept of Pharm. Pharmaceutical Microbiology	Member
3. Dr.O.J Ajanusi	Dept of Vet. Parasitology & Entomology	Member
4. Mr C.S Aiyejumo	Estate Department	Member
5. Dr. Kabir Bala	Dept of Building	Member
6. Dr.(Mrs) O Alabi	Dept of Crop Protection	Member
7. Dr. E J Bala	Dept of Mechanical Engineering	Member
8. Mr. A.U Anya	University Store	Member
9. Mr. D.D Afuwai	Equipment Dev. and Maintenance Center	Secretary

It was during the period of this committee that a place was sought for to site the Multi-User Science Research Laboratory. The Department of Chemistry with Prof. E.J Ekanem as head of department was approached. The present two floor story building was subsequently released by the Department to be renovated for the new Laboratory.

The above committee equally initiated the deployment of the first set of staff to the Multi-User Science Research Laboratory. These are:

i.	Mr. Silas Ekwuribe	Ag. Chief Technologist
ii.	Mr. Iliyasu Mohammed Salisu.	Principal Technologist
iii.	Mr. Bashir Musa	Technologist 1
iv.	Mrs. Uloma Matilda Nma Agbo	Asst. Chief Confidential Secretary.

The above mentioned Staff were to serve under the first Coordinator of the Laboratory Prof. J.F Iyun. However, when the laboratory fully started operation in October 2010 only Mr. Silas Ekwuribe and Mr. Bashir Musa who joined the Coordinator to work at the MUSRL. Latter the staff strength of the Laboratory was boosted with the employment of Mal. Usman S. Kabir as Confidential Secretary and Mal. Umar Abdullahi as Office Assistant.

The move to build a Multi-User Science Research Laboratory was captured and concretized in the 2002-2007 strategic plan of the Ahmadu Bello University. This move was boosted by the intervention of the International Foundation for Science (IFS), under the PRISM (Procurement, Installation, Service and Maintenance) project. The PRISM project was sponsored by the MacArthur Foundation.

The coming of the International Foundation for Science (IFS) marked a critical point in the development of the Multi-User Science Research Laboratory. Thanks to Prof. Y.K.E who painstakingly under the directive of the then Deputy Vice Chancellor (Academic) Prof. J.U Umoh collated a comprehensive proposal for IFS titled “strengthening Research Capacity in Ahmadu Bello University” Sub-title: “Upgrading and Strengthening Research Facilities of the Multi-User Science Research Laboratory in the Faculty of Science”. This document did not only earn the approval of Ahmadu Bello University to be enlisted as a beneficiary of the PRISM pilot project by IFS but also a reference guide to operating the MUSRL till date. It also serves as a historical material.

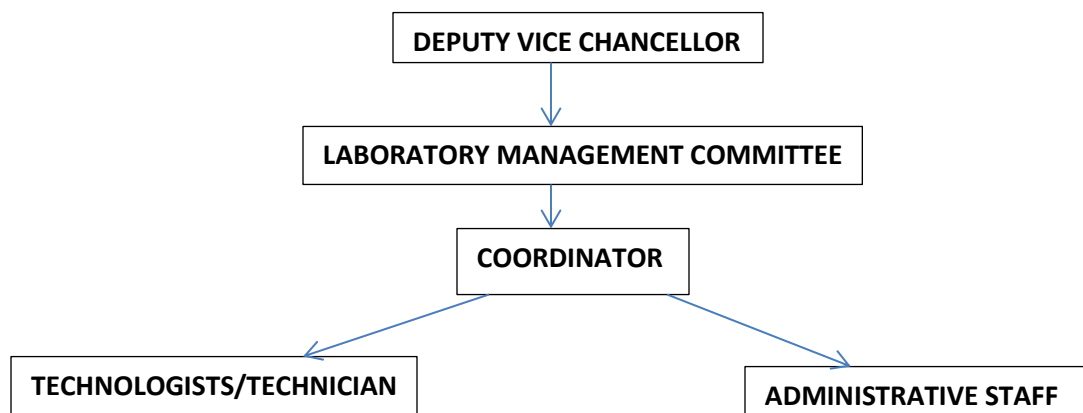
In 2007, the first Management Committee for the Multi-User Science Research Laboratory was set up. The membership of the committee was as follows: -

Professor I. I. Funtua, DVC (Admin)	-	Chairman
Professor J. F. Iyun, MUSRL coordinator	-	Member
Professor Y. K. E. Ibrahim, EDMC Director	-	“
Dr. D. A. Yusuf, Dept. of Agric Eng.	-	“
Professor A. Ahuwan, Dept of Ind. Des.	-	“
Dr. (Mrs.) A Mamman, Dept. of Haem.	-	“
Dr. (Mrs) H. Ibrahim Dept of Pharm.	-	“
Professor NDG Ibrahim, Dept of Vet Phat	-	“
Faculty Officer, Faculty of Science Secretary.	-	Secretary

The management of the Multi-User Science Research Laboratory was therefore shifted from the committee on Teaching and Research Equipment to the above mentioned committee. As at this period, the organogram of the laboratory was as shown below.

