

# *Africa Centre of Excellence*

## *In Phytomedicine Research and Development*

**ACE 033**

### ***Implementation Plan***

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## **ABBREVIATIONS**

ACEPRD: Africa centre of excellence in Phytomedicine Research and Development

GMP: Good Manufacturing Practice

TMP: Traditional Medical Practice

M&E: Monitoring and Evaluation

NIPRD: National Institute for Pharmaceutical Research and Development

BDCP: Biodiversity and Cultivation Programme

CSIR: Center for Science and Industrial Research, South Africa

## **1. BRIEF NARRATIVE SUMMARY**

### **Background**

Recently, there has been a paradigm shift from traditional pharmaceuticals to plant derived medication in the treatment of diseases. This has led to a global demand for plant-derived medicine (phytomedicines) as a primary and complementary medical tool. The world market for phytomedicine is estimated to be over \$100 billion annually. Africa has not contributed significantly to phytomedicine research, development and commercialization despite of the huge biodiversity on the continent.

Within the region traditional medicine has not been fully integrated into the modern healthcare delivery system due to the following challenges:

- The safety, efficacy and stability of traditional remedies have not been fully documented
- The indigenous traditional medicine knowledge base and culture are on the verge of extinction due to aging and death of custodians
- Depletion of herbs of medicinal value due to deforestation and other factors.
- Inadequate authentication, documentation and comprehensive database of flora in the sub-region.
- Poor academia- industry relationship

In order to overcome these challenges, this centre aims to develop the field of phytomedicine and integrate it into the healthcare delivery system in the sub-region. To accomplish this, strengthening in the area of clinical pharmacology, biotechnology, pharmaceutical microbiology and bioinformatics is necessary.

### **Motivation:**

Through the ACEPRD, the University of Jos is taking a leadership role as a Center of Excellence in strengthening training through development of Masters and PhD programs in phytomedicine, clinical pharmacology, biotechnology, pharmaceutical microbiology and bioinformatics. This will increase the supply of national/regional work force and contribute to the area of applied research in phytomedicine. There are also plans to train traditional medical professionals in areas relevant to Phytomedicine through short courses in order to better achieve educational standardization in traditional medicine. The above will be accomplished through innovative techniques that allow for the creation of new trends in science and technology with the intention of addressing the health challenges of Africa.

### **Objectives:**

The main objective of the Centre is to achieve excellence in educational training and applied research in discovery, production and management of phytomedicine, clinical pharmacology, biotechnology pharmaceutical microbiology and bioinformatics, as well as strengthen the education of traditional medical practitioners through the development of short courses. The above will be accomplished via:

- Enhancement of manpower development through quality teaching and training at a national and regional level in certificate, diploma, masters and PhD programs related to phytomedicine
- Expansion of competence in solving health problems in the region through drug development from the available biodiversity.
- Increasing the availability of phytomedicine through academia-industry relationship to alleviate the disease burden and enhance economic empowerment in the sub-region.
- Facilitating the integration of traditional herbal medicine practice in the healthcare delivery system in the sub-region.
- Conservation of our biodiversity through cultivation and preservation of medicinal plants.

### **Methodology**

The above objectives can be achieved through the development of new curriculum for short courses, Masters and PhD programs in the ACEPRD at the University of Jos. In order to strengthen the educational experience at our Center of Excellence and improve applied research techniques, outreach to students

both nationally and regionally will be conducted. Regional and International partnerships will be developed with the intent of creating collaborative opportunities. Existing infrastructure of the University of Jos facilities will be improved, and new, innovative and creative methods of teaching will be employed. The ACEPRD will allow for a stronger workforce in phytomedicine to be distributed within the region among government agencies, research institutions and the private sector that will help to strengthen our bio-economy and address gaps in the healthcare sector.

Regional partners including the University de Lome, Togo will be involved in the studies of traditional medicines, ethno-botanical survey, the development of herbarium and pharmacopeia. It will also be involved in recruiting students for the Traditional Medical Practice (TMP) new short-term, masters and Ph.D courses. The University of Abomey-Calavi will participate in the areas of biotechnology and applied genetics research, development of phytochemical products from medicinal plants, recruiting students, and staff exchange. The Kwame Nkrumah University of Science and Technology, Kumasi, Ghana; the University of Buea, Cameroon and the University de Ouagadougou will be involved in Biodiversity utilization and development, pharmacokinetics, and development of phytochemical products from medicinal plants, recruiting students and staff exchange.

National partners including NnamdiAzikiwe University, Awka, and the University of Port-Harcourt, Port-Harcourt will be engaged in curriculum development of new short-term courses including phytoremediation, human capital development in applied research in phytomedicine, recruiting students and staff exchange.

Private sector partners including the pharmaceutical companies, Neimeth and Europharm, will be involved in student internships and manufacturing of phytomedicinal products.

International partners including Sheffield Hallam University, Sheffield, is involved in applied research component of the project including; protein purification, DNA sequencing, vaccine development and student/faculty exchange. The Centre for Scientific and Industrial Research is involved in nanotechnology and nanomedicine development and student/faculty exchange. The University of Siena is involved in phytomedicine research and development. They have collaborated with us in the area of snake venom molecular studies and will be involved in further molecular studies including cloning and vaccine production. There will be student/faculty exchange between the institutions. The partnership will be facilitated by the Department of Internal Medicine. As a partner; the Ayurvedic University has already donated a set of bioreactors to the Centre. In the future they will be involved in the area human capital development in applied phytomedicine research, pharmacokinetics, pharmacodynamics, students/faculty exchange.

### **Important Changes Made**

The ACEPRD Project Management Committee is responsible for managing the grant and its activities. The Centre now has a functional audit committee including the Director of internal audit of the University, Procurement team, financial management team (External funds Unit), headed by the financial officer of the Centre and a Monitoring and Evaluation (M&E) team that has some measure of independence from the University system.

There is also a functional Secretariat from the Registry Unit of the University for the Centre to oversee the day-to-day administrative functions of the Centre. The Centre has developed new courses that are currently undergoing consideration for approval by the senate curriculum committee. These courses will increase capacity in phytomedicine training and research particularly faculty from within and outside the University of Jos. The changes will equip the Centre with the capacity to solve regional health-related problems by utilizing the continent's vast biodiversity.

## 2. OVERVIEW OF PLANNED OUTPUTS, ACTIVITIES AND COST FOR FIRST YEAR

**Table 1: Overview of first project year**

Code	Priority Rank	Result/Activity/Task	Budget Estimate (US\$)		
			ACE leader	Partners	Total
Action Plan 1	(1 highest 5 lowest)	ACE Action Plan to Achieve Learning Excellence	(Component total for ACE leader)	(Component total for partners)	(Total of component)
1.1	1	Design new curriculum and get approval for new short courses	0	7,500	7,500
1.2	3	Enrol and run new short courses	33,500	0	33,500
1.3	1	Design new curriculum and get approval for Masters program	1,245	0	1,245
1.4	3	Enrol and run new Masters curriculum	83,000	0	83,000
1.5	1	Design new curriculum and get approval for PhD program	1,245	0	1,245
1.6	3	Enrol and run new PhD curriculum	52,000	0	52,000
1.7	2	e-learning platform development	102,500	5,500	108,000
1.8	4	Running of English Second Language courses	8,670	0	8,670
1.9	2	Upgrade and refurbishment of Learning Facilities/Resources	141,800,8	35,800	177,600
1.10	1	Curriculum development of English as Second language	500	0	500
1.11	5	Hostel accommodation at the University for students	21,000	45,000	66,000
1.12	1	Improving Learning Equipment	300,000	0	300,000
		<b>Subtotal</b>	745,460	93,800	839,260
Action Plan 2	(1 highest 5 lowest)	ACE Action Plan to Achieve Applied Research Excellence	(Component total for ACE leader)	(Component total for partners)	(Total of component)
2.1	2	Applied research skills for faculty	78,200	0	78,200
2.2	3	Field sample study and collection	2,000	0	2,000
2.3	3	Lab based sample analysis for students (basic lab equipment)	16,000	10,500	26,000
2.4	5	Publication submission	40,000	0	40,000
2.5	2	Maintaining animal facility for laboratory tests	25,000	5,700	30,700
2.6	1	Core specialized research equipment	444,312	0	444,312
2.7	4	Center monthly seminar	1,200	0	1,200
2.8	2	Improving research environment	50,000	0	50,000

Code	Priority Rank	Result/Activity/Task	Budget Estimate (US\$)		
			ACE leader	Partners	Total
		<b>Subtotal</b>	656,712	16,200	672,412
Action Plan 3	(1 highest 5 lowest)	ACE Action Plan to Achieve Outreach of students and partners	(Component total for ACE leader)	(Component total for partners)	(Total of component)
3.1	2	Annual partner site visit	10,000	0	10,000
3.2	2	Regional Student Exchange	0	18,250	18,250
3.3	2	Regional Faculty Exchange	0	22,250	22,250
3.4	3	Training by international faculty to build UNIJOS capacity	0	7,000	7,000
3.5	5	Center combined regional and international research conference for students and faculty	112.50	30,937.50	71,050
3.6	4	Regional Center Research Conference	24,350	13,250	37,600
3.7	1	Project management committee meeting (bi-weekly)	0	0	0
3.8	2	Outreach events targeting women and minorities	8,000	23,000	31,000
3.9	3	Industry Networking events	52,500	0	52,500
		<b>Subtotal</b>	134,962.5	114,687.5	249,650
Action Plan 4	(1 highest 5 lowest)	ACE Action Plan to Achieve Center Operations and Management Excellence	(Component total for ACE leader)	(Component total for partners)	(Total of component)
4.1	1	Center Operational Cost	9,000	5,000	14,000
4.2	2	Vehicle purchase, fuel, maintenance	100,000	0	100,000
4.3	5	International Advisory Board meeting	5,100	18,150	24,250
4.4	4	Regional Advisory Board meeting	2,000	23,000	25,000
4.5	1	Center Management Training	20,000	0	20,000
4.6	3	Accreditation	23,125	0	23,125
		<b>Subtotal</b>	159,225	46,150	206,875
Action Plan 5	(1 highest 5 lowest)	ACE Action Plan to Strengthen Financial Stability	(Component total for ACE leader)	(Component total for partners)	(Total of component)
5.1	1	Farm cultivation management and expansion	60,250	8,250	68,500
		<b>Subtotal</b>	60,250	8,250	68,500
<b>TOTAL BUDGET</b>			<b>1,756,609.50</b>	<b>279,087.50</b>	<b>2,036,697</b>





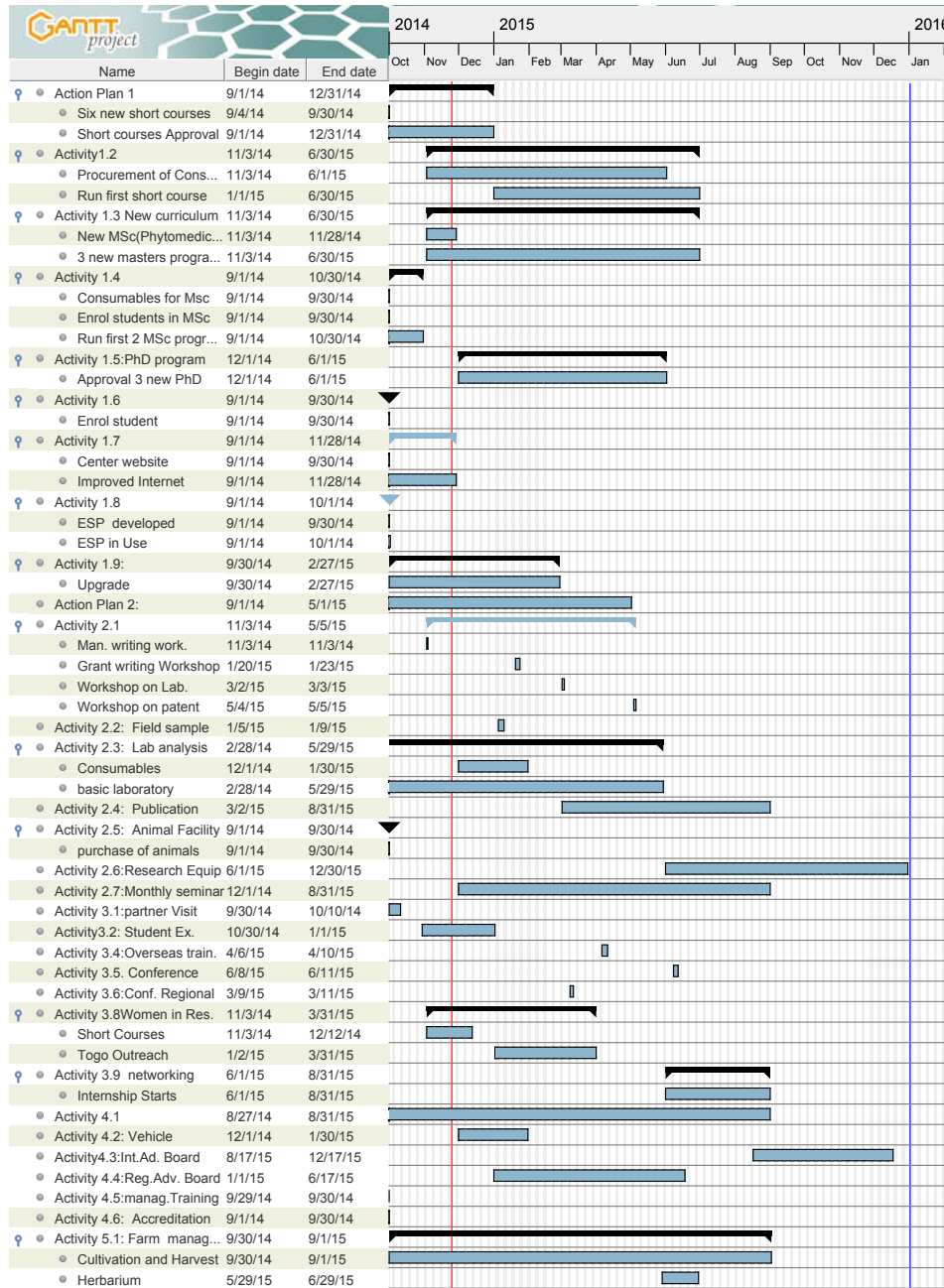
**Table 2: Overview distribution among partners**

Code	Result/Activity/ Task	Budget Estimates (USD)															
		National					Regional					International					
		Univ. of Port e-Univ.	NnamdiAzikiw	Neimeth PLC.	Euro-Pharm	BDCP	Univ. of Buea, Cameroon	Abomey- Univ. of Togo	Univ. of Lome, Ouagadoungo	Univ. de Ouagadoungo	Nkrumah Univ. of Science and	UKwame Nkrumah Univ. of Science and	CSIR	University of Siena, Italy	Ayurvedic University, UK	Hallam University, UK	Sheffield Hallam
<b>Action Plan 1</b>	<b>ACE action plan to Achieve Learning Excellence</b>																
1.1	Design new curriculum and get approval for new short courses	2500											2500			2500	7,500
1.7	e-learning platform development						1,100	1,100	1,100	1,100	1,100						5,500
1.9	Upgrade and Refurbishment of learning facilities and resources						7,160	7,160	7,160	7,160	7,160						35,800
1.11	Hostel accommodation at the University for students		6,000				1,500	1,500	36,000								45,000

<b>Action Plan 2</b>	<b>ACE action plan to Achieve Applied Research Excellence</b>																
2.3	Lab based sample analysis for students	1,500	1,500					1,500	1,500	1,500	1,500	1,500					10,500
2.5	Maintaining animal facility for laboratory tests							1,900	1,900	1,900							5,700
<b>Action Plan 3</b>	<b>ACE Action plan to Achieve regional outreach of students and partners</b>																
3.2	Regional Student Exchange							3,650	3,650	3,650	3,650	3,650					18,250
3.3	Regional Faculty Exchange							4,450	4,450	4,450	4,450	4,450					22,250
3.4	International/Oversees training of faculty															7,000	7,000
3.5	Center combined regional and international research conference for students and faculty							3,750	3,750	3,750	3,750	3,750	3,750		4,687.50	3,750	30,937.50

3.6	Regional Center Research conference							2,650	2,650	2,650	2,650	2,650					13,250
3.8	Outreach events targeting women and minorities							4,600	4,600	4,600	4,600	4,600					23,000
<b>Action Plan 4</b>	<b>ACE Action plan to Achieve Center Operations and Management Excellence</b>																
4.1	Center Operational Cost							1,000	1,000	1,000	1,000	1,000					5,000
4.3	International Advisory Board meeting												4,537.5,	4,537.5	4,537.5	4,537.5	18,150
4.4	Regional Advisory Board meeting							4,600	4,600	4,600	4,600	4,600					23,000
<b>Action Plan 5</b>	<b>ACE Action plan to Strengthen Financial Stability</b>																
5.1	Farm cultivation management and expansion								2,750		2,750	2,750					8,250
Total		4,000	7,500	-	-	-		37,860	38,710	75,110	39,110	34,460	10,787.50	4,537.50	9,225	17,787.50	279,087.50

## Gantt Chart



## **4. IMPLEMENTATION ARRANGEMENTS**

### **4.1 Guiding rules and regulations**

The Centre has a goal of promoting and sustaining regional specialization in phytomedicine, through quality training and applied research at the postgraduate level that is relevant to the healthcare needs of the sub-region. Here we provide a framework for undertaking the improvement of education, research and scholarship for phytomedicine in the region. This aligns with the University's strategic plan to support research and training that encourages knowledge mobilization for improved quality of life. The university management will play an active role in signing financing agreement, MOUs, contracts, and supervision of funds through its financial management team including finance, audit, advancement and procurement units that will provide accounting and financial reporting for the centre funds.

