



# Medical education and training of professionals in Cuba: Results and Perspectives

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- **Carrying on the legacy of professional development established at the University of Havana:**

- ✓ **Medicine:** established in 1726

- ✓ **Nursing:** established in 1898

- ✓ **Dentistry:** established in 1900

Governing Center for Undergraduate and Postgraduate Medical Education at the National Level.

ALMA MATER

# PRINCIPLES OF THE NATIONAL HEALTH SYSTEM



**ACCESSIBLE AND FREE**

**UNIQUE SYSTEM  
STATE AND SOCIAL**



**PROMOTIONAL AND PREVENTIVE**



**COMMUNITY-BASED**



**CROSS-SECTORAL**



**INTERNATIONAL  
COLLABORATION**



**SCIENTIFIC AND  
TECHNOLOGICAL ADVANCES**

**UNIVERSAL Y REGIONALIZED**



## Medical Attention Levels

Leading Institutions for integrated care and human resources training in healthcare

**Primary**



**Secondary**



**Tertiary**



# Health Institutions Network



464 thousand 118 health workers, 70,2% women.  
A ratio of 8 physicians per 1000 inhabitants

- 11 thousand 548 physician offices
- 451 Medical centers
- 150 Hospitals, 38 thousand 642 beds
- 2201 Pharmacies
- 113 Dental clinics,
- 151 Maternity homes.

- 13 Research Institutes
- 27 Biomolecular laboratories
- 157 Nursing homes
- 301 Retirement homes
- 30 Medical and psychopedagogical centers



**14 MEDICAL UNIVERSITIES**



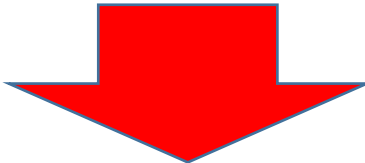
**1976:**

**The Ministry of Higher Education is created**

The Ministry of Public Health is defined as the formative body responsible for the training and professional development of human resources in the health sector.



Methodological →



Administrative





# Basic Principles

**The University is the  
entire national health  
system**

**The training scenario is  
that of your future  
professional performance**

**La “educación en el  
trabajo”, forma principal  
de organización de la  
enseñanza  
Aprender haciendo**

**Every profesional or  
technician participates in  
the training process**

**Tutorial teaching focused  
on estudent, with job  
independent**

**Education at work main  
form of teaching  
organization.  
Learn by Doing**

**Respect for ethical  
principles**

**Process focused on health preservation**

# MULTI-CAMPUS UNIVERSITY

- Medical Sciences Schools (9)
- Postgraduate Institutes (8)
- Specialized Schools (Dentistry, Health Technology and Nursing)
- Preparatory schools for International students
- Public Health National School
- Student Housing: 3
- Lifeguard schools

185

- University Degrees (12)
- Short-cycle Education Programs (18)
- Technical and Vocational Education Programs (8)
- Postgraduate Specialization Programs (69)
- Master's degree programs (75)
- Doctoring Training Programs(4) with five degrees



The University has a current enrollment of **23 thousand 238 students**, (19%) of whom are international students from 96 countries  
14 thousand 557 are undergraduated students,  
7 thousand 550 are postgraduated students



# Specialties in Health Sciences

**69 specialties**

**57 medical specialties (25 clinics; 12 surgical; 9 biomédical; 4 básico; 4 diagnosis; 3 public Health).**

**6 Nursing specialties .**

**5 Dentistry specialties.**

**75  
master' s  
programs**

**4  
doctoral  
programs in  
health sciences**

## Doctoring Training Program

- Authorized University Institution for the training of doctors in a specific area of knowledge, in 1977.  
UCMH ratified as an Authorized Institution for the training of doctors in specific areas of knowledge. **Agreement 20.496.21.**

