Prof. Ibrahima THIOUB
Vice Chancellor

20th Meeting of COMSATS Coordinating Council

14-15 May 2017. Cairo, EGYPT
PLAN

I. PRESENTATION OF UCAD
   1. History
   2. Educational and research structures

II. PRESENTATION OF CENTERS OF EXCELLENCE
    1. Governance
    2. Components
    3. Research activities

III. Areas of Cooperation and Collaboration
Created by February 24, **1957**, the University of Dakar was officially inaugurated in December 9, 1959.

The change of name of the University of Dakar, which becomes **University Cheikh Anta Diop in Dakar** was in March 30, 1987.
Educational and research structures

RECTORAT

6 FACULTES

FST
FMPOS
FLSH
FSJP
FASEG
FASTEF

9 Instituts de Facultés

IST
IOS
CRBL
CREA
IFACE
ISG

19 Ecoles et instituts d’université

ESP
IREMPT
IFEE
IUPA
CLAD
IGT
CERE

ENSETP
IMTA
EBAD
IDHP
IPS
IPDSR
ITNA

INSEPS
ISED
IREP
CESTI
IFAN-CAD
UCAD Research organization

Around a Direction of Research

• Scientific Council,

• Direction of International Cooperation,
  – Intellectual Property Service and exploitation of research results,
  – Bureau of Research and Innovation Support

• Research Ethics Committee.
College of Doctorate Schools: 7 Units

- Doctorate School of Water Quality and Water Uses (EDEQUE)
- Doctorate School of Life Sciences, Health and Environment (ED-SEV)
- Doctorate School Physics, Chemistry, Earth Sciences and Engineering (ED-PCSTUI)
- Doctorate School of Human and Society Studies (ED-ETHOS)
- Doctorate School of Mathematics and Computing (ED-mathinfo)
- Doctorate School of Arts, Cultures and Civilizations (ED-ARCIV)
- Doctorate School of Law, Political Science, Economics and Management (ED-JPEG)
ICT Facilities

• Free internet on Social campus

• Free internet on Educational campus

• One Student – One Computer
Financial resources for research

• Funds Programs from The Ministry of Higher Education and Research (with a special fund for women researchers)

• University budget (support of travels and participation to international conferences, workshops and seminars)
II. PRESENTATION CENTRE D’EXCELENNCE

1. Gouvernance

Approved by COMSATS in July 2012

Administered by:

- Director: Prof. Ibrahima THIOUB
- Focal point: Prof. Tahir DIOP
- Steering Committee: 10 Members
II. UNITS of the COMSATS – UCAD Center

- Renewable Energy
  - Plant and microbial biotechnologies
- Public Health (Bacteriology / Virology)
Research activities

- Conversion and Energy Storage, Thermal, Wind, Solar
- Thermal comfort in housing and energy efficiency
- Modeling Systems Renewables and design of static converters

- Monitoring and control of power systems
- Electrochemical Deposit n-Type CdTe
- Study of cells produced by electrochemical doping
- Electrical properties of SnTe

- Tabled CdTeSe and electrochemical characterization
- Models for the spectral response of photo-electrochemical cells
- Properties of Condensed Matter
- Behavior of functional materials
## Unit: Renewable Energy Statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Professor</td>
<td>61</td>
</tr>
<tr>
<td>PhD</td>
<td>54</td>
</tr>
<tr>
<td>Master degree</td>
<td>88</td>
</tr>
<tr>
<td>Publications 2015 - 2016</td>
<td>117</td>
</tr>
</tbody>
</table>
Unit: Renewable Energy: Equipements

Photoluminescence

Module cylindro-parabolique

Wind turbine
Unit 2: Plant and Microbial Biotechnologies

- Laboratory of Plant biotechnologies
- Joint Laboratory of Microbiology IRD / ISRA / UCAD (LCM)
- Laboratory of Fungal Biotechnologies

- Tissue cultures
- Phytopatology
- Molecular biology
- Biochemistry
- Experimental Station
- Microbiology
Research Activities

➢ Development of methods for micropropagation and in vitro cloning

➢ Ecophysiology of mycorrhizal fungi and nitrogen fixing bacteria

➢ Production and valorization of biofertilizers

➢ Biological control

➢ Integration of biotechnology in agriculture and forestry routes

➢ Determination of the genetic variability of sources for a rational management of plant genetic resources

➢ Introduction of genes of interest (resistance to pathogens) in tropical species

➢ Study of the reproductive system and mode of transmission of genes in natural populations

➢ Development of axes of research for food security and sustainability
<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Professor</td>
<td>36</td>
</tr>
<tr>
<td>PhD</td>
<td>22</td>
</tr>
<tr>
<td>Master degree</td>
<td>51</td>
</tr>
<tr>
<td>Technician</td>
<td>14</td>
</tr>
<tr>
<td>Publications 2015-2016</td>
<td>43</td>
</tr>
</tbody>
</table>
Equipments
Unit: Public Health

Bacteriology-Virology laboratory
Hôpital Aristide Le Dantec - Dakar - Sénégal

Headed by

Professor Souleymane Mboup
Organization

• **Technical Units (6)**
  – The Bacteriology unit
  – The Molecular Biology unit
  – The immunology unit
  – The Virology unit
  – Clinical trials unit
  – Quality management and Accreditation

• **Administration, finances and social**
Bacteriology Unit

Pioneer Unit of the Laboratory of Bacteriology Virology

- Diagnosis of bacterial infections by processing the bacteriological samples of hospitalized and external patients.
- Sub-unit of myco bacteriology that performs tuberculosis diagnosis
- BL3 facility
Virology Unit

- Reference laboratory for HIV infection
- Organization of the quality control of HIV infection serological diagnosis throughout the country
The unit is accredited by WHO for the surveillance of the HIV 1 drug resistances in 2009

• Training centre for students, trainees and other young researchers of the sub-region
Networking of UCAD-COMSATS Center (1)

- Member of the National Committee to Fight nosocomial infections (CONALIN in French)
- African AIDS Research Network (Western and central zone) - AARN
- African Society for Laboratory Medicine (ASLM)
  - WHO-AFRO, CDC, PEPFAR, UNAIDS, World Bank
  the Clinton Health Access Initiative, American Society for Clinical Pathology (ASCP), the African Union Commission, Biomerieux
Networking of UCAD-COMSATS Center (2)

- National laboratory of Biosecurity
- African Laboratory of Renewable Energy
- National project on sustainable agriculture financed by IAEA
- International Master on Tropical Biotechnologies.
Areas of Cooperation and Collaboration

- To Integrate Comsats Thematic Research Groups on:
  - Agriculture and Biotechnology
  - Renewable energy
- To be Head Leader on Thematic Research on Public Health
- To benefit of mobility through Comsats networking
  - Researchers
  - Ph D students
Follow-up of 19th Meeting of COMSATS Coordinating Council, May 2016, Islamabad, Pakistan

UCAD-Senegal is ready:

- to jointly organize trainings in the fields of Renewable Energy, and Plant and Microbial Biotechnologies.

- UCAD also expresses willingness to host COMSATS-ISESCO National Workshop on repair and maintenance of laboratory instruments.
THANK YOU FOR ATTENTION