The Institution's policies concerning admission and enrolment for MSc and PhD through the School of Postgraduate Studies will be adhered to strictly by the ACEPRD. The School of Postgraduate Studies will work with the Centre to apply these rules in its admission processes. The University has a gender policy in place that empowers women in scholarship, administration and appointment in the academia. Therefore gender mainstreaming will be adhered to in the process of admissions and the encouragement of female students /faculty in human resource development in Phytomedicine and applied research. The University regulation on postgraduate admissions, disciplinary policy will be strictly adhered to. Furthermore, the Centre will comply with university intellectual property regulations.

In addition, the University structures for financial accountability (finance, audit, procurement, price control, pre-qualifications) will be strictly adhered to as well as the World Bank financial regulations. To engender these, a financial officer and a procurement officer from the external funds unit of the university bursary has been seconded by the university management to the Centre. They are to report to the university management through the project director all matters of appropriation and implementation. Two committees finance and procurement will check all the books of the Centre, grant approval for all procurements, and monitor the accounts and financial dealings of the Centre.

The Office of Research and Development (ORD) has an institutional research policy. Research that will be conducted by students and faculty of the ACEPRD will be made known to the ORD for adherence of the guiding policies on research. The ORD has competent Directors in-charge of pre-award, post-award, deputy director in-charge of policy implementation, a Director and a Research Administrator who are all trained in Research Administration and Management. They will assist the Centre in translating research results beyond publications to community relevance.

There is a university Central Research Ethics Committee that will receive applications from the Centre for any research that will be conducted by the centre, complying with the university approval process as well as the National Research Ethics guidelines, which have been adapted for university use.

To allow the centre independence, autonomy and flexibility in its timing and decision-making the Vice Chancellor has appointed a project management team to run the Centre. This is to make the Centre an entity that is compliant with university institutions but not lost in the day-to-day operations of the University. As an integral part of a university system, the Centre administrative structure envisions a strategic approach to evolve innovative thinking to bring about excellence in human capacity development in phytomedicine for the development of Africa, contributing to the world health system.

### **4.2 Governance structures**

The University of Jos where the ACEPRD is located has a governance structure which provides leadership and guidance for all educational and research activities. The Centre has developed an administrative structure that is made up of international advisory board that is responsible in standardizing the ACEPRD education and research programme. It will be involved in the international accreditation of its education

programmes, and implement all matters pertaining to the overall scientific and programmatic quality and standard of the ACEPRD. The IAB will also be responsible for the supervision of compliance to the project mission and vision.

Other administrative structures include the sub-regional advisory board, project management team, and departmental units.

The day-to-day administration of the project is the responsibility of the project management team (PMT) that will meet twice a month. The PMT will proffer solutions to project challenges, and ensure proper implementation of project objectives and goals. The Centre Leader Prof. John Chinyere Aguiyi is designated to provide leadership, advocacy, coordination, management and administration of all aspects of implementation, training and research, including support and policy framework. He is also vested with the responsibility of reporting to the World Bank, Association of African Universities and the National University Commission.

The project management team has the responsibility of managing the Centre in accordance with the program guidelines and the funding agreement, providing accounting and financial reporting for Centre's funds. For the monitoring and evaluation of project implementation, the PMT is expected to meet twice in a month.

<b>Project Management Team</b>	
<b>Position</b>	<b>Name</b>
Center Leader	Prof. JC Aguiyi
Deputy Center Leader	Prof FK Okwuasaba
Secretary	Mr.Mark G. Kparamak
M & E Officer	Prof CA Ugodulunwa
Financial Officer	Mr. Luke C. Ngwu
Procurement Officer	Mr. Micah O. Sattong
Head of phytomedicine program	Prof. F.C Ohiri
Head of Clinical Pharm	Dr.MaxwellDapar
Information Communication Technology	Dr.Tankolshaya
Head of Library	Dr. Stephen Akintunde
Education Leaders	Prof. U.K Eke Prof. M.N Sule
Post Graduate Representative	Prof.Warisu O. Alli

The Regional Advisory board will contribute to faculty exchange, student mobilization for training, workshop participation, budget implementation by partners, and evaluation of success of the ACEPRD programme in the region. They will meet twice annually.

<b>Nameof Partner</b>	<b>Representative</b>
Universityof Lome, Togo	Dr. Nicholas Koudouvo
UniversityofAbomey-Calavi, Cotonou, Benin Republic	Dr. Enoch G. Achigan-Dako
UniversityofBuea, Cameroon	Prof.Efange Simon
University de Ouagadougou, Burkina Faso	Dr.DjierroKhadidja
KwameNkrumah University of Science and Technology, Kumasi, Ghana	Prof.Theophilus C. Fleitcher
University of Port-Harcourt	Prof. A. Akwaranta
NnamdiAzikiwe University, Awka	Prof. Charles O. Esimone

Biodiversity Development and Cultivation Programme, BDCP	Prof. E.N Sokomba
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Department	Name
Phytomedicine	Prof. F.C Ohiri
Phytomedicine	Dr. Charity Amienyo
Clinical Pharmacology	Prof. F.O. Okwuasaba
Clinical Pharmacology	Prof. J.C. Aguiyi
Clinical Pharmacology	Prof. (Mrs.) M.O. Uguru
Clinical Pharmacology	Dr. N.N. Wannang
Clinical Pharmacology	Dr. S.O. Otimenyin
Pharmaceutics	Prof. M.A. Ibrahim
Pharmaceutics	Prof. I.S Okafor
Pharmaceutics	Dr. I Ogaji
Medicinal Chemistry	Prof. J.A. Kolawale
Medicinal Chemistry	Prof. Alemika Taiwo E.
Medicinal Chemistry	Prof. N.A. Ochekepe
Clinical Pharmacy	Dr. S.S. Gyang
Clinical Pharmacy	Dr. L.M.P. Dapar
Medicinal Chemistry	Dr. (Mrs.) L. A. Lohdip
Medicinal Chemistry	Prof. E.A Adalokun
Biotechnology and Genetic Engineering	Prof. B.A Ajala
Zoology	Dr. Georgina Mwansat
Human Physiology	Dr. U.G Egesie
Community Medicine	Prof. C. Ogbonna
Internal Medicine	Dr. O.O Agbaji
Education Foundations	Dr. M.N Sule
Chemistry	Prof. M. Ekwonchi
Reproductive Biology	Dr. E.O Ekwere
Pharmaceutical Microbiology	Emmanuel Nnadi
Pharmaceutical Microbiology	Dr. P.M Lar
Intellectual Property	Dr. D.N Jangkam
Bioinformatics	Dr. I shaya Tanko
Biochemistry	Dr. T.I. Johnson
French Linguistics	Prof. U.K Eke

**CENTRE FACULTY:** The Centre faculty will teach, supervise and mentor all Masters and PhD students, facilitate workshops, conduct seminars and research activities at the Centre. They are solely responsible for the day-to-day management of the Centre Units. They will meet with Management Team to present all research and learning activities and challenges monthly.

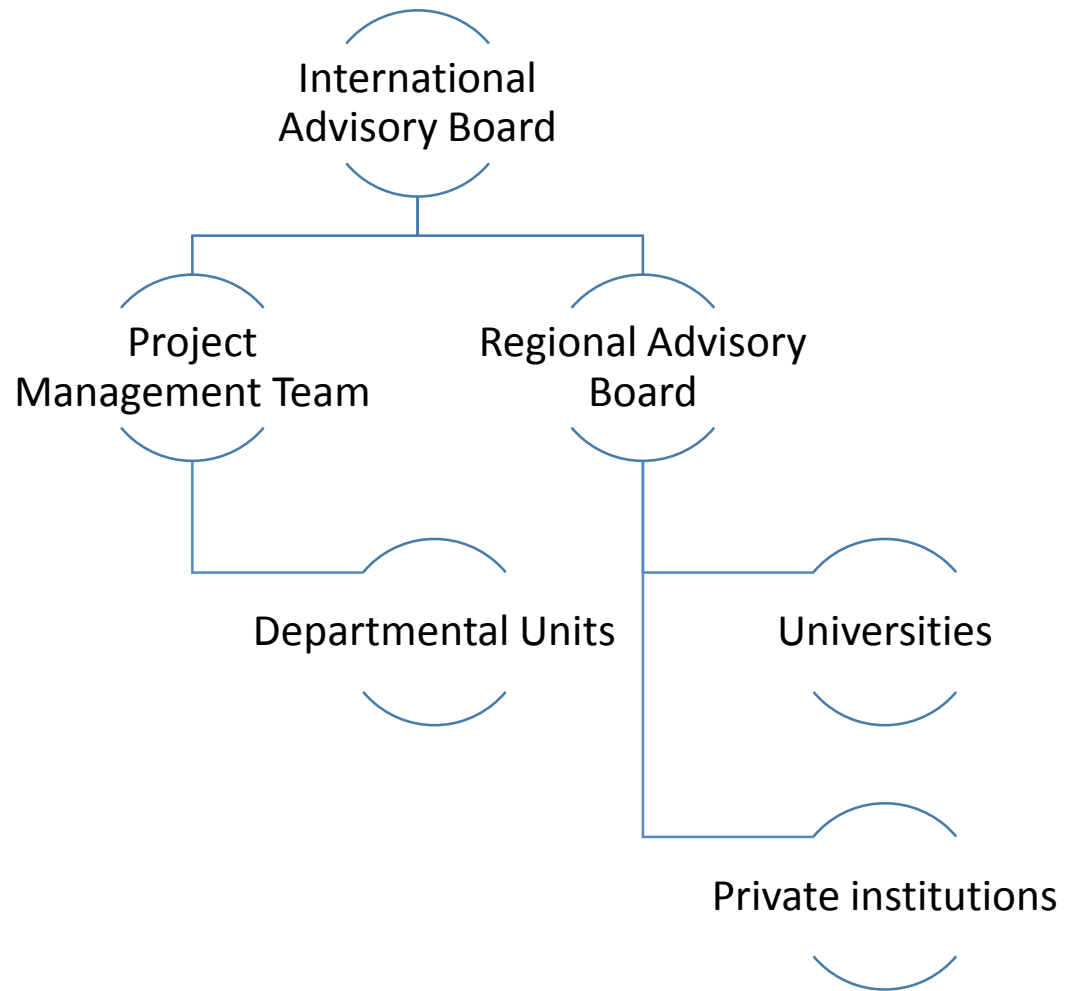


Figure 1: ORGANOGRAM OF ACEPRD ADVISORY BOARDS



## Partners' Contribution in the ACEPRD Project

### Regional Partners:

University of Buea, Cameroon

The University of Buea, Cameroon as a partner will be involved in human capital development in applied phytomedicine research, medicinal and computational chemistry and chemo-informatics. It will also be involved in pharmacokinetics and pharmacodynamics of phytomedicine research and development. There will be also student/faculty exchange. Prof. Simon Efang a renowned Professor of medicinal chemistry will anchor this partnership.

University de Lome

The University de Lome will contribute in its areas of expertise traditional medicine and natural product studies of the region. They have a very active herbal unit in the country's Ministry of Health, which is interested in working with the University de Lome to translate natural medicinal plants to products and service. This can be achieved by bringing its human resources; the traditional practitioners and academics, together. University de Lome will be involved in ethno-botanical studies of the region, helping the Centre to know the medicinal plant potentials of each part of the region and the diseases it can address respectively. It will also assist in the development of an herbarium and pharmacopeia on the regional medicinal plants. University de Lome will also be involved in staff and student exchange. The partnership is represented by Dr. Nicholas Koudouvo, who holds a PhD in natural and phytomedicine science. He has also worked extensively with herbal practitioners. He will be anchoring the project's herbal education in Togo.

University of Abomey-Calavi, Cotonou Benin Republic

The University of Abomey-Calavi department of biotechnology has experts in phyto-genetics, phyto-conservation and production. Students and faculty exchange between their University and the Centre will enhance sharing of knowledge and expertise. Dr. Ir. Enoch G. Achigan-Dako, the Head of the Horticulture and Genetics Unit of the Faculty of Agronomic Sciences at the University is the liaison to the Centre.

Kwame Nkrumah University of Science and Technology Kumasi Ghana

The Kwame Nkrumah University of Science and Technology, Kumasi, Ghana is renowned for research in natural products, agriculture and natural resources. The ACEPRD project will explore the biodiversity utilization and development in that country to transform research products into phytomedicines in collaboration with pharmaceutical industries in Ghana. Pharmacodynamics and pharmacokinetics of phytomedicines shall also be addressed by the Ghanaian collaboration. The phytochemical components of identified medicinal plants will be used for teaching and research. Student and faculty exchange will take advantage of these learning opportunities for applied research. Prof. Theophilus C. Fleischer who is the current Dean of the pharmaceutical sciences is the main contact person. He will also be involved in assisting the Centre to recruit students from Ghana to study phytomedicine.

University de Ouagadougou, Burkina Faso

The University de Ouagadougou will contribute human capital development in applied phytomedicine research; pharmacokinetics and pharmacodynamics through student/faculty exchange.

National Partners

University of Port-Harcourt

The University of Port-Harcourt is a national partner and is involved in the introduction of environmental management through the use of phytomedicine (Phytoremediation). It will contribute to the phytoremediation short-term course curriculum development and in the teaching of the course. Students will go for internship in Port Harcourt for environmental pollution management experience. The partnership is facilitated by Prof. A Akwaranta.

#### Nnamdi Azikiwe University Awka

The Nnamdi Azikiwe University Awka is also a national partner that will help develop human capital in applied phytomedicine research phytomicrobiology, biotechnology, pharmacokinetics and participate in student/faculty training. The partnership is facilitated by Prof. Charles Esimone an expert in pharmaceutical microbiology and biotechnology.

#### INTERNATIONAL PARTNERS:

Sheffield Hallam University, UK

The Sheffield Hallam University is providing bench space to our postgraduate students on short-term visits to develop in vitro and in vivo models for the assessment of the compounds absorption, distribution, metabolism, excretion, and toxicity in the systems. They will also be involved in our vaccine development and design. Dr Smith a renowned molecular biologist will develop a curriculum for short-term course in the areas of analytical biology, protein purification and characterization and molecular biology. The training of students/faculty will be for 2 weeks annually in Jos.

#### Centre for Scientific and Industrial Research, (CSIR) South Africa

The Centre for Scientific and Industrial Research (CSIR) will be involved in the development of curriculum in nanotechnology. Dr Hulda Swai an expert in nanotechnology will conduct train-the-trainers workshops and short-term courses in various aspects of nanotechnology and nanomedicine and their integration in phytomedicine. The training of student/faculty will be for 2 weeks in Jos annually.

#### University of Siena, Italy

The University of Siena is involved in phytomedicine research and development. They have collaborated with us in the area of snake venom molecular studies and will be involved in further molecular studies including cloning and vaccine production. There will be student/faculty exchange with the partnership shall be facilitated by the Department of Internal Medicine.