## Doctoring Programs

Doctoring Program in Biomedical Sciences

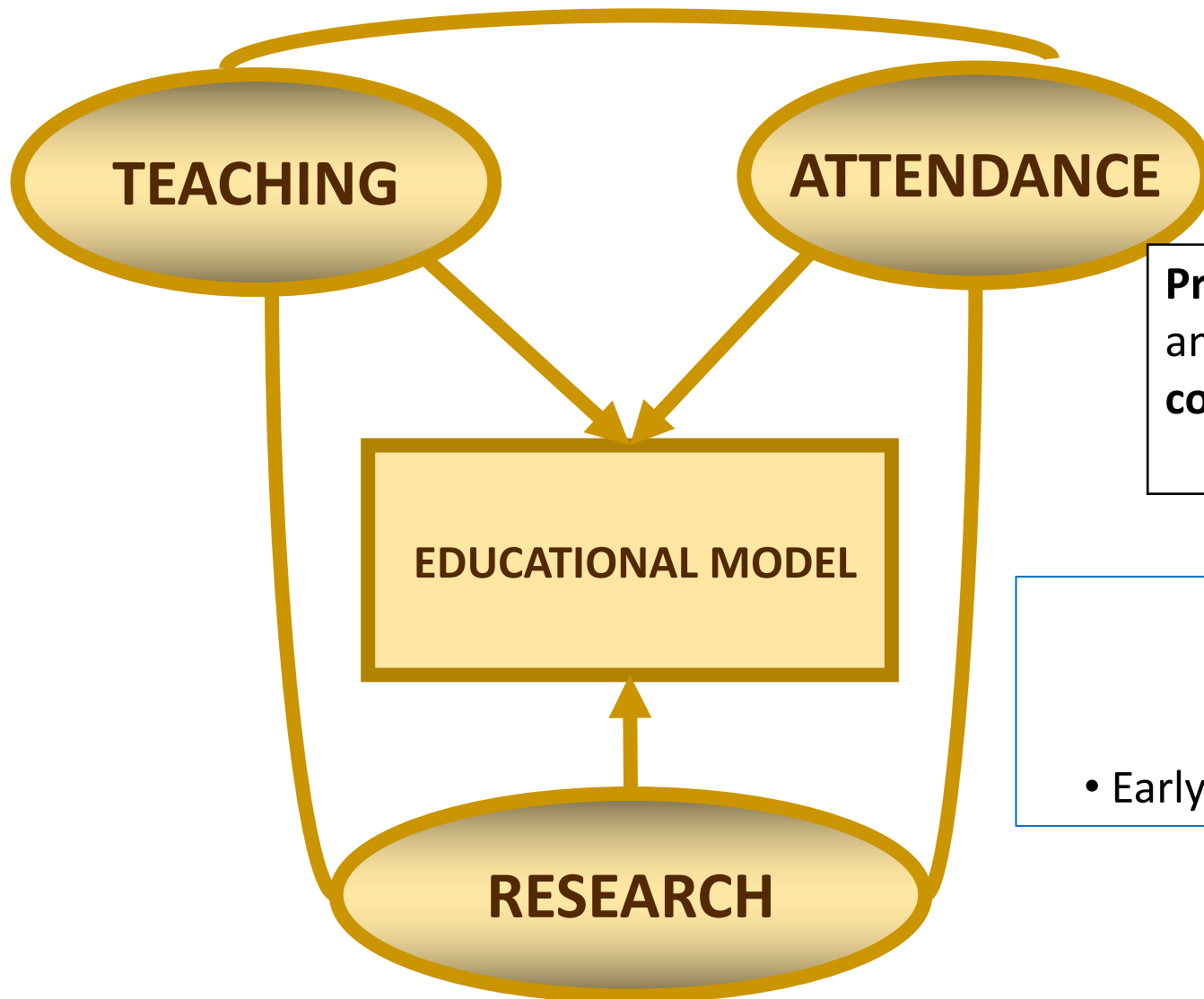
Doctoring Program in Health Sciences

Doctoring Program in Basic Sciences

**Infectology and Tropical Medicine Program (IPK)**

# Guiding principle of medical sciences education

## Work-based education



**Profession objective:** The health-disease process and its qualified care in individuals, families, **the community and the environment.**