VICE CHANCELLOR





The inclusion of Ahmadu Bello University in the MacArthur Foundation/IFS sponsored PRISM Pilot project in the African sub-region which was executed between 2007 – 2011, as said earlier facilitated the establishment of the Multi-User Science Research Laboratory. In this Project, scientific equipment worth four hundred thousand US dollars (\$400,000.00) was donated to ABU. The donors in their wisdom gave a condition not to release these equipment until the Laboratory building was ready to house them.

The rehabilitation of the present structure of the Multi-User Science Research Laboratory was completed in June 2010. The first batch of the IFS equipment arrived ABU on 1st Oct 2010. That same month, the equipment were moved into the Laboratory together with others that were earlier purchased by the University through the Committee on Teaching and Research Equipment. Activities started in the Multi-User Science Research Laboratory in October, 2010. However, analysis could not start until May, 2011 when most of the equipment brought in had been installed. The first batch of equipment received from IFS/PRISM project are listed below.

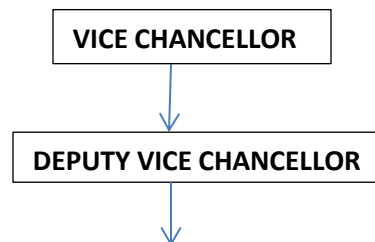
1. Varian AA 240FS Atomic Absorption spectrophotometer, (with accessories).
2. X-ray Fluorescence spectrophotometer, Twin X
3. Millipore Laboratory water purification system.
4. Satorius Analytical laboratory balances (2)
5. Uninterrupted Power Supply units (2)
6. Asys Microplate Reader & accessories.

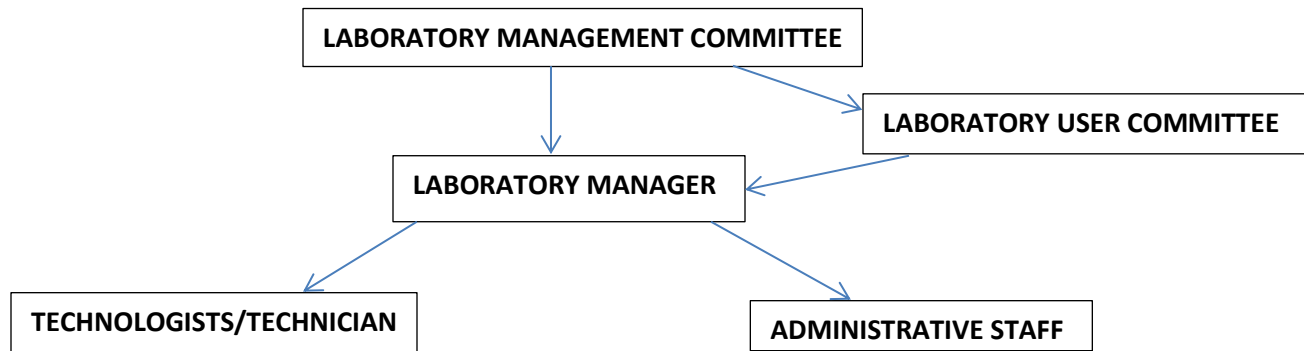
7. Hach Advance portable Laboratory kit

In March, 2012, the Management Committee and the organizational structure for the Multi-User Science Research Laboratory were re-constituted with the following as members: -

- | | |
|--|-------------------------------|
| 1. Prof A M. Adamu (DVC Academic) | Chairman |
| 2. Prof. G.N Akpa (Dean Fac. of Agric.) | Member |
| 3. Dr. I. A Yakasai (Represented the Dean Fac. of Pharm sc.) | “ |
| 4. Prof. O.J Mudiare (Dean Fac. of Engineering) | “ |
| 5. Prof. Y.K.E Ibrahim (Director EMDC) | “ |
| 6. Prof. A.O Oyewale (Chairman, Teaching & Research Equip Comm.) | “ |
| 7. Dr. M. I. A Saleh (Represented the Dean Fac. of Medicine) | “ |
| 8. Prof. J.F Iyun (Dept. of Chemistry) | “ |
| 9. Prof. Andrew Nok(Dean Faculty of science) | “ |
| 10. Prof. M.B Yunusa (Dean Env. Design) | “ |
| 11. Mr. Silas Ekwuribe | Secretary/ Laboratory Manager |

CURRENT ORGANIZATIONAL STRUCTURE OF THE MULTI-USER SCIENCE RESEARCH LABORATORY





CONCLUSION: The history of The Multi-User Science Research Laboratory ABU, will not be complete without mentioning the enormous contribution of some past and the Present Vice Chancellor. Prof. J.U Umoh and Prof. S. U Abdullahi saw the establishment of the Multi-User Science Research Laboratory as a priority during their administration. The present Vice Chancellor Prof. Abdullahi Mustapha always give his approval for every vision oriented and articulated request from the MUSRL and severally visits the laboratory, sometimes unannounced.

The Multi-User Science Research Laboratory ABU was established based on the Procurement, Installation, Service and Maintenance (PRISM) concept. Facilities and equipment in the Laboratory are funded by;

- Ahmadu Bello University.
- MacArthur Foundation (through the International Foundation for Science IFS)
- Education Trust Fund (ETF)
- Step-B Project (Science & Technology, Education Post-Basic Project)

COMPILED BY:

SILAS EKWURIBE

LABORATORY MANAGER (MUSRL)

March, 2013