#### Ayurvedic University, New Jersey USA

The Ayurvedic University partnership was developed by the Centre because of its expertise in drug discovery from natural products and traditional medicines. The university leadership was instrumental in the development of processes for the manufacture of Paclitaxel and second generation Paclitaxel. They established a line of Nutraceuticals (phytomedicines as food supplement) that were marketed through the company's XetaPharm, a subsidiary of the University, which established offices in the UK, China, India and Nigeria. The Nigerian subsidiary, Xechem Pharmaceuticals Nigeria, Ltd., was established to manufacture and market NICOSAN™ a phytopharmaceutical for the treatment and management of Sickle Cell Disease, licensed from the National Institute of Pharmaceutical Research and Development (NIPRD) in Abuja, Nigeria. The Ayurvedic University mission is to bring credibility and acceptability to traditional systems of health and medicines to western cultures and to establish a multi-national drug discovery team that will collaborate on phytopharmaceuticals for the treatment of malaria and other neglected diseases. This is a natural correlation of the objectives of the ACEPRD, which is to integrate traditional systems of health and medicines into the world of western medicines. In support to the centre Ayurvedic University has donated a set of bioreactors to the Centre. In the future they will be involved in the area human capital development in applied phytomedicine research, pharmacokinetics, pharmacodynamics, students/faculty exchange

#### INDUSTRY PARTNERS

Neimeth Pharmaceuticals

Neimeth Pharmaceutical Company has a mission to “add value to indigenous research” through acquisition of patents, manufacturing of lead compounds, and commercialization. The partnership will strengthen the existing internship programme for students. Furthermore, the industry has contributed immensely in the area of Good Manufacturing Practice (GMP) in phytomedicine development in the Centre. The partnership is facilitated by Mr. Emmanuel Ekunno the Managing Director/Chief Executive Officer.

Europharm Ltd.

Europharm is a Nigerian-owned pharmaceutical company based in Jos. Its business includes the manufacturing of pharmaceuticals, medicinal chemical, and botanical products. A partnership with the ACEPRD will allow the centre to be a knowledge generating source for the company. The company will also be a training ground for the students for internships and field trips, and staff will also have direct access to the laboratories for industrial research. The partnership shall be facilitated by the Managing Director Dr. J.N Nasir.

#### **4.3 Incentive structures**

The planned facility renovations, including upgrading of mushroom and animal houses and expanding farm capabilities are all to the benefits of the Centre and the University. Learning is improved for faculty and students not just in the centre but the university as a whole by access to these improvements. The admission of foreign partner students, visitation of foreign partner faculty, and exchange programmes bring additional value to the learning and research environment through increased specialization and broadened perspective. Subscription to high impact journals by the centre will also benefit the university and regional partners immensely by roll modelling academic standards, motivating faculty development and increasing high impact publications.

Faculty and staff working in the ACE, in addition to their standard university granted salaries, will have the opportunity to participate in collaborative research work with partner institutions and individuals. This increases their opportunity for producing highly rated publications in reputable journals, increasing knowledge generation and access to grant support. Networking with experts in the field of phytomedicine research and development is also made possible through exchange programmes locally and internationally further expanding the ability of faculty and students to expand their work. Additional incentives including support for manuscript writing and publication, exchange visits to partner institutions and conferences. Additional attention will be paid to ensure female staff and students are accessing these centre benefits.

Students in the Centre have the opportunity for internships with the Centre partners in the pharmaceutical industries, exposing them to practical and pragmatic approaches to phytomedicine and the production of research findings. They are also equipped with entrepreneurial and managerial skills that will help them enter the workforce more easily. This culminates to the development of a future of human resources in the health sector. Exchange programs for the region will allow regional students to benefit from the resources in teaching by faculty and facilities of the centre. Laboratories of international partners like the CSIR in South Africa and Sheffield Hallam University are open to the Centre for targeted learning by faculty for centre capacity building. To support regional student exchange some support for accommodations will be provided.

#### **Incentive for Partners**

The regional partners have agreed to engage in the project because of the gap it aims to address in the area of phytomedicine capacity building and research that will address the issues of alternative medicines in the region. The project will help them harness the biodiversity in their respective environments for the benefit of their socio-economic well-being and the development of the health system in the region both now and in the future because of the human resources being developed in this field. All partners appreciate the benefit in conferences, research publications, and outreach activities. Female scientists, minorities, and faculty from the region have also been specially considered. The aim is to encourage

women scientists and minority as much as possible to contribute in the development of their countries health system. The partners will also be sponsored to attend regional and internal conferences by the ACEPRD annually to represent their participation in the Center.

#### **4.4 Roles and Responsibilities**

##### **Project Director and Centre Leader**

The Project Director Prof. John C. Aguiyi is a pharmacologist, and pharmaceutical analyst, with vast experience in teaching, research and community service both locally and internationally. He has administrative experiences and has served at different levels of national and international academic boards, pharmaceutical, and leadership roles in the university. He is the current Dean of the Faculty of Pharmaceutical Sciences, Chairman of Committee of Deans of Pharmacy Schools in the Country, external examiners to institutions in Nigeria and the region. He will be responsible for the day-to-day administration, education, research, fiscal and working together with the advisory board, the project management team, the secretariat, to attain and maintain excellence in phytomedicine research and development.

##### **Deputy Project Director**

The Deputy Centre Leader Professor Francis K. Okwuasaba, a renowned Pharmacologist with vast experience in research, teaching and community service will assist the Project Director in ensuring the implementation of academic programmes in the Centre, and oversees research and development activities. He will always liaise with the departments in ensuring proper placement for regional students/faculty on exchange. He will work also with the monitoring and evaluation officer to evaluate project implementation and achievement of its objectives.

##### **Secretary**

The Centre Administrator and Secretary is Mr. Mark G. Kparamak. He shall be responsible for all logistics that will support the realization of the programme theory, arranging management and scientific meetings, arrange students and staff exchanges, workshops and conferences. Moving the timeline of the organizational aspects of the programme including prompting the management team and the project director will be one of his primary responsibilities.

##### **M and E Officer**

The Monitoring and Evaluation Officer Prof. Christiana Ugodulunwa is a Professor of Educational Foundation. She will also be responsible for the monitoring of all activities of the project and evaluating them to ensure the actualization of its goals and objectives and generating the reports on the deliverables as required by the project in its results based financing scheme.

##### **Finance Officer**

The Finance Officer, Mr Luke Ngwu is a senior accountant, trained by KPMG. This position should be A Certified National Accountant with proficiency in Microsoft excel, soft and hardware accounting computing system. He shall be responsible for all the accounting, finance, reporting, audit, and budget implementation of the ACEPRD. He shall also be in custody of the University financial manual, audit manual. He shall design the system in conjunction with the centre management team and ensure strict adherence to the university and World Bank financial regulations.

##### **Procurement Officer**

The Procurement Officer Mr Micah Sattong is a Chief Accountant in the Bursary. He will be responsible for complying with World Bank procurement policies for the ACEPRD. He will pre-qualify all contractors and suppliers and open a bid for public procurement in compliance with national, university and World Bank procedures.

##### **Head of Phytomedicine**

The Head of Phytomedicine Prof Felicia Ohiri will develop the curriculum in phytomedicine and monitor the implementation. Additionally, she will establish linkages with herbal practitioners; manage the ACEPRD farm in GangnimLangtang South Area of Plateau State. She shall ensure the implementation of phytomedicine in other courses in the masters and PhD programme.

#### **Head of Clinical Pharmacy**

The Head of Clinical Pharmacy Dr Maxwell Dapar will coordinate the masters and PhD programmes in Clinical Pharmacy. He will ensure the integration of the Course and its application into Phytomedicine. He will ensure that students in the Centre understand their role after their studies on how to provide patient care that optimizes medication therapy and promotes health, wellness, and disease prevention by the application of phytomedicine. He will design the synergy between the practice of clinical pharmacy in phytomedicine, how it embraces the philosophy of pharmaceutical care; blends a caring orientation with specialized therapeutic knowledge, experience, and judgment for the purpose of ensuring optimal patient outcomes. As a discipline in phytomedicine, he will seek to establish how clinical pharmacy also has an obligation to contribute to the generation of new knowledge that advances health and quality of life.

#### **Director of Information Communication Technology (ICT)**

The Director of ICT Dr Tanko Ishaya is the current Head of ICT in the University and is committed to the ACEPRD project. He will be in-charge of promoting distribution of research publications and communications, setting up the ACEPRD internet platforms, e-learning, publishing all ACEPRD financial, procurement, audit and annual programmatic reports on the website. He shall be in-charge of bioinformatics curriculum development and implementation along with other Faculty.

#### **Head of Library**

The Head of Library Dr. Stephen Akintunde is an experienced Librarian. He shall bring his prior experience in partnership with the director of ICT to establish and manage an e-library for the centre, which also has the capability to disseminate research findings. Additionally he will maintain all catalogued textbooks and journals (electronic and print) for the centre.

#### **Education Leaders**

The education leaders of the ACEPRD project are Prof. M.N Sule and Prof. U.K Eke. Prof.Sule is focused on education with interests in sociological educational foundations. He will be responsible for overseeing the educational organization of the project and ensure that the education strategy of the Centre is realized. Prof. Eke, a professor of languages and linguistics will facilitate the teaching of English Language to our French-speaking partners.. He shall be in charge of translation and interpretation of document and conferences into English language for participating partners' assimilation.

#### **Dean of the Post Graduate School**

The Dean of the School of Postgraduate Studies position in the project management committee is to facilitate the processes of admission of students into the centre programme. Represent the Centre's postgraduate programmes and curricula in senate and senate curriculum committee of the University Adoption and approval.

#### 4.5 Environment safeguards

*(Insert the Environmental Management Plan and disclosed on your website, please list responsible staff*

No displacement of population or destruction of vegetation is anticipated throughout the project period. All biological and chemical laboratory waste shall be disposed in accordance with national and international disposal guidelines. Laboratory animals shall be procured from relevant animal houses and maintained according to experimental animal use guidelines. The Faculty of Pharmaceutical Sciences has been involved in research in, biological testing, of herbal and natural products, snake vaccines experiments, however without negative impact on the environment. There are well-developed sewage and disposal processes of all chemical and consumable wastes.

To ensure continued safeguards, all clinical trials will commence with ethical clearance and follow strict clinical trial procedures. Any sign of negative environmental impact will be reviewed accordingly. The ethical committee is regulated by the National Health Research guidelines and has a strict sense of duty to protect the environment

Safe Laboratory practices are currently in place. Technologists and laboratory assistants are trained in anticipation of the activities that will be taking place. First aid boxes and shower are provided in all the laboratories as control and mitigation measures for any laboratory accident and will be included in any new facilities as part of the Centre.

During general renovation of offices and laboratories, interior demolitions will be controlled to minimize dust and noise. These measures will include the project management team liaising with the university management for temporary relocation of facilities by staff and students in such areas being renovated to avoid accident. Workers involved in the renovation will be provided with equipment and facilities that will protect them from direct contact with hazardous chemicals, sewage, or dust.

The project so far has not recorded any negative impact on the environment and the population as no displacement of population or destruction of vegetation is anticipated throughout the project period, as plants materials and products has no harmful effect on man. All biological and chemical laboratory wastes shall be disposed of according to international disposal guidelines.

## 5. PERFORMANCE MONITORING

**Table 4: Disbursement Linked Indicators**

Disbursement Linked Indicator	Action to be Completed	Amount (USD) of the Financing allocated Per DLI (expressed in Special Drawing Rights (SDR))	Amount (USD) Allocated per DLR for the Disbursement Calculation (expressed in SDR)
<p><b>DLI 1:</b> Regional specialization endorsed and institutional readiness</p>	<p><b>DLR 1.1:</b> Center Regional Advisory Board endorsed a MoU promoting regional specialization through the ACEs</p> <p><b>DLR 1.2:</b> Establishment of International Advisory Board Committee</p> <p><b>DLR 1.3:</b> Creation of designated account/ endowment fund with rules of operation</p> <p><b>DLR 1.4:</b> Signing of funding and performance contract between the University and the Government</p> <p><b>DLR 1.5:</b> Signing of the partnership MOUs</p> <p><b>DLR 1.6:</b> Approved Financial Management and procurement procedures and capacity</p>	<p>\$800,000</p>	<p>\$800,000</p>
<p><b>DLI 2:</b> Excellence in education and research capacity and development impact</p>	<p><b>DLR 2.1</b> New Short-term Students: -489 National: 293 males &amp; 196 females -210 Regional: 126 males &amp; 84 females</p> <p><b>DLR 2.2</b> New Master students: -98 National: 68 males &amp; 30 females -42 Regional: 26 males &amp; 17 females</p> <p><b>DLR 2.3</b> New PhD Students: - 18 National: 10 males &amp; 8 females - 9 Regional: 5 males &amp; 4 females</p> <p><b>DLR 2.4:</b> Number of outreach “periods” for faculty and students. National: 200</p>	<p>\$215,200 \$184,800</p> <p>\$211,000 \$189,000</p> <p>\$200,000 \$200,000</p> <p>\$400,000</p>	<p>\$400,000</p> <p>\$400,000</p> <p>\$400,000</p>

	<p>Regional: 100</p> <p><b>DLR 2.5:</b> International evaluation and accreditation of quality of education programs. National Accreditations (up to 2) \$200,000 International Accreditation (one) \$600,000</p> <p><b>DLR 2.6:</b> Published articles in internationally recognized and peer reviewed journals (22) papers co-authored regionally (16) \$200,000 national authored papers only (40) \$600,000</p> <p><b>DLR 2.7:</b> Externally generated revenue National revenue forecast (tuition, fees and grants) \$600,000 Regional revenue forecast (Tuition, fees and grants) \$600,000</p> <p><b>DLR 2.8:</b> Meeting milestones for improved learning and research environment specified in the Performance and Funding contracts - Improving learning environment facilities \$335,688 - Improving applied research environment \$50,000 - e-learning platform development \$390,000 - Learning equipment \$400,000 - Applied research equipment \$424,312</p>	<p>\$400,000</p> <p>\$200,000</p> <p>\$600,000</p> <p>\$200,000</p> <p>\$600,000</p> <p>\$600,000</p> <p>\$600,000</p> <p>\$335,688</p> <p>\$50,000</p> <p>\$390,000</p> <p>\$400,000</p> <p>\$424,312</p>	<p>\$800,000</p> <p>\$800,000</p> <p>\$800,000</p> <p>\$1,200,000</p> <p>\$1,600,000</p>
<p><b>DLI 3:</b> Timely, transparent and institutionally reviewed Financial Management</p>	<p><b>DLR 3.1:</b> Timely withdrawal application supported by financial reporting for the ACE account for the period - 25,000/year x 4 years</p> <p><b>DLR 3.2:</b> Functioning Audit Committee under the university council - 25,000/year x 4 years</p> <p><b>DLR 3.3:</b> Functioning internal audit unit for the university - 25,000/year x 4 years</p> <p><b>DLR 3.4:</b> Web Transparency on Financial management (web-access to audit reports, interim financial reports, budgets and annual workplan) - 25,000/year x 4 years</p>	<p>\$100,000</p> <p>\$100,000</p> <p>\$100,000</p> <p>\$100,000</p>	<p>\$400,000</p>



<b>DLI 4:</b> Timely and audited Procurement	<b>DLR 4.1:</b> Timely procurement audit - \$50,000/year x 4 years  <b>DLR 4.2:</b> Timely and satisfactory procurement progress - \$50,000/year x 4 years	\$200,000   \$200,000	   \$400,000