- Training in real-world settings
- Integrates all levels of the Health System
  - Community-oriented
- Early and progressive linkage in each year of training

# Network of academic institutions of high national and international prestige



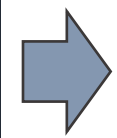


"How can be ensured that educational processes are developed with quality and relevance?"

**It is necessary...**  
to monitor the performance of university processes and rigorously and comprehensively **EVALUATE** the outcomes of health professional training, which society needs.



UNIVERSIDAD DE CIENCIAS MÉDICAS DE LA HABANA



**Management System**

**SEA-IES**

**SEAES**



# ACCREDITATION 2014



# REACCREDITATION 2024

Where are we addressing?

## Program Accreditation

Possible programs for accreditation: 16/16  
✓ 53,5 excellence rating

## Specialty Accreditation

Possible programs for accreditation: 41/29 (70,7%)  
✓ 27 of Excellence (93,1%)

## Mastering Accreditation

Accreditable programs 29/29(100%)  
✓ 20 of Excellence (68,9%)

## Doctoring Accreditation

Possible programs for accreditation: 2/2  
✓ 2 of excellence 100%)

100% of acreditable university programs are accredited (40% excellence).

80% of acreditable postgraduate programs are accredited (50% excellence).

30% hold a Doctorate (Dr. C) and a total of 70% hold a Doctorate (Dr. C) and a Master of Science (MSc) or postgraduate specialization  
(34,5%) (93%)

45% of Full Professor and Auxiliar Professor in the teaching staff.(80,12%)

Publication Index 2 per professor and 0,8 per professor groups I - III.  
(4,03%)



**"Science and innovation as a strategic component of Cuban public health development."**



# "UNIVERSITY MANAGEMENT SYSTEM BASED ON SCIENCE AND INNOVATION"

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## Health Challenges

1. The demographic transition.
2. Chronic diseases.
3. Emerging and re-emerging diseases
4. Rising healthcare costs.
5. The re-encounter with the social sciences.
6. The lessons of COVID-19 and new epidemics



# Main Research lines of UCMH period 2024-2029

## Geriatric Health Line

## Mental Health Line

## Additive Technologies and Medical Equipment Line (Prosthetics and Others)

## Line: Artificial Intelligence, Telemedicine, Augmented Reality

## Line: Human Resources Training

### UDI Cognitive Decline and Dementias

Project: Multidomain Intervention to prevent cognitive impairment

Project: Longitudinal Study of Anging and Alzheimer's

### UCMH (FCM Manuel Fajardo) vs Orthopedic Hospital Fructuoso Rodríguez

Project: Technological Innovation in External Bone Fixation for Intertrochanteric Fractures

### UCMH Nursing School

Project: Technological Education for the Creation of Open Educational Resources

Project: Simulators for the Acquisition of Practical Skills in Medical Sciences Programs

Diseases of Atherosclerosis.

### UCMH Rectory

Project: University (Management System)

INTERNACIONALIZATION

**The ability** of an entity to market its products or establish a presence in a country other than its country of origin.

