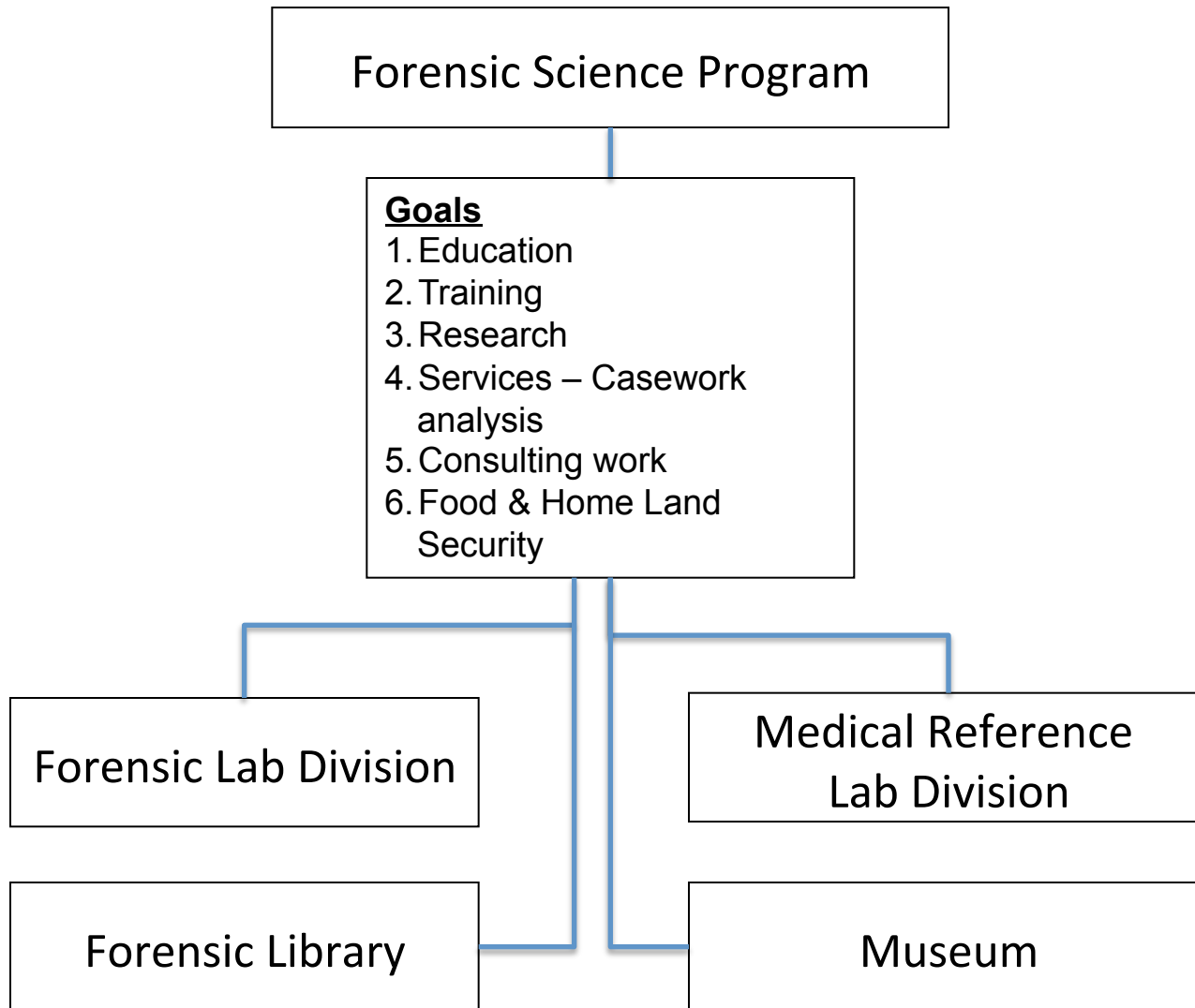


National Institute for Forensic Sciences (NIFS)

Owerri, Nigeria

Forensic Science Program



National Institute for Forensic Sciences (NIFS)

Divisions

1. Forensic /Criminalistic Laboratory Division
2. Medical Reference Laboratory Division

Site

1. Owerri, Nigeria
2. Across ISU, ISP and FUTU

Programs

1. Biomedical Forensic Science(s)
2. Mortuary Science(s)

Sponsors

Nebraska Institute of Forensic Sciences, Inc. (NIFS – USA)

National Institute for Forensic Sciences (NIFS)

TOTAL

- 1. Total Personnel = 500 People (with 2000 additional jobs in supportive, construction and related industries)**
- 2. Total Cost = \$16.9 Million**

Personnel Needs

- 1. Total Personnel = 500 People**
- 2. Annual Human Resource Cost = \$3.0 Million***

Equipment Needs

- 1. Capital Cost - Equipment = \$2.9 Million***
- 2. Individual items greater than \$100,000 (8 in total)**
 - GC' s**
 - LCMS**
 - Automated robotic Analyzers/Equipment**
 - Special Body Coolers**

* Includes 10% Contingency.