## 6. DETAILED BUDGET

Table 5: Budget, 2014 – 2018 with split between partners

Expenditure Category	3. Estimated Costs in (US\$)					
	Year 1	Year 2	Year 3	Year 4	Total	% of total
	2014-2015	2015-2016	2016-2017	2017-2018		
<b>A: Budget by Activity Plan</b>						
<b>Action Plan 1:</b> Achieve Learning Excellence	839,260	780,000	545,000	545,000	2,709,260	33.87
<b>Action Plan 2:</b> Achieve Applied Research Excellence	672,412	610,000	510,000	388,000	2,180,412	27.26
<b>Action Plan 3:</b> Achieve Outreach of students and partners	249,650	385,000	385,000	385,000	1,404,650	17.56
<b>Action Plan 4:</b> Achieve Center Operations and Management Excellence	206,875	106,035	106,000	106,000	524,910	6.56
<b>Action Plan 5:</b> Strengthen Financial Stability	68,500	115,000	115,000	115,000	413,500	5.17
Programme Management	10,000	10,000	10,000	10,000	40,000	0.50
Contingency (10%)	204,669.70	200,603.5	167,100	154,900	727,273.2	9.09
<b>TOTAL</b>	<b>2,251,366.7</b>	<b>2,206,638.5</b>	<b>1,838,100</b>	<b>1,703,900</b>	<b>8,000,005.20</b>	<b>100</b>
<b>%</b>	<b>28.14</b>	<b>27.58</b>	<b>22.98</b>	<b>21.30</b>	<b>100</b>	
<b>B: Budget by partners</b>						
ACE leader- University of Jos, Nigeria	1,972,279.2	1,982,638.5	1,644,600	1,540,400	7,139,918.2	89.25
University of Port Harcourt, Port Harcourt, Nigeria	4,000	3,500	3,000	2,500	13,000	0.16
NnamdiAzikiwe University, Awka, Nigeria	7,500	4,000	3,000	2,500	17,000	0.21
Neimeth	-	1,000	500	500	2,000	0.02

Europarm	-	1,000	500	500	2,000	0.02
BDCP	-	1,000	500	500	2,000	0.02
NIPRD	-	1,000	1,000	1,000	3,000	0.04
University of Buea, Cameroon	37,860	35,000	30,000	25,000	127,860	1.60
University of AbomeyCalayi, Benin Republic	38,710	35,000	30,000	25,000	128,710	1.61
University de Lome, Togo	75,110	55,000	45,000	40,000	215,110	2.69
University de Ouagadougou Burkina Faso	39,110	35,000	30,000	25,000	129,110	1.61
Kwame Nkrumah University of Science and Technology, Kumasi Ghana	34,460	30,000	30,000	25,000	119,460	1.49
CSIR	10,787.50	5,000	4,000	3,000	22,787.50	0.28
University of Siena, Italy	4,537.50	2,500	2,500	2,500	12,037.5	0.15
Ayurvedic University USA	9,225	4,000	3,500	3,000	19,725.5	0.25
Sheffield Hallam University, Sheffield, UK	17,787.50	11,000	10,000	7,500	46,287.50	0.58
Total partner budget	279,087.50	224,000	193,500	163,500	860,087.50	10.75
<b>TOTAL</b>	<b>2,251,366.7</b>	<b>2,206,638.5</b>	<b>1,838,100</b>	<b>1,703,900</b>	<b>8,000,005. 2</b>	<b>100</b>
% partner budget	12.40	10.15	10.53	9.60	10.75	

## 7. DETAILED ACTIVITY SHEETS

### Action Plan 1: Achieve Learning Excellence

**Timeframe:** September 2014- December 2014

#### Activity 1.1: Design new curriculum and get approval for new short courses

RESULT	Center able to run 7 newly developed short courses with emphasis is on practically oriented learning and providing educational experience and expanded knowledge in phytomedicine	
ACTIVITY	Design new curriculum and get approval for new short courses	
OUTPUT	<p>New curriculum designed for short courses in:</p> <ol style="list-style-type: none"> <li>1. Protein isolation and purification: Dr. David Smith</li> <li>2. Clinical Trials in Phytomedicine: Prof. Okwuasaba</li> <li>3. Nanotechnology: Dr.Hulda Swai</li> <li>4. Separation techniques in Phytomedicine: Prof. N.A Ochekepe</li> <li>5. Vaccinology: Prof. J.C Aguiyi</li> <li>6. Phytoremediation: Prof.A. Akwaranta</li> <li>7. Traditional Medical Professional Training: Prof. F.C Ohiri</li> </ol> <p>Short courses approved by Center leadership</p>	
OUTPUT INDICATOR	<p>7 new curricula in:</p> <ol style="list-style-type: none"> <li>1. Protein isolation and purification: Dr. David Smith</li> <li>2. Clinical Trials in Phytomedicine: Prof.Okwuasaba</li> <li>3. Nanotechnology: Dr.HuldaSwai</li> <li>4. Separation techniques in Phytomedicine: Prof. N.A Ochekepe</li> <li>5. Vaccinology: Prof. J.C Aguiyi</li> <li>6. Phytoremediation: Prof. Akwaranta</li> <li>7. Traditional Medical Professional Training: Prof. F.C Ohiri</li> </ol>	<p>SOURCE OF VERIFICATION</p> <ul style="list-style-type: none"> <li>• M &amp; E- Prof CA Ugodulunwa</li> <li>• Center Administrator: Mark Kparamak</li> </ul>
IMPLEMENTATION MILESTONES	<p>September 2014: Initiate development of 7 new short courses</p> <p>December 2014: Complete and approve short courses</p>	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	<p>Center Leader- Prof. JC Aguiyi</p> <p>Deputy Center Leader- Prof FK Okwuasaba</p>	
DURATION: 3 months	Commencement: September 2014	Completion: December 2014
<p>PRIMARY CONSTITUENTS:</p> <ul style="list-style-type: none"> <li>• All Center Faculty</li> <li>• All Regional Faculty</li> <li>• All enrolled students</li> <li>• Traditional Healers</li> <li>• National/Regional Citizens</li> </ul>	<p>PARTICIPANTS:</p> <ul style="list-style-type: none"> <li>• Dr. David Smith</li> <li>• Prof. Okwuasaba</li> <li>• Dr.Hulda Swai</li> <li>• Prof. N.A Ochekepe</li> <li>• Prof. J.C Aguiyi</li> </ul>	

		<ul style="list-style-type: none"> <li>• Prof. Akwaranta</li> <li>• Prof. F.C Ohiri</li> <li>• All enrolled short course students</li> </ul>					
ASSUMPTIONS	Faculty and students in region want to take short courses						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1 Curriculum development of short courses		7,500					7,500
TOTALS		7,500					7,500

**Action Plan 1: Achieve Learning Excellence**

**Timeframe:** November 2014- June 2015

**Activity 1.2: Enrol and run new short courses**

RESULT	Successful enrolment and execution of 2 new short courses with expanded knowledge in phytomedicine: Traditional Medical Professional Training and Clinical Trials in Phytomedicine targeted at faculty, students and traditional practitioners.	
ACTIVITY	Enrol and run new short courses	
OUTPUT	Successful enrolment and execution of 2 new short course	
OUTPUT INDICATOR	Number of students enrolled in short course one: Traditional Medical Practice Number of students enrolled in short course two : Clinical trials in phytomedicine	SOURCE OF VERIFICATION <ul style="list-style-type: none"> <li>Center administrator: Mark Kparamak</li> <li>M &amp; E officer: Prof. C.A Ugodulunwa</li> </ul>
IMPLEMENTATION MILESTONES	November 2014: Initiate procurement of consumables for short courses January 2015: Run first short course June 2015: Running of 2 short courses completed	
PROCUREMENT	Consumables for short courses	
RESPONSIBILITY FOR IMPLEMENTATION	<ul style="list-style-type: none"> <li>Center Leader- Prof. JC Aguiyi</li> <li>Deputy Center Leader- Prof FK Okwuasaba</li> <li>Dr. David Smith</li> <li>Prof. Okwuasaba</li> <li>Dr.Hulda Swai</li> <li>Prof. N.A Ochekepe</li> <li>Prof. J.C Aguiyi</li> <li>Prof. Akwaranta</li> <li>Prof. F.C Ohiri</li> </ul>	
DURATION: 7 months	Commencement: November 2014	Completion: June 2015
PRIMARY CONSTITUENTS: <ul style="list-style-type: none"> <li>All Center Faculty</li> <li>All Regional Faculty</li> <li>All enrolled students</li> <li>Traditional Healers</li> <li>National/Regional Citizens</li> </ul>	PARTICIPANTS: <ul style="list-style-type: none"> <li>Dr. David Smith</li> <li>Prof. Okwuasaba</li> <li>Dr.Hulda Swai</li> <li>Prof. N.A Ochekepe</li> <li>Prof. J.C Aguiyi</li> <li>Prof. Akwaranta</li> <li>Prof. F.C Ohiri</li> <li>All enrolled short course students</li> </ul>	

ASSUMPTIONS		Students and faculty want to take courses Curriculum development completed and approved						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Advertising costs		2,500		2,500			5,000
2	Lecture materials		200		200			400
3	Consumables and supplies		7,000		8,000			15,000
4	Operational costs for course		6,550		6,550			13,100
TOTALS			16,250		17,250			33,500

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** November 2014- June 2015

**Activity 1.3:** Design new curriculum and get approval for Masters Program

RESULT	New curriculum development and approval of masters program in Phytomedicine, Clinical Pharmacy, Biotechnology, Pharmaceutical Microbiology and Bioinformatics will improve the research capabilities of trained manpower and close the gaps between education, research and industry. This will also provide the pharmaceutical industry and the government agencies on drug quality control with adequate personnel.
ACTIVITY	Design new curriculum and get approval for masters program
OUTPUT	New curriculum designed for masters programs in: 1) Phytomedicine 2) Clinical Pharmacy 3) Biotechnology 4) Pharmaceutical Microbiology 5) Bioinformatics Masters program approved by university leadership
OUTPUT INDICATOR 5 new curricula in the following Masters programs: <ul style="list-style-type: none"> <li>• Phytomedicine</li> <li>• Clinical Pharmacy</li> <li>• Biotechnology</li> <li>• Pharmaceutical Microbiology</li> <li>• Bioinformatics</li> </ul>	SOURCE OF VERIFICATION <ul style="list-style-type: none"> <li>• University Senate</li> <li>• School of PG studies</li> </ul>
IMPLEMENTATION MILESTONES	<ul style="list-style-type: none"> <li>• November 2013: Initiate curriculum development of 2 new Masters programs (Phytomedicine, Clinical Pharmacy)</li> <li>• January 2014: 2 Program curricula submitted to University Senate</li> <li>• September 2014: Approval of 2 new masters programs curriculum</li> <li>• December 2014: Initiate and complete development of 3 new Masters programs curriculum (Biotechnology, Pharmaceutical Microbiology, Bioinformatics)</li> <li>• June 2015: Approval of 3 new Maters programs curriculum</li> </ul>
PROCUREMENT	n/a
RESPONSIBILITY FOR IMPLEMENTATION	Center Leader- Prof. JC Aguiyi Deputy Center Leader- Prof FK Okwuasaba Post graduate school representative- Prof.Warisu Alli Phytomedicine- Prof. F.C Ohiri Clinical Pharmacy- Dr. Maxwell Dapar Pharmaceutical Microbiology-Prof. I.S Okafor Bioinformatics- Dr. Ishaya Tanko Biotechnology- Prof. B.A Ajala



DURATION: 20 months		Commencement: November 2013		Completion: June 2015				
<b>PRIMARY CONSTITUENTS:</b> <ul style="list-style-type: none"> <li>All Center Faculty</li> <li>All Regional Faculty</li> <li>All current and prospective students</li> </ul>			<b>PARTICIPANTS:</b> University Senate Center Leadership Faculty curriculum leaders Post Graduate School					
ASSUMPTIONS		Faculty complete curriculum on schedule Senate meets regularly						
FINANCIAL IMPLICATIONS		ACEPR Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Curriculum Design	415	415	415				1,245
TOTALS		415	415	415				1,245

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** April 2014- October 2014

**Activity 1.4:** Enrol and run new Masters Programs

RESULT	Successful enrolment and execution of new masters programs with expanded knowledge in Phytomedicine Clinical Pharmacy, Biotechnology, Pharmaceutical Microbiology and Bioinformatics	
ACTIVITY	Enrol and run Masters programs	
OUTPUT	Successful enrolment and execution of new Masters programs	
OUTPUT INDICATOR	SOURCE OF VERIFICATION	
Number of students enrolled in Phytomedicine Masters program Number of students enrolled in Clinical Pharmacy Masters program	<ul style="list-style-type: none"> <li>University Senate</li> <li>School of PG studies</li> </ul>	
IMPLEMENTATION MILESTONES	<p>April 2014: Advertisement of Masters programs</p> <p>September 2014: Initiate procurement of consumables for masters programs</p> <p>September 2014: Enrol students in Masters program</p> <p>October 2014: Run first 2 Masters programs in Phytomedicine and Clinical Pharmacy</p>	
PROCUREMENT	Consumables for laboratory work	
RESPONSIBILITY FOR IMPLEMENTATION	<ul style="list-style-type: none"> <li>Center Leader- Prof. JC Aguiyi</li> <li>Deputy Center Leader- Prof FK Okwuasaba</li> <li>Post graduate school faculty representatives</li> <li>Department of Phytomedicine: Prof. F.C Ohiri</li> <li>Department of Clinical Pharmacy: Dr. Maxwell Dapar</li> </ul>	
DURATION: 15 months	Commencement: April 2014	Completion: June 2015
PRIMARY CONSTITUENTS:	PARTICIPANTS:	
<ul style="list-style-type: none"> <li>All Center Faculty</li> <li>University Community</li> <li>All Regional Faculty</li> <li>All current and prospective students</li> </ul>	<ul style="list-style-type: none"> <li>University Senate</li> <li>Center Leadership</li> <li>Faculty curriculum leaders</li> <li>Post Graduate School</li> <li>Center Faculty</li> <li>Accepted and enrolled students</li> </ul>	
ASSUMPTIONS	Students and faculty want to receive Masters degree Curriculum development of 2 new Master programs completed and approved	
FINANCIAL IMPLICATIONS	ACEPRD Budget	

Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Advertisement costs		1,250		1,250			2,500
2	Operational Costs		80,500					80,500
TOTALS			81,750		1,250			83,000

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** November 2014- June 2015

**Activity 1.5:** Design new curriculum and get approval for PhD programs

RESULT	New curriculum development and approval of PhD program in Phytomedicine, Clinical Pharmacy, Biotechnology, Pharmaceutical Microbiology and Bioinformatics	
ACTIVITY	Design new curriculum and get approval for PhD program	
OUTPUT	New curriculum designed for PhD programs in; Phytomedicine, Clinical Pharmacy, Biotechnology, Pharmaceutical Microbiology, Bioinformatics PhD program approved by center and university leadership	
OUTPUT INDICATOR	<p>5 new curricula in the following PhD programs:</p> <ul style="list-style-type: none"> <li>• Phytomedicine</li> <li>• Clinical Pharmacy</li> <li>• Biotechnology</li> <li>• Pharmaceutical Microbiology</li> <li>• Bioinformatics</li> </ul>	<p>SOURCE OF VERIFICATION</p> <ul style="list-style-type: none"> <li>• University Senate</li> <li>• School of PG studies</li> </ul>
IMPLEMENTATION MILESTONES	<ul style="list-style-type: none"> <li>• November 2013: Initiate curriculum development of 2 new PhD programs in Phytomedicine and Clinical Pharmacy</li> <li>• January 2014: 2 PhD program curricula submitted to University Senate</li> <li>• September 2014: Approval of 2 new PhD programs curriculum</li> <li>• December 2014: Initiate and complete development of 3 new PhD programs curriculum (Biotechnology, Pharmaceutical Microbiology, Bioinformatics)</li> <li>• June 2015: Approval of 3 new PhD programs curriculum</li> </ul>	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	<p>Center Leader- Prof. JC Aguiyi                  Deputy Center Leader- Prof FK Okwuasaba                  Post graduate school representative: Prof. WarisuAlli                  Phytomedicine- Prof. F.C Ohiri                  Clinical Pharmacy- Dr. Maxwell Dapar                  Pharmaceutical Microbiology-Prof. I.S Okafor                  Bioinformatics- Dr. Ishaya Tanko                  Biotechnology- Prof. B.A Ajala</p>	
DURATION: 20 months	Commencement: November 2013	Completion: June 2015
PRIMARY CONSTITUENTS:	PARTICIPANTS:	
<ul style="list-style-type: none"> <li>• All Center Faculty</li> <li>• All Regional Faculty</li> </ul>	University Senate Center Leadership	

<ul style="list-style-type: none"> <li>All current and prospective students</li> </ul>		Faculty curriculum leaders Post Graduate School Center Faculty Accepted and enrolled students						
<b>ASSUMPTIONS</b>		Faculty complete curriculum on schedule Senate meets regularly						
<b>FINANCIAL IMPLICATIONS</b>		ACEPR D Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Curriculum Design		415	415	415			1245
<b>TOTALS</b>			415	415	415			1245