*Knowledge Transfer*

*Practical Application*

International Market Knowledge

Knowledge of Business Partners

Knowledge of qualified personnel



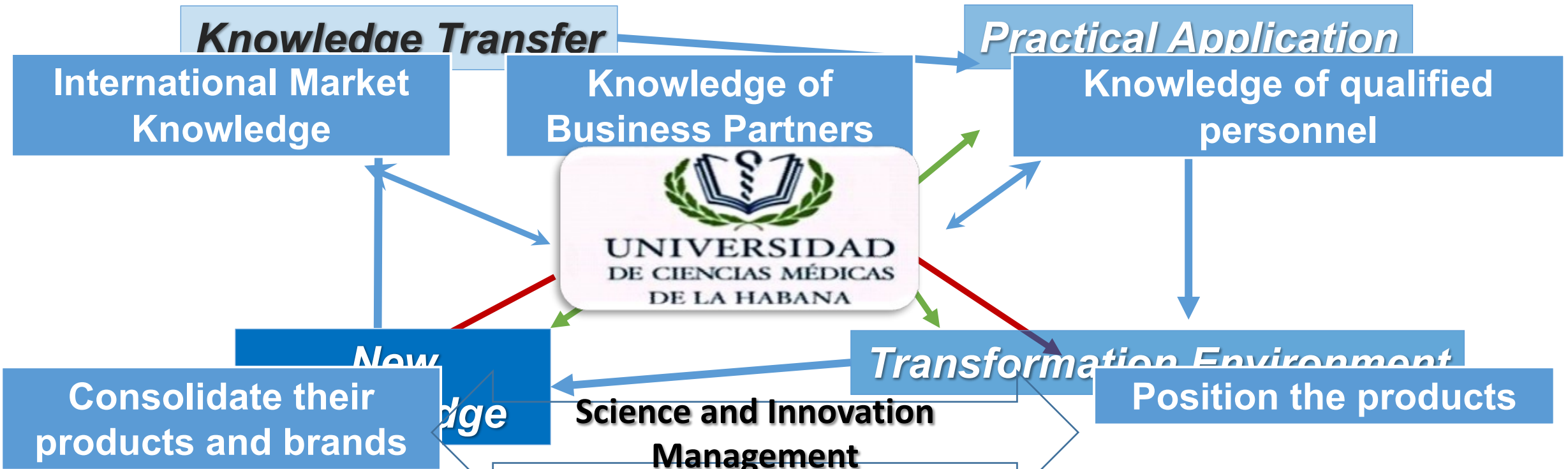
New Knowledge

Consolidate their products and brands

Science and Innovation Management

*Transformation Environment*

Position the products





**Academic Services**

**Technical Assistance**

**Technical Scientific Results**



Central Unit for Medical  
Collaboration



***UCMH Interface Science and  
Techonology Commercial Enterprise***

# INTERNACIONALIZATION OF SCIENCE NATIONAL OPPORTUNITIES



# INTERNACIONALIZATION OF SCIENCE INTERNATIONAL OPPORTUNITIES



# INTERNACIONALIZATION OF SCIENCE POTENTIALS



14 301 foreign graduates in over 141 countries.

108 cooperation agreements, with more than 34 countries

Project portfolio, with over 80 proposals.  
“Research in Health Systems and Services”  
“Human Resources Development”

Strong ties with different economic actors

Network of science units (ECTI, UDI, pharmaceutical laboratories, Labcel, Center for Development of Basic Sciences, CIRAH)



## **Main areas of scientific and technical exchange**

**Environmental management and its effect on health**

**Validation of the “One Health” concept**

**Transformation of communities and vulnerable environments**

**Development and validation of medical equipment and devices, for diagnosis and rehabilitation, for insertion into the Cuban market**

**Creation of joint spaces for research development.**

**Commercial partnerships with similar entities to promote the development of biomedical research.**



## Main scientific and technical services

### Scientific and technical consulting

Rat and mouse biomodels for the study of: Septic peritonitis, Chronic kidney failure, Acute and chronic kidney failure, Intestinal occlusion, Short bowel syndrome, Intrauterine growth retardation, High blood pressure, Experimental obesity system, Experimental diabetes mellitus system