National Institute for Forensic Sciences (NIFS)

Supplies

- 1. Kits and equipment related supplies = \$ 0.6 Million**
- 2. General lab supplies, disposal, etc. = \$ 0.8 Million**

Sales, Advertising and Communication

- 1. Advertising = \$ 0.5 Million**
- 2. Covers sales people located in the Americas, EU, Middle East - Africa and Far East**

Forensic Science Library and Museum

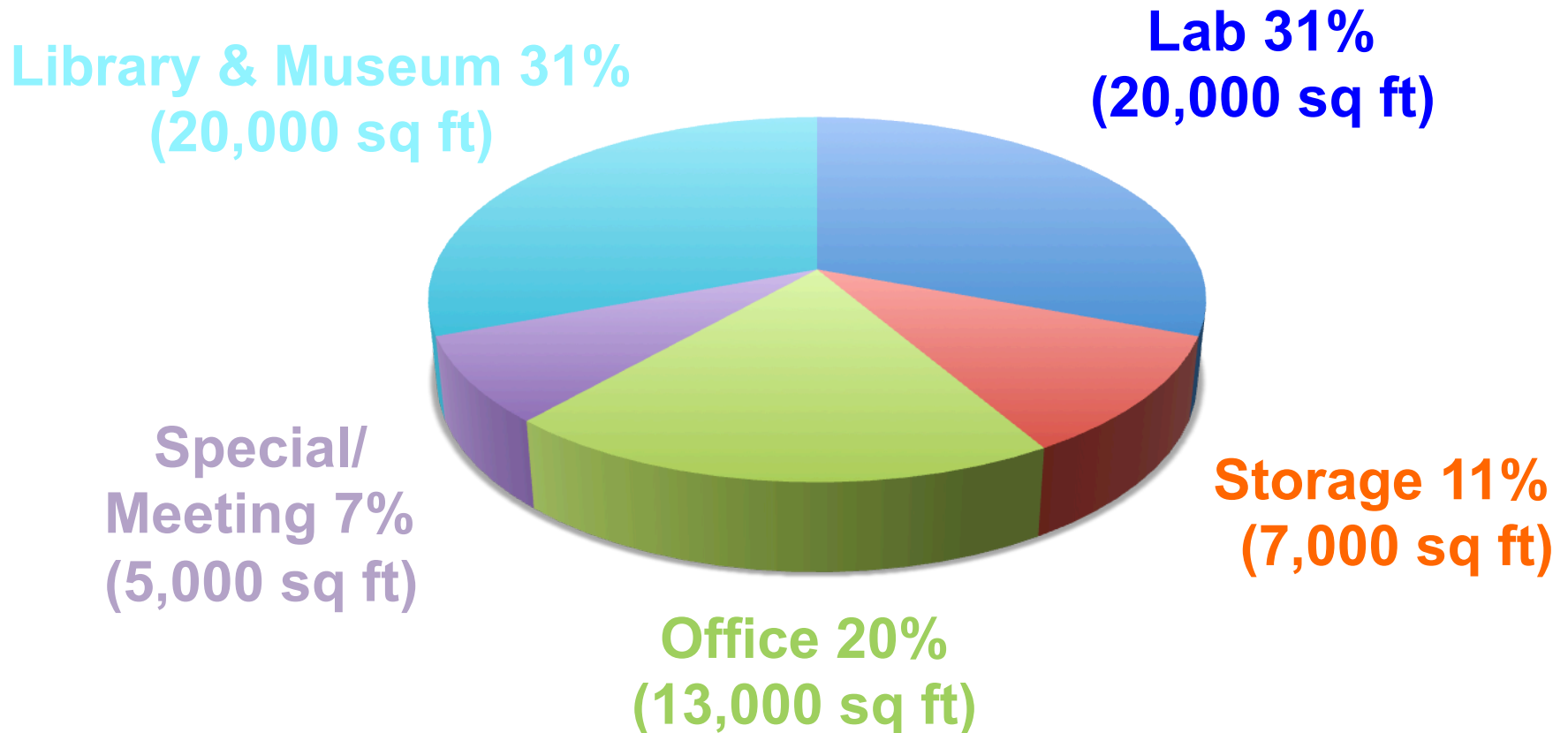
- 1. Capital for Buildings = \$ 1.4 Million***
- 2. People costs covered in earlier sections**

* Includes 10% Contingency.