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** April 2014 – June 2015

**Activity 1.6:** Enrol and run PhD programs

RESULT	Successful enrolment and execution of two new PhD programs in Phytomedicine and Clinical Pharmacy.	
ACTIVITY	Enrol and run PhD programs	
OUTPUT	Successful enrolment and execution of two new PhD programs	
OUTPUT INDICATOR	Number of students enrolled in new Phytomedicine PhD program Number of students enrolled in new Clinical Pharmacy PhD program	SOURCE OF VERIFICATION <ul style="list-style-type: none"> <li>• University Senate</li> <li>• School of PG studies</li> </ul>
IMPLEMENTATION MILESTONES	April 2014: Advertisement of PhD programs September 2014: Initiate procurement of consumables for PhD programs September: Enrol students in PhD programs October 2014: Run first 2 PhD programs in Phytomedicine and Clinical Pharmacy	
PROCUREMENT	Consumables for laboratory work	
RESPONSIBILITY FOR IMPLEMENTATION	<ul style="list-style-type: none"> <li>• Center Leader- Prof. JC Aguiyi</li> <li>• Deputy Center Leader- Prof FK Okwuasaba</li> <li>• Post graduate school faculty representatives</li> <li>• Department of Phytomedicine PG Board</li> <li>• Department of Clinical Pharmacy PG Board</li> <li>• Phytomedicine- Prof. F.C Ohiri</li> <li>• Clinical Pharmacy- Dr. Maxwell Dapar</li> </ul>	
DURATION: 7 months	Commencement: April 2014	Completion: June 2015
PRIMARY CONSTITUENTS:	PARTICIPANTS:	
<ul style="list-style-type: none"> <li>• All Center Faculty</li> <li>• University Community</li> <li>• All Regional Faculty</li> <li>• All current and prospective students</li> </ul>	<ul style="list-style-type: none"> <li>• University Senate</li> <li>• Center Leadership</li> <li>• Faculty curriculum leaders</li> <li>• Post Graduate School</li> <li>• Center Faculty</li> <li>• Accepted and enrolled students</li> </ul>	
ASSUMPTIONS	Students and faculty want to receive PhD degree Curriculum development of 2 new PhD programs completed and approved	
FINANCIAL IMPLICATIONS	ACEPR Budget Shared advertisement costs with Masters programs	

Budget Line Analysis		1 <sup>st</sup> Qt	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qt	4 <sup>th</sup> Qt	5 <sup>th</sup> Qt	6 <sup>th</sup> Qt	Total
1	Consumables and supplies		52,000					52,000
TOTALS								52,000

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** September 2014- November 2014

**Activity 1.7:** e-learning platform development

RESULT	Ready availability of educational resources including journals, e-texts, lecture materials, and center information expanding the resources available to students and faculty.	
ACTIVITY	e-learning platform development	
OUTPUT	Functional e-learning platform	
OUTPUT INDICATOR	Functional platform in place Number of e-resources purchases	SOURCE OF VERIFICATION <ul style="list-style-type: none"> <li>• Dr. Stephen Akintunde: University Librarian</li> <li>• ICT Director: Dr Ishaya Tanko</li> <li>• Financial Officer: Mr Luke Ngwu</li> </ul>
IMPLEMENTATION MILESTONES	September 2014: Functional Center website November 2014: Initiation and completion of Improved Internet capabilities	
PROCUREMENT	Bandwidth/router/server upgrade e-journals and e-texts	
RESPONSIBILITY FOR IMPLEMENTATION	<ul style="list-style-type: none"> <li>• ICT Director: Dr Ishaya Tanko</li> <li>• University Librarian: Dr. Stephen Akintunde</li> <li>• Procurement Officer: Mr. Micah Sattong</li> <li>• Financial Officer: Mr Luke Ngwu</li> <li>• Unit Leaders for individual departments: Centre Leader Prof. Aguiyi, J.C</li> </ul>	
DURATION: 3 months	Commencement: September 2014	Completion: November 2014
PRIMARY CONSTITUENTS:	PARTICIPANTS:	
<ul style="list-style-type: none"> <li>• All faculty</li> <li>• All regional faculty</li> <li>• All students</li> </ul>	<ul style="list-style-type: none"> <li>• ICT Officer: Dr.Ishaya Tanko</li> <li>• Librarian: Dr. Stephen Akintunde</li> <li>• Procurement Officer: Mr. Micah Sattong</li> <li>• Financial Officer: Mr. Luke Ngwu</li> <li>• Unit Leaders for individual departments</li> <li>• All faculty</li> <li>• All regional faculty</li> <li>• All students</li> </ul>	
ASSUMPTIONS	Internet availability to students and faculty	



FINANCIAL IMPLICATIONS		ACEPR Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qt	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Purchasing/subscriptions of e-journals/e-text		6,000					6,000
2	Web design		2,000					2,000
3	Upgrade current internet capabilities	50,000						50,000
4	Software purchasing for web capabilities	50,000						50,000
<b>TOTALS</b>		100,000	8,000					108,000

**Action Plan 1: Achieve Learning Excellence**

**Timeframe:** September 2014 to October 2014

**Activity 1.8: Running of English as second language courses**

RESULT	Improvement of language comprehension and ability of non-English speaking partners to participate in the Centre's learning opportunities	
ACTIVITY	Running of English as a second language courses	
OUTPUT	Completed language courses	
OUTPUT INDICATOR Number of students receiving language support Number of faculty receiving language support	SOURCE OF VERIFICATION Center Administrator: Mark Kparmak	
IMPLEMENTATION MILESTONES	September 2014- ESP Curriculum developed and approved October 2014- Application of ESP Curriculum	
PROCUREMENT	Language teachers Translation instruments	
RESPONSIBILITY FOR IMPLEMENTATION	<ol style="list-style-type: none"> <li>1. Department of Languages and Linguistics :Prof. U.K Eke</li> <li>2. Department of Education: Prof. M.N Sule</li> <li>3. Centre Leader: Prof. J.C Aguiyi</li> <li>4. Deputy Centre Leader: Prof. F.K Okwuasaba</li> </ol>	
DURATION: One Month commencing from 30 <sup>th</sup> of September annually	Commencement: 30/9/2014	Completion: 30/10/2014
<b>PRIMARY CONSTITUENTS:</b> <ul style="list-style-type: none"> <li>• All faculty</li> <li>• All regional faculty</li> <li>• All students current and prospective</li> </ul>	<b>PARTICIPANTS:</b> <ul style="list-style-type: none"> <li>• All faculty</li> <li>• All regional faculty</li> <li>• All students</li> <li>• Department of Languages and Linguistics: Prof. U.K Eke</li> <li>• Department of Education: Prof. M.N Sule</li> <li>• Centre Leader: Prof. J.C Aguiyi</li> <li>• Deputy Centre Leader: Prof. F.K Okwuasaba</li> </ul>	
ASSUMPTIONS	Need for English language skills Availability of language teachers and translators Translating equipment	

FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qt	6 <sup>th</sup> Qt	Total
1	English Language Course design	3,000						3,000
2	Translation Instruments: Transmitters (10), Receivers (10)	5,670						5,670
3	Language Teachers	0						0
<b>TOTALS</b>		<b>8,670</b>						<b>8,670</b>

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** September 2014 – February 2015

**Activity 1.9:** Upgrade and Refurbishment of learning facilities and resources

RESULT	Availability of teaching infrastructures. The facilities refurbished has improved learning by students and teaching by faculty, e.g internet facilities more accessible to faculty and students, animal house in better condition, classrooms and laboratories well illuminated and furnished.	
ACTIVITY	Upgrade and Refurbishment of Learning facilities and Resources	
OUTPUT	Refurbished and Upgraded learning infrastructures completed	
OUTPUT INDICATOR	SOURCE OF VERIFICATION	
Number of classrooms refurbished Number of laboratories refurbished Number of animal houses refurbished Mushroom house refurbished Number of offices refurbished	<ul style="list-style-type: none"> <li>• Finance Officer: Like Ngwu</li> <li>• Centre Administrator : Mark Kparmak</li> <li>• Procurement Officer: Mr Micah Sattong</li> <li>• University Director of Physical Facilities</li> </ul>	
IMPLEMENTATION MILESTONES	September 2014-Process of refurbishment starts February 2015 –Refurbishment ends	
PROCUREMENT	Materials for refurbishment of classrooms, laboratories, offices, animal house and mushroom houses	
RESPONSIBILITY FOR IMPLEMENTATION	<ul style="list-style-type: none"> <li>• Center Leader- Prof. JC Aguiyi</li> <li>• Deputy Center Leader- Prof F.K Okwuasaba</li> <li>• Procurement Officer: Mr. Micah Sattong</li> <li>• Finance Officer: Mr Luke Ngwu</li> <li>• University Director of Physical Facilities</li> </ul>	
DURATION: 5 months	Commencement: September 2014	Completion: February 2015

<b>PRIMARY CONSTITUENTS:</b> Centre Leadership University Community All current and prospective students		<b>PARTICIPANTS:</b> Consultants Director of Physical Facilities: Mrs.Hauwa Auta Heads of Animal and Mushroom Houses: Mr Luka Wazoh Centre leadership: Prof. J.C Aguiyi					
<b>ASSUMPTIONS</b>	Readiness of infrastructures and resources for learning						
<b>FINANCIAL IMPLICATIONS</b>	ACEPRD Budget						
<b>Budget Line Analysis</b>	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	<b>Total</b>
1 Equipment (smart boards, projectors, computers)		56,000					56,000
2 Infrastructure upgrades/refurbishment: Animal House (4), Mushroom House (1)		41,000					41,000
3 Laboratories (11)		50,600					50,600
4 13 Offices and 8 Lecture Halls		30,000					30,000
<b>TOTALS</b>		177,600					177,600

**Action Plan 1: Achieve Learning Excellence**

**Timeframe:** September 2014 – October 2014

**Activity 1.10: Curriculum development of English as Second language**

RESULT	New English as a Second Language Program curriculum developed and approved for teaching of foreign partner students to improve their access to the centre's educational and applied research offerings.						
ACTIVITY	Curriculum development of English as Second language						
OUTPUT	Availability of New English as a Second Language curriculum						
OUTPUT INDICATOR ESP Curriculum developed Curriculum approved for use						SOURCE OF VERIFICATION ACEPRD University Senate	
IMPLEMENTATION MILESTONES	September 2014- Initiate Curriculum design and curriculum approved October 2014 Curriculum implementation begins and course delivered						
PROCUREMENT	N/A						
RESPONSIBILITY FOR IMPLEMENTATION	Language Faculty in the Centre: Prof. U.K Eke Department of Education: Prof. M.N Sule Deputy Centre Leader: Prof. F.K Okwuasaba						
DURATION: 1 month	Commencement: September 2014			Completion: October 2014			
PRIMARY CONSTITUENTS: Department of Languages Students Faculty Regional Partners	PARTICIPANTS: Students of ESP Language Teachers Centre Faculty PG School						
ASSUMPTIONS	Partner students will understand and study in English language						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1 Advertisement for position	N/A						

2	ESP Curriculum design	500						500
TOTALS								500

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** October 2014-September 2015

**Activity 1.11:** Hostel accommodation at the university for students

RESULT	Hostel available for Centre students especially female regional students who will find ease in settling for their studies on arrival. Apart from security, it will also incentivize foreign students to apply to the Centre in Jos.						
ACTIVITY	Hostel accommodation at the university for students						
OUTPUT	Hostel accommodations available for students of the centre						
OUTPUT INDICATOR Number of students being accommodated in the hostel Number of female students being accommodated in the hostel						SOURCE OF VERIFICATION Centre Administrator: Mark Kparamak	
IMPLEMENTATION MILESTONES	September 2014-Student applications to the University Directorate of Student Affairs October 2014- Equip hostels by renovation and acquisition of modest facilities. November 2014-Hostel open to students						
PROCUREMENT	Furniture, refurbishment of toilets, beds, power and water						
RESPONSIBILITY FOR IMPLEMENTATION	Centre Deputy Leader Finance Officer Procurement Officer Centre Administrator Directorate of Student Affairs						
DURATION: 1 year	Commencement: October 2014			Completion: September 2015			
PRIMARY CONSTITUENTS: Students Directorate of Student Affairs ACEPRD Faculty				PARTICIPANTS: Directorate of Student Affairs Centre Administrator ACEPRD			
ASSUMPTIONS	The university will agree to allocating some of its existing hostel facilities to the centre						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qt	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total



Analysis								
1	Accommodation (New Master students: -National: 10 -Regional:26		54,000					54,000
2	Accommodation (New PhD Students: -National: 3 -Regional:5		12,000					12,000
TOTALS			66,000					66,000

**Action Plan 1:** Achieve Learning Excellence

**Timeframe:** December 2014-May 2015

**Activity 1.12:** Improving Learning Equipment

RESULT	Exposure of students to experimental tools on phytomedicine research to prepare them for entry into the job market in phytomedicine.	
ACTIVITY	Improving learning Equipment	
OUTPUT	Use of available laboratory learning equipment for MSc. and PhD students for analysis for their course work and learning of phytomedicine techniques	
<b>OUTPUT INDICATOR</b> Number of Students participating in phytomedicine analytical procedures, learning equipment installed and evidence of utilization of equipment by student/faculty		<b>SOURCE OF VERIFICATION</b> -Laboratory attendance register: Sola Motunbade ACEPRD Chief Laboratory Technologist: Motunbade Sola Use of equipment register: Micah Sattong
IMPLEMENTATION MILESTONES	September 2014-January 2015-Consumables for analysis procured February 2015-May 2015-basic laboratory equipment installed	
PROCUREMENT	Basic Laboratory analytical equipment	
RESPONSIBILITY FOR IMPLEMENTATION	Procurement Officer: Micah Sattong Finance Officer: Luke Ngwu Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. Francis Okwuasaba	
DURATION: 6 months	Commencement: December 2014	Completion: May 2015
<b>PRIMARY CONSTITUENTS:</b> Departments: Clinical Pharmacy, Pharmaceutical Microbiology, Phytomedicine, Bioinformatics and Biotechnology Laboratories for the new departments Students both local and regional		<b>PARTICIPANTS:</b> Departments: Clinical Pharmacy, Pharmaceutical Microbiology, Phytomedicine, Bioinformatics and Biotechnology Laboratories: for the new departments Students: both local and regional

Technologists in the Laboratories headed by the Chief Technologist Faculty: Centre Faculty		Technologists: in the Laboratories headed by the Chief Technologist Faculty: Centre Faculty					
ASSUMPTIONS		The availability of learning equipment for phytomedicine available in the region					
FINANCIAL IMPLICATIONS		ACEPRD Budget					
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Laboratory Equipment and supplies <i>Cardiovascular pharmacology and infectious diseases - Equipment for non-invasive CVS measurements, invasive CVS measurements , 11TC Restrainers for mice and rats; Surgical instruments and accessories, data capsule recorder, pressure transducers, isotonic, isometric, lager doff recorder, oxygen cylinder, patch clamp machine</i>						50,000
2	<i>Immunopharmacology and Molecular biology clinical - 120oC refrigerator, Lyophilize and 1500-300, Tissue culture (competent) 1000-1800, Pcr machine, flow cytometry system, floctometer 1300-15500, color 40,000-45,000, Cd4 machine 2000-14000</i>						50,000
3	<i>Reproductive and GIT Pharmacology – Homonoassayanalyzer, digital biological microscope, metabolic cages, digital microscope, advanced auto biochemical analyzer</i>						40,000
4	<i>Toxicology and Virology - Automated hermatologyanalyzer, high speed refrigerator catotige, microtome, electron microscope 120,000-150,000,</i>						40,000

	<i>camera, 3.5 inches electron machine</i>							
5	<i>Endocrine Pharmacology - Homorodanalyzer, stretozotoare, alloxan</i>			30,000				30,000
6	<i>Caspian Schizophrenias Psychosis - 11TC expandable treadmill and rota rod, activity monitoring system – Harvard, 11TC plantar analgesia meter for paw and tail, stimulation, pleftimanometer, marbles, maze</i>		50,000					50,000
7	<i>Parasticology/Malaria – Amino acid analyzers, incubators 1000-1500, proximate analyzer 23,000-26,000</i>			40,000				40,000
TOTALS			150,000	150,000				300,000