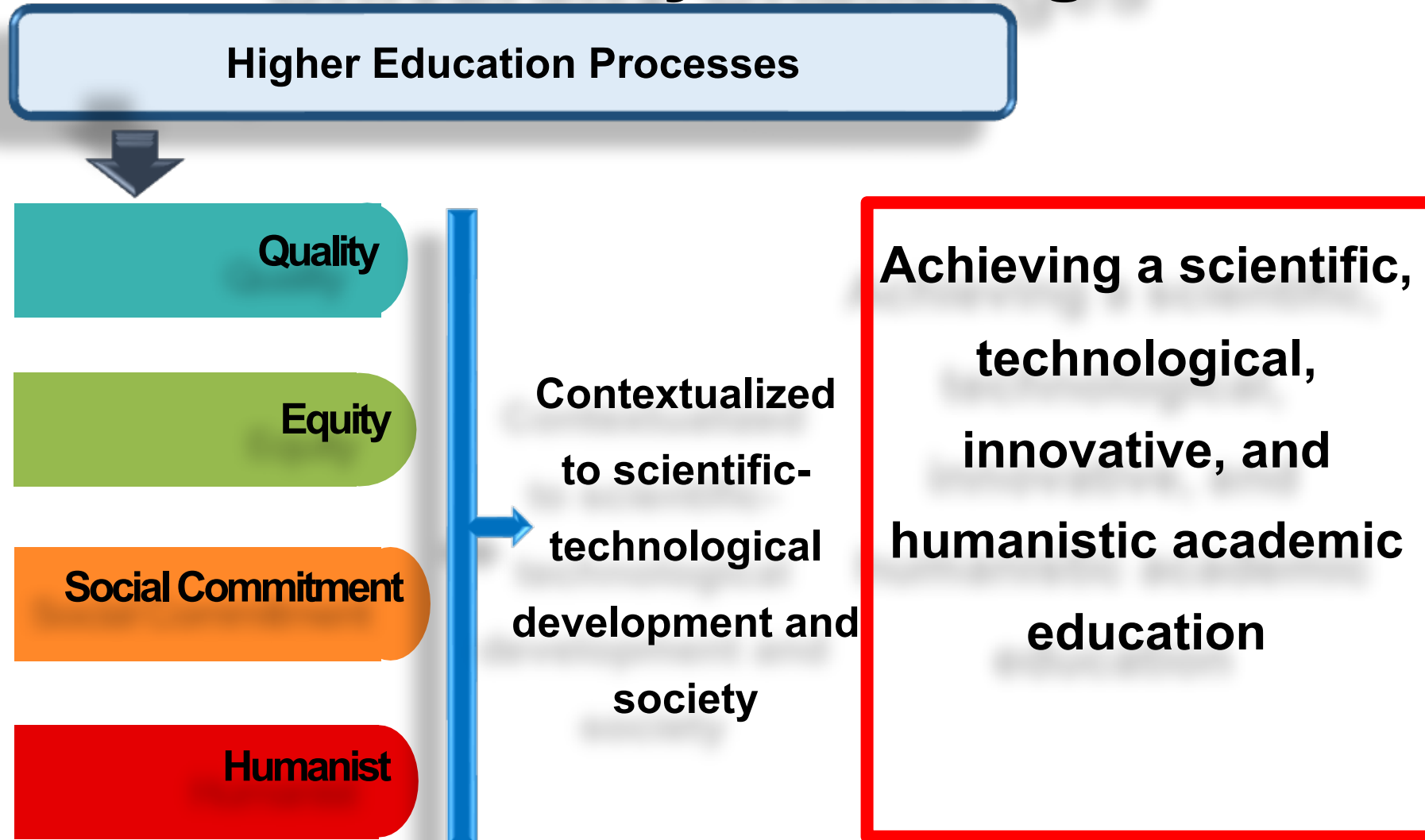
Medium- and long-term toxicity studies of conventional drugs and diagnostic agents

Development of drugs or active principles derived from medicinal plants.

Scientific and academic training based on knowledge derived from research.



# University Challenges



**Greater society-university integration**