**Action Plan 2: Achieve Applied Research Excellence**

**Timeframe:** September 2014- April2015

**Activity 2.1:** Applied research skills for faculty and students

RESULT	Strengthened faculty and students problem-solving, grant writing, mentorship and entrepreneurial skills for applied phytomedicine research and development to increase publication and production of research findings and results	
ACTIVITY	Applied research skills for faculty and Students	
OUTPUT	Faculty with improved skills in applied research to increase publication and production of research findings and results	
OUTPUT INDICATOR	Number of peer-reviewed journal articles Number of faculty in grant writing workshop Number of faculty and students in manuscript writing workshop Number of students/faculty and technologists at workshop on Laboratory Technique and Experimentation Number of student/faculty in workshop on patent and property rights application procedures	SOURCE OF VERIFICATION  Centre Administrator: Mark Kparmak
IMPLEMENTATION MILESTONES	September 2014-May 2015-Development of website for dissemination of research results November 2014-- Manuscript writing workshop for Faculty and Students January 2015-Grant writing Workshop for faculty and students March 2015-Workshop on Laboratory Technique and Experimentation for Faculty, Students and Technologists May 2015-Workshop on patent and property rights application procedures	
PROCUREMENT	N/A	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasa Centre Administrator: Mark Kparmak Monitoring and Evaluation Officer: Prof. C.A Ugodulunwa	
DURATION: 9 months	Commencement: September 2014	Completion: May 2015
PRIMARY CONSTITUENTS: Faculty Students	PARTICIPANTS: Workshop Facilitators from ACEPRD Partner and Local Faculties and Students	

ASSUMPTIONS		Local and Partner Faculty and students are interested in further developing these skills						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Operational costs for grant writing workshop		15,400					15,400
2	Airfare/accommodation/honorarium for facilitators for Grant Writing Workshop		10,500					10,500
3	Operational costs for Manuscript workshop		15,400					15,400
4	Airfare/accommodation/honorarium for facilitators for Manuscript Workshop		10,500					10,500
5	Lab training costs/workshops				500			500
5	Workshop on patent and property right application procedures				15,400			15,400
6	Airfare/accommodation/honorarium for facilitators for Workshop on patent and property right application procedures				10,400			10,400
TOTALS			51,800		26,400			78,200

**Action Plan 2: Achieve Applied Research Excellence**

**Timeframe:** March 2015 -September 2015

**Activity 2.2:** Field sample study and collection

RESULT	Raw materials for training and research of students and faculty available for use in bioassay, phytochemical studies, and other relevant studies.						
ACTIVITY	Field sample study and collection						
OUTPUT	Raw materials: 20 medicinal plants collected from the field and available at the Centre						
OUTPUT INDICATOR Digital herbarium of those new plants collected Pharmacopeia addition of new plants 20 new phyto-raw materials available at the Centre for research						SOURCE OF VERIFICATION: ACEPRD website Centre Prof. F.C Ohiri Head of Phytomedicine	
IMPLEMENTATION MILESTONES	March 2015-Field sample study August 2015-Collection of samples, classification and documentation						
PROCUREMENT	N/A						
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba Head of Phytomedicine; Prof. F.C Ohiri						
DURATION: 6 months	Commencement: March 2015			Completion: August 2015			
PRIMARY CONSTITUENTS: Local Faculty Local and regional Students				PARTICIPANTS: ACEPRD Farm Manager ACEPRD Chief Technologist Enrolled students ACEPRD Faculty			
ASSUMPTIONS	Availability of all the raw materials needed for students and faculty research on phytomedicine						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total

1	Fuelling of vehicle			400	400			800
2	Field team food			600	600			1,200
TOTALS				1,000	1,000			2,000



**Action Plan 2:** Achieve Applied Research Excellence

**Timeframe:** December 2014-May 2015

**Activity 2.3:** Lab based sample analysis for students

RESULT	Exposure of students to experimental tools on phytomedicine research, for advancement in their skills and ability to conduct applied research	
ACTIVITY	Lab based sample analysis for students (basic lab equipment)	
OUTPUT	Use of available basic laboratory equipment by MSc. and PhD students for analysis	
OUTPUT INDICATOR	Number of Students participating in phytomedicine analytical procedures	SOURCE OF VERIFICATION -Laboratory attendance register: Sola Motunbade ACEPRD Chief Laboratory Technologist: Motunbade Sola Use of equipment register: Micah Sattong
IMPLEMENTATION MILESTONES	September 2014-January 2015-Consumables for analysis procured February 2015-May 2015-basic laboratory equipment procured	
PROCUREMENT	Basic Laboratory analytical equipment	
RESPONSIBILITY FOR IMPLEMENTATION	Procurement Officer: Micah Sattong Finance Officer: Luke Ngwu Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader ACEPRD Chief Tech: Shola Motunbade	
DURATION: 6 months	Commencement: December 2014	Completion: May 2015
PRIMARY CONSTITUENTS: Departments: Clinical Pharmacy, Pharmaceutical Microbiology, Phytomedicine, Bioinformatics and Biotechnology Laboratories for the new departments	PARTICIPANTS: Departments :Clinical Pharmacy, Pharmaceutical Microbiology, Phytomedicine, Bioinformatics and Biotechnology Laboratories: for the new departments	

Students both local and regional Technologists in the Laboratories headed by the Chief Technologist Faculty: Centre Faculty		Students: both local and regional Technologists: in the Laboratories headed by the Chief Technologist Faculty: Centre Faculty						
ASSUMPTIONS		Students ability to use basic laboratory equipment and analytical procedures						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Lab consumables and supplies		17,500					17,500
2	Experiment processing	6,500						6,500
4	Laboratory manuals for students		2,000					2,000
TOTALS		6,500	19,500					26,000

**Timeframe:** February 2015-August 2015

**Activity 2.4:** Publication submission

RESULT	Publication of findings in peer-reviewed journals, increased contributions of knowledge in the field of phytomedicine.	
ACTIVITY	Support for publication and preparation of manuscripts for submission	
OUTPUT	Publications submitted in peer-reviewed journals	
OUTPUT INDICATOR Number of manuscripts submitted for review and publication	SOURCE OF VERIFICATION Dr.Ishaya Tanko: Head of ICT Librarian: Dr Stephen Akintunde	
IMPLEMENTATION MILESTONES	February 2015: Initiation of Publication August 2015: Theses/ manuscripts/Journal publication Continued	
PROCUREMENT	Subscription to journals and publication fees	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof J.C Aguiyi Head of Research and Publications: Dr.Ishaya Tanko ACEPRD Departments Phytomedicine- Prof. F.C Ohiri Clinical Pharmacy- Dr. Maxwell Dapar Pharmaceutical Microbiology-Prof. I.S Okafor Bioinformatics- Dr.Ishaya Tanko Biotechnology- Prof. B.A Ajala	
DURATION: 6 months	Commencement:February2015	Completion: August 2015
PRIMARY CONSTITUENTS: Centre Leader: Prof. J.C Aguiyi Head of Research and Publications: Dr Ishaya Tanko ACEPRD Departments: Phytomedicine- Prof. F.C Ohiri Clinical Pharmacy- Dr. Maxwell Dapar Pharmaceutical Microbiology-Prof. I.S Okafor Bioinformatics- Dr.Ishaya Tanko Biotechnology- Prof. B.A Ajala Students: Local and Regional Faculty: Local/Regional	PARTICIPANTS: Centre Leader: Prof. J.C Aguiyi Head of Research and Publications: Dr Ishaya Tanko ACEPRD Departments Phytomedicine- Prof. F.C Ohiri Clinical Pharmacy- Dr. Maxwell Dapar Pharmaceutical Microbiology-Prof. I.S Okafor Bioinformatics- Dr.Ishaya Tanko Biotechnology- Prof. B.A Ajala Students both Local and Regional Faculty: Local/Regional	
ASSUMPTIONS	Publications for training and research	

FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Publication submission fees		5,000					5,000
3	Subscription fees: (Web of Science)		35,000					35,000
TOTALS			40,000	5,000				40,000

**Action Plan 2:** Achieve Applied Research Excellence

**Timeframe:** September 2014-August 2014

**Activity 2.5:** Maintaining animal facility for laboratory tests

RESULT	Standard animal house for experimental phytomedicine research using animals (in vivo and in vitro studies),to validate traditional claims by herbal practitioners on such plants	
ACTIVITY	Maintaining animal facility for laboratory tests	
OUTPUT	Well-maintained animal facility available	
OUTPUT INDICATOR	Number of experimental animals available Number of different types of experimental animals available	SOURCE OF VERIFICATION -ACEPRD Chief Technologist: Mr Luka Wazoh Head of Animal House: Mr. Shola Motunbade Animal house records for different animals
IMPLEMENTATION MILESTONES	September 2014-purchase of animals for breeding	
PROCUREMENT	Animal subjects, animal feeds, cages, water bottles, disinfectants	
RESPONSIBILITY FOR IMPLEMENTATION	Procurement Officer: Mr Micah Sattong Finance Officer: Mr Luke Ngwu ACEPRD Chief Technologist: Mr Luka Wazoh, Mr Sola Motunbade Centre Leader: Prof J.C Aguiyi	
DURATION: 1 year	Commencement: September 2014	Completion: August 2015
PRIMARY CONSTITUENTS: Faculty who utilize animals for research Students who utilize animals for research Animal House	PARTICIPANTS: Staff of Animal House Students Faculty	
ASSUMPTIONS	Experimental animals available for tests	
FINANCIAL IMPLICATIONS	ACEPRD Budget	

Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Maintaining animal facility	1,000	1,000	1,000	1,000			4,000
2	Maintaining the animals for laboratory testing	1,000	1,000	1,000	1,000			4,000
3	Animal subjects	1,000	1,000	1,000	1,000			4,000
4	Feeds, cages, water bottles, and disinfectants	15,700	1,000	1,000	1,000			18,700
TOTALS		18,700	4,000	4,000	4,000			30,700

**Action Plan 2:** Achieve Applied Research Excellence

**Timeframe:** May 2015 - December 2015

**Activity 2.6: Core specialized research equipment**

RESULT	Core-specialized research equipment for faculty and students available for applied research to improve skills, knowledge, human resource development in phytomedicine for the nation and region.	
ACTIVITY	Core specialized research equipment	
OUTPUT	Availability of core research equipment in the Centre	
OUTPUT INDICATOR	<p>Number of core research equipment and accessories in use in the Centre</p> <p>Number of Technologists, students, and faculty trained by equipment vendors</p>	<p>SOURCE OF VERIFICATION</p> <p>-Equipment use register: Procurement Officer: Micah Sattong</p> <p>-ACEPRD Chief Technologist: Mr Sola Motunbade</p> <p>-Students</p> <p>-Faculty</p>
IMPLEMENTATION MILESTONES	May 2015 December 2015- purchase of core equipment, accessories and installation	
PROCUREMENT	Core research equipment and accessories and consumables	
RESPONSIBILITY FOR IMPLEMENTATION	<p>Centre Leader</p> <p>Deputy Centre Leader: Prof J.C Aguiyi</p> <p>Procurement Officer: Mr Micah Sattong</p> <p>Finance Officer: Luke Ngwu</p> <p>ACEPRD Chief Technologist: Sola Motunbade</p>	
DURATION: 7 months	Commencement: May 2015	Completion: December 2015
PRIMARY CONSTITUENTS: Faculty Students Laboratories	<p>PARTICIPANTS:</p> <p>ACEPRD Chief Technologist: Sola Motunbade</p> <p>Equipment Vendors</p> <p>Laboratories</p> <p>Procurement officer: Micah Sattong</p> <p>Center leader: Prof. J.C Aguiyi</p>	
ASSUMPTIONS	Core research equipment available for research by students and faculty	

FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	<i>Purchase of equipment: NMR – NMReady 60P</i>			43,000				43,000
2	<i>HPLC – Agilent 1200 series</i>			35,000				35,000
3	<i>Freight/Clearing (5% each)</i>			14,210				14,210
4	<i>Refurbishment of equipment:  Rotary Evaporator refrigerated circulator Thermo-Hake C10-K20 (3 units)- \$3,419 each; Freeze Dryer Shell freezer – Labcono LC-CE-7949040(1 Unit) - \$5,035; AGC-MPLC Fraction collector spectrum chromatography CF-1(2 units) - \$2,155 each</i>			19,602				19,602
5	<i>Procurement of equipment : Rotary tablet press – manesty B3B</i>				105,000			105,000
6	<i>Differential scanning Mettler DSC1, Calorimeter and accessories Toledo</i>				123,000			123,000
7	<i>Equipment procurement, deployment and implementation</i>			40,000				40,000
8	<i>Accessories</i>			10,000				10,000



9	Consumables			10,000				10,000
TOTALS				216,312	228,000			444,312

**Action Plan 2:** Achieve Applied Research Excellence

**Timeframe:** December 2014-August 2015

**Activity 2.7:** Center Monthly seminar

RESULT	Presentation of Research findings, by faculty to promote collaboration and updates in research activities in ACEPRD						
ACTIVITY	Center monthly seminar						
OUTPUT	Research findings disseminated						
OUTPUT INDICATOR	Number of seminars on research findings Number of attendees at each research seminar					SOURCE OF VERIFICATION Dr. Ikoni Ogaji -Seminar time-table -Attendance register	
IMPLEMENTATION MILESTONES	December 2014-August 2015 Monthly seminars from						
PROCUREMENT	N/A						
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba M and E Officer: Prof. C.A Ugodulunwa Centre Administrator: Mark Kpamak						
DURATION: Monthly	Commencement: December 2014			Completion: August 2015			
PRIMARY CONSTITUENTS:	ACEPRD student/faculty and  Tele-conference for connecting partner students/faculty			PARTICIPANTS: Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Owuasaba M and E Officer: Prof. C.A Ugodulunwa Centre Administrator: Mark Kpamak Faculty: ACEPRD Students: Centre partners			
ASSUMPTIONS	There are research findings to disseminate						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total

Analysis								
1	Hospitality (Refreshment) for 50 students and faculty participants	300	300	300	300			1,200
TOTALS		300	300	300	300			1,200

**Action Plan 2:** Achieve Applied Research Excellence

**Time frame:** May 2015 - December 2015

**Activity 2.8:** Improving research environment facilities

RESULT	Research facility for faculty and students available for applied research to improve investigative skills, knowledge, and analysis of phytomedicine in the region	
ACTIVITY	Improving research environment facility	
OUTPUT	Availability of research facility in the Centre	
OUTPUT INDICATOR	Number of research facilities in use in the Centre Number of Technologists, students, and faculty trained in the use of the facility	SOURCE OF VERIFICATION -Equipment use register: Procurement Officer: Micah Sattong -ACEPRD Chief Technologist: Mr Sola Motunbade -Students -Faculty
IMPLEMENTATION MILESTONES	May 2015 December 2015- purchase and installation of research facility	
PROCUREMENT	Research facility upgrade supplies	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader Deputy Centre Leader: Prof J.C Aguiyi Procurement Officer: Mr Micah Sattong Finance Officer: Luke Ngwu ACEPRD Chief Technologist: Sola Motunbade	
DURATION: 7 months	Commencement: May 2015	Completion: December 2015
PRIMARY CONSTITUENTS: Faculty Students Laboratories	PARTICIPANTS: ACEPRD Chief Technologist: Sola Motunbade Equipment Vendors Laboratories Procurement officer: Micah Sattong Center leader: Prof. J.C Aguiyi	
ASSUMPTIONS	Research facility available for research by students and faculty	

FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Installation of Stability and shelf life chamber, cold room, tissue and cell culture			50,000				50,000
TOTALS				50,000				50,000

**Action Plan 3:** Achieve outreach

**Timeframe:** September 2014-October 2014

**Activity 3.1:** Annual partner site visit

RESULT	Partners are incentivized on Centre activities on education, industrial partnership, applied research and networking opportunities available to move them forward in phytomedicine research and development	
ACTIVITY	Annual partner site visit	
OUTPUT	Full participation of partners in the ACEPRD project	
OUTPUT INDICATOR Number of visits to partner	SOURCE OF VERIFICATION M&E records: Prof. C.A Ugodulunwa Centre Administrator: Mark Kparamak Centre Leader: Prof. J.C Aguiyi	
IMPLEMENTATION MILESTONES	September 2014-Partners visits commenced October 2014-return from visits Annual visits for implementation of project with partners	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Centre Administrator: Mark Kparamak M&E Officer: Prof. C.A Ugodulunwa	
DURATION: 11 days	Commencement: September 2014	Completion: October 2014
PRIMARY CONSTITUENTS: Partners ACEPRD faculty	PARTICIPANTS: Centre Leader: Prof. J.C Aguiyi Centre Administrator: Mark Kparamak M&E Officer: Prof. C.A Ugodulunwa Partners: Faculty ACEPRD: Faculty	
ASSUMPTIONS	Partners encouraged to participate by visits	
FINANCIAL IMPLICATIONS	ACEPRD Budget	

Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Center leadership visits to partners (Togo, Benin Republic, Ouagadougou, Cameroon)	10,000						10,000
TOTALS		10,000						10,000

**Action Plan 3:** Achieve outreach

**Timeframe:** October 2014-January 2015

**Activity 3.2:** Regional Student Exchange

RESULT	Knowledge mobilization for phytomedicine training and research	
ACTIVITY	Regional Student Exchange	
OUTPUT	Regional Student Exchange for capacity building in phytomedicine	
OUTPUT INDICATOR Number of students exchanged between Centre and others		SOURCE OF VERIFICATION Centre Administrator: Mark Kparamak Senate Committee on Linkages Deputy Vice Chancellor Academics Deputy Registrar Academics
IMPLEMENTATION MILESTONES	October 2014-welcoming and introduction of students November 2014-Contact with students January 2015-Students return to their country	
PROCUREMENT	N/A	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba Centre Administrator: Mark Kparamak Finance Officer: Luke Ngwu	
DURATION: 2 months	Commencement: October 2014	Completion: January 2015
PRIMARY CONSTITUENTS: Partner students Local Students Local Faculty	PARTICIPANTS: ACEPRD University of Jos Partner Countries Partner Students Local Students	
ASSUMPTIONS	Regional students will want to exchange to University of Jos	



FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Air Tickets (5)	6,250						6,250
2	Food (5)	6,000						6,000
3	Accommodation (5)	6,000						6,000
<b>TOTALS</b>		18,250						18,250

**Action Plan 3:** Achieve outreach

**Timeframe:** January 2015-February 2015

**Activity 3.3:** Regional Faculty Exchange

RESULT	Knowledge mobilization for phytomedicine training and research Regional faculty Exchange for capacity building in phytomedicine						
ACTIVITY	Regional Faculty Exchange						
OUTPUT	Regional faculty complete exchanges						
OUTPUT INDICATOR	Number of faculty exchanged into the Centre Number of faculty from the Centre exchanged to other sites					SOURCE OF VERIFICATION Centre Administrator Mark Kparmak	
IMPLEMENTATION MILESTONES	January 2015-welcoming and introduction of Faculty January 2015-Contact with Faculty and On-going rotations for Faculty February 2015 Faculty return to their country						
PROCUREMENT	n/a						
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba Centre Administrator: Mark Kparmak Finance Officer: Luke Ngwu						
DURATION: 1 month	Commencement: January 2015			Completion: February 2015			
PRIMARY CONSTITUENTS: ACEPRD Faculty Regional Faculty	PARTICIPANTS: ACEPRD Local and UNIJOS Faculty						
ASSUMPTIONS	Regional faculty are willing to participate in exchanges						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1 Air ticket (5)			6,250				6,250

2	Food (5)			6,000				6,000
3	Accommodation (5)			10,00 0				10,000
TOTALS				22,25 0				22,250

**Action Plan 3:** Achieve outreach

**Timeframe:** April 2015

**Activity 3.4:** International/Overseas training of faculty

RESULT	Short-term training for faculty and PhD Candidates by an overseas international expert	
ACTIVITY	Training by international faculty to build UNIJOS capacity	
OUTPUT	Specialized training of faculty and students by internationally-acclaimed expert	
OUTPUT INDICATOR Number of Faculty and Students trained	SOURCE OF VERIFICATION Centre Administrator: Mark Kparmak M and E Officer: Prof. C.A Ugodulunwa	
IMPLEMENTATION MILESTONES	April 2015-Oversea expert visits Centre for training April 2015-April 2015-Training commences April 2015-Training ends	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba M&E Officer: Prof. C.A Ugodulunwa Trainer Consultant	
DURATION: 2 weeks	Commencement: April 2015	Completion: April 2015
PRIMARY CONSTITUENTS: Faculty Students Technologists Animal House Staff	PARTICIPANTS: ACEPRD University of Jos Faculty Students Trainer M&E Officer Local Faculty	
ASSUMPTIONS	Sufficient international experts exist and are willing to conduct these trainings	
FINANCIAL IMPLICATIONS	ACEPRD Budget	

Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Air Ticket			1,600				1,600
2	Accommodation			500				1,000
3	Food			200				400
4	Honorarium			2,000				4,000
TOTALS				4,300				7,000

**Action Plan 3: Achieve Outreach**

**Timeframe:** February 2015-June 2015

**Activity 3.5:** Center combined regional and international research conference for students and faculty

RESULT	Centre combined regional and international conference for students and faculty held. Presentation and dissemination of information on phytomedicine research leading to a goal of 5 journal publications and 10 conference proceedings Such scientific data can be presented at other conferences.	
ACTIVITY	Center combined research conference for students and faculty	
OUTPUT	Center research conference held	
OUTPUT INDICATOR	Number of national attendees at the conference Number of regional attendees at the conference	SOURCE OF VERIFICATION M&E: Prof. C.A Ugodulunwa Centre Administrator: Mark Kparamak Finance Officer: Luke Ngwu
IMPLEMENTATION MILESTONES	February 2014-Meetings of local organizing committee commences February 2014-First announcement of conference, call for abstracts, contact of speakers, also starts April 2014-Final announcement and call for abstracts ends June 2015- Conference is held lasting 3 days	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof J.C Aguiyi Deputy Centre: Prof F.K Okwuasaba M&E Officer: Prof. C.A Ugodulunwa Partner Leaders: Prof. Simon Efange, Prof.Theophilus Fleitcher, Dr Enoch Achigan, Dr Nicholas Koudovou, Dr Djerro Khadidja, Dr David Smith, Dr Hulda Swai, Prof Ramesh Padney	
DURATION: 5 months	Commencement: February 2015	Completion: June 2015
PRIMARY CONSTITUENTS: Faculty Students Invited Speakers International Participants	PARTICIPANTS: Faculty Students Invited Speakers International Participants University of Jos	

ASSUMPTIONS		That regional, international faculty and students will want to attend this conference						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Air fare (9 Speakers both international and Regional)				13,125			13,125
2	Food				16,575			16,575
3	Honoraria for Invited Speakers				18,000			18,000
4	Conference materials: (fliers and conference programme, certificates of attendance, conference proceedings, banners,badges				6,000			6,000
5	Local transportation for participants)				500			500
6	Advertisement				4,500			4,500
6	Field trip				350			350
7	Accommodation				4,500			4,500
8	Conference Venue				7,500			7,500
TOTALS					71,050			71,050

**Action Plan 3: Achieve Outreach**

**Timeframe:** November 2014-March 2015

**Activity 3.6:** Regional Center Research conference

RESULT	Presentation and Dissemination of information on Phytomedicine Research for regional student/faculty to serve as a forum for interaction and sharing of experiences in solving health problems in the sub-region	
ACTIVITY	Regional Center Research conference	
OUTPUT	Regional center research conference held	
OUTPUT INDICATOR	Number of conferences held Number of attendees at each conference	SOURCE OF VERIFICATION  M&E Officer: Prof. C.A Ugodulunwa Centre Administrator: Mark Kparamak Finance Officer: Luke Ngwu
IMPLEMENTATION MILESTONES	November 2014-Meeting by local organizing committee(LOC) begins December 2014-First conference announcement, call for abstracts and papers, and contact of speakers January 2015: LOC meeting continues and final announcement of conference February 2014: Communication with participants and logistics continues March 2015-Conference is held	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof J.C Aguiyi Deputy Centre : Prof F.K Okwuasaba M&E Officer: Prof C.A Ugodulunwa Partner Leaders Prof. Simon Efange, Prof.Theophilus Fleitcher, Dr Enoch Achigan, Dr Nicholas Koudovou, Dr Djierro Khadidja	
DURATION: 5 Months	Commencement: November 2015	Completion: November 2015



PRIMARY CONSTITUENTS: Faculty Students Invited Speakers International Participants		PARTICIPANTS: Faculty Students Invited Speakers International Participants					
ASSUMPTIONS	Regional faculty and students will want to attend						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Air fare (5 Regional Partner Speakers)			6,250			6,250
2	Food			10,000			10,000
3	Honoraria for Invited Speakers			2,500			2,500
4	Conference materials: (fliers and conference programme, certificates of attendance, conference proceedings, banners, bag decoration)			6,000			6,000
5	Local transportation for participants)			500			500
6	Conference Venue			7,500			7,500
7	Advertisement			4,500			4,500

8	Field trip			350				350
9	Accommodation			4,500				4,500
TOTALS				37,600				37,600

**Action Plan 3: Achieve Outreach**

**Timeframe:** August 2014 -August 2015

**Activity 3.7: Project management committee meeting (bi-weekly)**

RESULT	Assessment of project implementation, which will involve monitoring and evaluation, re-alignment of actions, validation of procurements, and review of budget.	
ACTIVITY	Project management committee meeting (bi-weekly)	
OUTPUT	Project management committee meets regularly to achieve project goals and objectives	
OUTPUT INDICATOR	Minutes of Bi-weekly meetings to assess project implementation	SOURCE OF VERIFICATION Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba M&E Officer: Prof. C.A Ugodulunwa Centre Administrator: Mark Kparmak
IMPLEMENTATION MILESTONES	Bi-weekly meetings starting from 27/8/2014	
PROCUREMENT	N/A	
RESPONSIBILITY FOR IMPLEMENTATION	<ul style="list-style-type: none"> <li>- Center Leader- Prof. JC Aguiyi</li> <li>- Deputy Center Leader- Prof FK Okwuasaba</li> <li>- Secretary- Mark Kparmak</li> <li>- M &amp; E- Prof CA Ugodulunwa</li> <li>- Financial Officer- Mr. Luke Ngwu</li> <li>- Procurement Officer- Mr. Micah Sattong</li> <li>- Post Graduate Representative</li> <li>- Head of phytomedicine program</li> <li>- Head of Clinical Pharm- Dr. Maxwell Dapar</li> <li>- ICT- Dr. Ishaya Tanko</li> </ul>	

DURATION: 1 year		Commencement: August 2014				Completion: August 2015		
<b>PRIMARY CONSTITUENTS:</b> - Center Leader- Prof. JC Aguiyi - Deputy Center Leader- Prof FK Okwuasaba - Secretary- Mark Kparmac - M & E- Prof CA Ugodulunwa - Financial Officer- Mr. Luke Ngwu - Procurement Officer- Mr. Micah Sattong - Post Graduate Representative - Head of phytomedicine program - Head of Clinical Pharm- Dr. Maxwell Dapar - ICT- Dr. Ishaya Tanko All center faculty All center students				<b>PARTICIPANTS:</b> - Center Leader- Prof. JC Aguiyi - Deputy Center Leader- Prof FK Okwuasaba - Secretary- Mark Kparmac - M & E- Prof CA Ugodulunwa - Financial Officer- Mr. Luke Ngwu - Procurement Officer- Mr. Micah Sattong - Post Graduate Representative - Head of phytomedicine program - Head of Clinical Pharm- Dr. Maxwell Dapar - ICT- Dr. Ishaya Tanko				
ASSUMPTIONS		All faculty present regularly						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Biweekly meetings	0	0	0	0	0	0	0
TOTALS		0	0	0	0	0	0	0

**Action Plan 3: Achieve Outreach**

**Timeframe:** November 2014 - February 2015

**Activity 3.8: Outreach events targeting women**

RESULT	Encouraging and empowering women to participate in phytomedicine training and applied research will be a major fulfilment of the Centre's gender equality policy for women in science and meeting the 30% World Bank policy for women. This will project and acquaint them with knowledge and skills necessary for them to compete favourably in the labour market.	
ACTIVITY	Outreach events targeting women	
OUTPUT	Outreach events for women held	
<b>OUTPUT INDICATOR</b> Number of women attending outreach events Number of women in phytomedicine training programs		<b>SOURCE OF VERIFICATION</b> Centre Administrator: Mark Kparmak Finance Officer: Luke Ngwu M&E Officer: Prof. C.A Ugodulunwa
IMPLEMENTATION MILESTONES	November 2014-Advertisement of short-term phytomedicine courses December 2014-Admission of female students with bias for science into short-term phytomedicine courses to build capacity in such courses to incentivize them in developing interest for phytomedicine December 2014-enrollment of female students into phytomedicine Courses February 2015-Theatre for phytomedicine development outreach in Togo for participating partners which will showcase the importance of women participation in research and science education especially phytomedicine development.	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof F.K Okwuasaba partner Leaders: Prof. Simon Efange, Prof.Theophilus Fleitcher, Dr Enoch Achigan, Dr Nicholas Koudovou, Dr Djierro Khadidja	
DURATION: 4 months	Commencement: November 2014	Completion: February 2015
PRIMARY CONSTITUENTS: ACEPRD	PARTICIPANTS: Faculty	

Faculty Students Partner Institutions Ministry of Health Lome, Togo Traditional Healers Association		Students Theatre performers Partner Institutions Ministry of Health Lome, Togo Traditional Healers Association						
ASSUMPTIONS		Women will have interest in phytomedicine						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Advertisement		4,500					4,500
2	Female Student Scientists Development (1 each from 5 partner institution)		12,500					12,500
3	Accommodation		5,000					5,000
4	Food		1,000					1,000
5	Air Ticket		5,500					5,500
6	Hiring of venue		2,000					2,000
7	Honorarium for theatre performers and other speakers		500					500
TOTALS			18,500					31,000

**Action Plan 3: Achieve Outreach**

**Timeframe:** June 2015-August 2015

**Activity 3.9: Industry networking events**

RESULT	Networking for research, partnership, internship, and student/faculty exchange and establishment of data for human resources for employment and consultancy.	
ACTIVITY	Industry networking events	
OUTPUT	Strengthened relationship with industry resulting to Faculty signing MOUs for production of research findings and other consultancies	
OUTPUT INDICATOR	Number of industry partners attending events Number of industry partners willing to take students for outreach periods Number of outreach experiences for students and faculty	SOURCE OF VERIFICATION Centre Leader: Prof.J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba Centre Administrator: Mark Kparmak M&E Officer: Prof. C.A Ogudulunwa Industry partners: Neimeth Lagos, Europharm Jos
IMPLEMENTATION MILESTONES	May 2015- Symposium and phytomedicine fair in collaboration with the industry to strengthen industry-academic partnership for development July 2015: Commencement of internship August 2015-End of internship	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Owkuasaba Centre Administrator: Mark Kparmak Finance Officer: Luke Ngwu M&E Officer: Prof. C.A Ugodulunwa	
DURATION: 4 months	Commencement: May 2015	Completion: August 2015

PRIMARY CONSTITUENTS: Students Faculty Industries ACEPRD		PARTICIPANTS: Students Faculty Industries ACEPRD						
ASSUMPTIONS		Industry partners are interested in working with academic partners						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Transportation incentive for interns to industries for 44 students for 1 month at \$1000 per student and (14:15:15 students per time)			44,000				44,000
2	One-day Symposium on industry-academic partnership for phytomedicine development (100 participants including students and faculty, A Keynote Speaker, 3 Lead Speakers, and industry participants-Venue, Transportation, Honorarium for speakers, refreshment, and Publicity) Solicitations will be made to the industries to sponsor more students to the event.				88,500			
TOTALS				44,000				52,500



**Action Plan 4:** Achieve Center Operations and Management Excellence

**Timeframe:** August 2014-August 2015

**Activity 4.1:** Center Operational Cost

RESULT	Efficient Structure for project implementation, monitoring and evaluation as well as center management in place	
ACTIVITY	Center Operational Cost	
OUTPUT	<p>Full Management Team constituted for project implementation</p> <ul style="list-style-type: none"> <li>- Center Leader- Prof. JC Aguiyi</li> <li>- Deputy Center Leader- Prof FK Okwuasaba</li> <li>- Secretary- Mark Kparmak</li> <li>- M &amp; E- Prof CA Ugodulunwa</li> <li>- Financial Officer- Mr. Luke Ngwu</li> <li>- Procurement Officer- Mr. Micah Sattong</li> <li>- Post Graduate Representative: Prof. Warisu Alli</li> <li>- Head of phytomedicine program: Prof. F.C Ohiri</li> <li>- Head of Clinical Pharmacy- Dr. Maxwell Dapar</li> <li>- ICT- Dr. IshayaTanko</li> </ul>	
<p>OUTPUT INDICATOR</p> <p>Number of meetings for project implementation and evaluation</p>		<p>SOURCE OF VERIFICATION</p> <p>Centre Administrator: Mark Kparmak</p> <p>Minutes of meetings</p>
IMPLEMENTATION MILESTONES	Bi-weekly meeting through the year: August 2014- August 2015	
PROCUREMENT	12 laptops	
RESPONSIBILITY FOR IMPLEMENTATION	<p>Centre Leader: Prof. J.C Aguiyi</p> <p>Deputy Centre Leader: Prof. Francis Okwuasaba</p> <p>Centre Administrator: Mark Kparmak</p>	
DURATION: 1 year	Commencement: August 2014	Completion: August 2015
<p>PRIMARY CONSTITUENTS:</p> <p>ACEPRD</p> <p>Students</p> <p>Regional and International Faculty</p> <p>University of Jos Community</p>		<p>PARTICIPANTS:</p> <p>ACEPRD Management Team</p>
ASSUMPTIONS		

FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qt	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total
1	Printing and stationary, communication, transportation, postages, other operating costs, 12 laptops	12,000						12,000
2	Preparation of materials for meeting, stationeries, communication, postages, other operating expenses	500	500	500	500			2,000
<b>TOTALS</b>		12,500	500	500	500			14,000

**Action Plan 4:** Achieve Center Operations and Management Excellence

**Timeframe:** December 2014-January 2015

**Activity 4.2:** Vehicle purchase, fuel, maintenance

RESULT	Efficient transportation for proper execution of project; student/faculty field trips and farm produce haulage is enhanced.	
ACTIVITY	Vehicle purchase, fuel, maintenance	
OUTPUT	Enhanced transportation of students, faculty, and farm produce	
OUTPUT INDICATOR	Vehicles procured Fuel log established	SOURCE OF VERIFICATION Finance Officer: Luke Ngwu Procurement Officer: Micah Sattong Centre Administrator: Mark Kparamak Centre Leader: Prof. J.C Aguiyi
IMPLEMENTATION MILESTONES	December 2014-January 2015-Procurement of vehicle	
PROCUREMENT	Vehicle purchase, fuel, maintenance	
RESPONSIBILITY FOR IMPLEMENTATION	Procurement Officer Finance Officer: Luke Ngwu Centre Leader: Prof. J.C Aguiyi	
DURATION: 1 month	Commencement: December 2014	Completion: January 2015
PRIMARY CONSTITUENTS: ACEPRD Farm Manager Students Faculty	PARTICIPANTS: Procurement Officer Finance Officer Centre Leader	
ASSUMPTIONS	Vehicles are available in country that meet specifications	
FINANCIAL IMPLICATIONS	ACEPRD Budget	

Budget Line Analysis		1 <sup>st</sup> Qt	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Q t	Total
1	Vehicle purchase ( 2)		80,000					80,000
3	Maintenance/fuel			7,000	7,000	6,000		20,000
TOTALS			80,000	7,000	7,000	6,000		100,000

**Action Plan 4:** Achieve Center Operations and Management Excellence

**Timeframe:** August 2015–December 2015

**Activity 4.3:** International Advisory Board Meeting

RESULT	Annual meeting for deliberations on project implementation, evaluation of project outcome, maintenance of scientific standards, and advice on proper fund management.						
ACTIVITY	International Advisory Board Meeting						
OUTPUT	Important decisions and advice for achieving project goals and objectives						
OUTPUT INDICATOR Annual meetings convened							SOURCE OF VERIFICATION Centre Leader: Prof. J.C Aguiyi Centre Deputy Leader: Prof. F.K Okwuasaba Centre Administrator: Mark Kparmak
IMPLEMENTATION MILESTONES	October 2015: Planning of meeting commences December 2015: Meeting of International Advisory Board Members						
PROCUREMENT	n/a						
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Centre Administrator: Mark Kparmak						
DURATION: 3 months	Commencement: October 2015			Completion: December 2015			
PRIMARY CONSTITUENTS: ACEPRD International faculty Center faculty Center students							PARTICIPANTS: ACEPRD
ASSUMPTIONS	International advisory board members are available and able to travel to the meeting						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qt	Total

Analysis							
1	Air Tickets (5) (International and Local Flights)				12,500		12,500
2	Accommodation (2 days arrival and departure)				2,750		2,750
3	Honorarium (2 days)				7,000		7,000
4	Food				2,000		2,000
TOTALS					24,250		24,250

**Action Plan 4:** Achieve Center Operations and Management Excellence

**Timeframe:** January 2015 -June 2015

**Activity 4.4:** Regional Advisory Board Meeting

RESULT	Regional meetings to assess progress in project implementation						
ACTIVITY	Regional Advisory Board Meeting						
OUTPUT	Important decisions and advice for achieving project goals and objectives						
OUTPUT INDICATOR	Bi-Annual meetings convened					SOURCE OF VERIFICATION	
						Centre Leader: Prof. J.C Aguiyi Centre Deputy Leader: Prof. F.K Okwuasaba Centre Administrator: Mark Kparmac	
IMPLEMENTATION MILESTONES	December 2014: Planning of first Regional Board meeting commences January 2015: First Meeting of Regional Board Members May 2015: Planning of second Regional Board meeting June 2015: Second Meeting of Regional Board members						
PROCUREMENT	n/a						
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Centre Administrator: Mark Kparmac						
DURATION: 7 months	Commencement: December 2015			Completion: June 2015			
PRIMARY CONSTITUENTS:	ACEPRD Regional Partners All center faculty All center students			PARTICIPANTS: ACEPRD regional board ACEPRD leadership			
ASSUMPTIONS	Regional members are willing an able to attend						
FINANCIAL IMPLICATIONS	ACEPRD Budget						
Budget Line Analysis	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qt	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total

1	Air Tickets-Local and International (2 meetings)		4,750		4,750			9,500
2	Accommodation(2 days for 2 meetings)		1,750		1,750			3,500
3	Food for (2 days for 2 meetings)		1,000		1,000			2,000
4	Honorarium for (2 days for 2 meetings)		5,000		5,000			10,000
5	Venue for (1 day for 2 meetings at Faculty Boardroom)		0		0			0
TOTALS			12,500		12,500			25,000



**Action Plan 4: Achieve Center Operations and Management Excellence**

**Timeframe:** September 2014

**Activity 4.5: Center management Training**

RESULT	Orientation of management team for efficient execution of project will enable them to carry out the project in a timely and effective manner, meeting all the project deliverables.	
ACTIVITY	Center management training	
OUTPUT	Management team equipped with managerial skills for project implementation	
OUTPUT INDICATOR Number of Management Team trained	SOURCE OF VERIFICATION Centre Leader: Prof. J.C Aguiyi M&E Officer: Prof. C.A Ugodulunwa Centre Administrator: Mark Kparamak Finance Officer: Luke Ngwu	
IMPLEMENTATION MILESTONES	July 2014-Planning of training of management staff, contact of speaker and arrangements of logistics commences September 2014:training of management team	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi M&E Officer: Prof. C.A Ugodulunwa Centre Administrator: Mark Kparamak Finance Officer: Luke Ngwu	
DURATION: 3 months	Commencement: July 2014	Completion: September 2014
PRIMARY CONSTITUENTS: -Center Leader- Prof. JC Aguiyi - Deputy Center Leader- Prof FK Okwuasaba - Secretary- Mark Kparamak - M & E- Prof CA Ugodulunwa - Financial Officer- Mr. Luke Ngwu - Procurement Officer- Mr. Micah Sattong - Post Graduate Representative - Head of phytomedicine program - Head of Clinical Pharm- Dr. Maxwell Dapar - ICT- Dr. IshayaTanko		PARTICIPANTS: -Center Leader- Prof. JC Aguiyi - Deputy Center Leader- Prof FK Okwuasaba - Secretary- Mark Kparamak - M & E- Prof CA Ugodulunwa - Financial Officer- Mr. Luke Ngwu - Procurement Officer- Mr. Micah Sattong - Post Graduate Representative - Head of phytomedicine program - Head of Clinical Pharm- Dr. Maxwell Dapar - ICT- Dr.IshayaTanko

ASSUMPTIONS		Training for efficient project management can be completed in country						
FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Food	2,000						2,000
TOTALS		2,000						2,000

**Action Plan 4: Achieve Center Operations and Management Excellence**

**Timeframe:** September 2014-November 2014

**Activity 4.6: Accreditation**

RESULT	Accreditation of Centre Short Courses, masters and PhD programme by the National Universities Commission NUC, Pharmacist Council, WHO, Federation of International Pharmacists for National and international recognition of graduates trained by the Centre.	
ACTIVITY	Accreditation	
OUTPUT	Centre short courses, masters and PhD programs accredited	
OUTPUT INDICATOR	Accreditation of two masters programs Accreditation of two PhD programs Short courses accredited by national accreditors	SOURCE OF VERIFICATION Centre Leader: Prof. J.C Aguiyi Registrar: Barr. Jilli Dandam DVC Academics: Prof. B.T Ugwu Dean, PG School: Prof. WarisuAlli
IMPLEMENTATION MILESTONES	November 2014- Review accreditation criteria by ACEPRD Management December 2014-Invitation for site visit made February 2015-Accreditors make site visits April 2015-Two masters programme and short Courses accredited for graduation of students within the programme timeline (1 year)	
PROCUREMENT	n/a	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof J.C Aguiyi Centre Administrator: Mark Kparamak Dean of PG School: Prof. Warisu Alli	
DURATION: 6 months	Commencement: November 2014	Completion: April 2015
PRIMARY CONSTITUENTS: ACEPRD Regional Partners	PARTICIPANTS: Accreditation bodies both local and international	
ASSUMPTIONS	Internationally recognized training in phytomedicine able to be accredited	
FINANCIAL IMPLICATIONS	ACEPRD Budget	

Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	International Accreditation fees							
	Federated International Pharmacist, FIP/World Health Organization, WHO (Site visit, travel, accommodation, honorarium)				220,000 5			20,000
	NAPPSA	0						0
2	Local accreditation fees:							
	NUC	0						
	Pharmacist Council of Nigeria	3,125						3,125
<b>TOTALS</b>		3,125		5500	220,000			23,625

**Action Plan 5: Strengthen Financial Stability**

**Timeframe:** September 2014 - August 2015

**Activity 5.1: Farm cultivation management and expansion**

RESULT	Availability of raw materials for training, applied research and industrial use is essential for sustained Centre project. Centre will also generate revenue for the supply of raw materials to the industry.	
ACTIVITY	Farm cultivation management and expansion	
OUTPUT	Medicinal raw materials for training and applied research available	
OUTPUT INDICATOR	Number of medicinal plants harvested for research use and commercialization Preservation and cultivation of farmland	SOURCE OF VERIFICATION Head of Phytomedicine :Prof. F.COhiri Farm Manager
IMPLEMENTATION MILESTONES	September 2014-Preparation of farm for cultivation of medicinal plants October 2014-Cultivation of medicinal plants December 2014-May 2015-Management of medicinal plants September 2015-Harvest of medicinal raw materials May 2015-Herbarium for medicinal plants June 2015-Uploading digital herbarium	
PROCUREMENT	Hiring casual workers, farm implements, medicinal plants and seedlings, tractor, water pumping machine, overhead tank	
RESPONSIBILITY FOR IMPLEMENTATION	Centre Leader: Prof. J.C Aguiyi Deputy Centre Leader: Prof. F.K Okwuasaba Farm Manager: Nannim Langyi Procurement Officer: Micah Sattong Finance Officer: Luke Ngwu Head of Phytomedicine: Prof. F.C Ohiri	
DURATION: 1 year	Commencement: September 2014	Completion: September 2015
PRIMARY CONSTITUENTS: ACEPRD Students Faculty Farm Manager Head of Phytomedicine	PARTICIPANTS: ACEPRD Students Faculty Farm Manager Head of Phytomedicine Gangnim Community	
ASSUMPTIONS	No natural conditions (flood, infestation etc) preventing farm cultivation	

FINANCIAL IMPLICATIONS		ACEPRD Budget						
Budget Line Analysis		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	5 <sup>th</sup> Qtr	6 <sup>th</sup> Qtr	Total
1	Hiring 50 casual workers to clear 800 Hectares farm 5 days	2,000						2,000
2	Farm implements	5,000						5,000
3	Medicinal plants and seedlings	35,000						35,000
4	Tractor	25,000						25,000
5	Water pumping machine/hose	500						500
6	Overhead tank	1,000						1,000
<b>TOTALS</b>		<b>68,000</b>						<b>68,000</b>

## Annex

<b>PART C</b>							
<b>Phase</b>	<b>What</b> (Is the parameter to be monitored?)	<b>Where</b> (Is the parameter to be monitored?)	<b>How</b> (Is the parameter to be monitored?)	<b>When</b> (Define the frequency / or continuous?)	<b>Why</b> (Is the parameter being monitored?)	<b>Cost</b> (if not included in project budget)	<b>Who</b> (Is responsible for monitoring?)
During activity <b>preparation</b>  Initial stage	Centre will develop a structured method of controlling and reducing the environmental impact that may result from the project. Hence scientific and management processes will be written as a policy document	Centre Laboratories and Farm	Ensuring compliance to established National and International environmental management laws	During application process for a prevention and control approval in February 2015 through the 4 years of the project	To identify and prepare EMP document that will comply with environmental control legislation to avoid risk and obstruction to the project implementation	Adherence to health and environmental management laws and effective response preparedness will reduce risk management cost: Part of Budget in Action Plan 4: Centre Operations	National and International Environmental pollution prevention agency to monitor compliance Centre Leader Prof J.C Aguiyi, M&E Officer Prof. C.A Ugodulunwa Plateau State Environmental Protection Agency
During activity <b>implementation</b>	Centre will collect regularly data for analysis to measure and monitor our EMP objectives and targets	Centre Laboratories and Farm	Data analysis, internal checks and audits to measure progress and improvement	Regular Review as from January 2015 through the 4 years of the project	To continually identify impacts and controlling the risks	Identified and corrected risks will save cost	Deputy Centre Leader Prof F.K Okwuasaba, Prof. I.S Okafor Department of Pharmaceutics, Prof. Dung Gwom HOD Department of Geography and Planning Project management to demonstrate preparedness and response to emergency
	Training on Laboratory Ethics	Centre Laboratories and Farm	Use and handling of animals, biological and land conservation and biodiversity	Environmental pollution and land preservation management to be done annually from February 2015 through the project period	For effective handling of laboratory animals and biological and prevention of soil depletion.	Centre budget	Dr.Oche Agbaji, Dr Ekwere.O Ekwere
	Will identify and improve environmental performance indicators after self internal assessment to ensure meeting national legal obligations	Centre Laboratories and Farm	Self evaluation methods adopted to track environmental management control objectives and targets	The environmental management within the period of the project will regularly identify and evaluate compliance to impact issues from September 2014 to the end of the project	To improve sustainability of project activities environmental management corrective actions will be evaluated regularly from within 4 years of the project	Improve performance will save cost: Budgeted for in Action plan 2	Centre Stakeholders and World Bank to monitor on regular basis: Prof. F.K Okwuasaba

<p>During activity <b>supervision</b></p>	<p>The Centre will ensure standard Laboratory and Farm Management practice</p>	<p>ACEPRD Laboratories, Farm, and partner Farm</p>	<p>Utilizing data acquired during monitoring of implementation stage to review rules, ensuring compliance of management rules put in place by the Project Management Team And Organizing environmental standard operations management seminars for technologists, farm managers</p>	<p>Twice in a month beginning from January 2015-December 2017</p>	<p>To ensure strict compliance with all environmental standards relating to research</p>	<p>The cost as budget for in Action Plan 5</p>	<p>ACEPRD Chief Technologist Mr Shola Motunbade, Head of Animal House Mr Luka Wazoh, Deputy Centre Leader Prof F.K Okwuasaba</p>
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