National Institute for Forensic Sciences (NIFS)

Facility Requirements

1. Facility Footprint = 65,000 Square Feet*
2. Total rooms = 75
3. Cost = \$7.4 Million



National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>	<u>Building Area</u>			
Title	\$000 USD	Items Needed	Item	\$000 USD	Room	(Sq Feet by room)	
Forensic/Criminalistic Lab Division							
DNA Analysis Division							
1	Director	60	2	DNA Analyzers	100	DNA Lab	500
1	DNA Analyst	40	3	Computers	5	General Lab	500
1	Lab Scientist	30	1	Miscellaneous Equipment and Supply	5	General Lab	500
3	Lab Technician	75				Admin Office	250
1	Secretary/Admin Assistant	25				Reception	250
1	Receptionist	20					
8	Subtotal	190		Subtotal	110		2,000
Ballistics Division							
1	Firearm Analyst	40	1	Comparison Microscope	50	Office	250
1	Lab Technician	25	1	Shooting Range Equipment	10	Shooting Range	500
			1	Miscellaneous Equipment and Supply	10	Storage Room	250
2	Subtotal	65		Subtotal	70		1,000

National Institute for Forensic Sciences (NIFS)

	Title	\$000 USD	Items Needed	Item	\$000 USD Room	(Sq Feet by room)
Forensic/Criminalistic Lab Division						
Fingerprint Division						
1	Fingerprint Analyst	40		Automated Fingerprint Analyzer - Linked to Interpol	100	Fingerprint Lab 500
1	Fingerprint Technician	25		Miscellaneous Equipment and Supply	20	Office 250
						Storage 250
2	Subtotal	65		Subtotal	120	1,000
Questioned Documents Examination Division						
1	Questioned Document Examiner	40	1	Automated QE Analyzer/ Machine	50	Documents Lab 500
2	Questioned Document Technician	50	1	Miscellaneous Equipment and Supply	20	Office 250
						Storage 250
3	Subtotal	90		Subtotal	70	1,000

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>	<u>Building Area</u>		
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD</u>	<u>Room</u>	<u>(Sq Feet by room)</u>
Forensic/Criminalistic Lab Division						
Forensic Chemistry Division						
1	Forensic Chemist	40	1	Atomic Absorption Spectrophotometer	50	AA Lab 500
1	Lab Scientist	30	3	GSR Analysis Equipment - SEM	100	SEM Lab 500
2	Lab Technician	50	1	Colorimeter and UV Spectrophotometer	25	Colorimeter Lab 500
						Office 250
						Office 250
4	Subtotal	120		Subtotal	175	2,000
Forensics Biology and Serology Division						
1	Forensics Lab Scientist	40		Colorimetric Test Kits	50	Lab 500
2	Lab Technician	50		Serology Kits	Total All Kits	Lab 500
				Semen Analysis Kits and Supplies		Office 250
				Immunoematology Kits		Storage Room 250
3	Subtotal	90		Subtotal	50	1,500

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>		<u>Equipment</u>		<u>Building Area</u>		<u>(Sq Feet by room)</u>	
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD</u>	<u>Room</u>		
Forensic/Criminalistic Lab Division							
Hairs and Fiber Analysis Division							
1	Lab Scientist	40	2	Microscopes	15	Photo lab	500
2	Lab Technician	50	2	Cameras	2	Office	250
			1	Miscellaneous Equipment and Supply	5	Storage	250
3	Subtotal	90		Subtotal	22		1,000
Forensic Toxicology and Drug Analysis Division							
1	Forensic Toxicologist	50		Toxilab Kits	10	Accessing	250
2	Analytical Chemist/Lab Scientist	40		Automated Chemistry and Drug Analyzer	50	Screening Lab	500
4	Lab Technician	100		Headspace GC for Alcohols	35	Headspace GC Lab	500
				GC Mass Spectrophotometer	100	GC Mass Spec Lab	500
				LCMS	250	LCMS Lab	500
				Miscellaneous Equipment and Supply	50	Office	250
						Storage	250
						Storage	500
7	Subtotal	190		Subtotal	495		3,250

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>		<u>Building Area</u>	
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD</u>	<u>Room</u>	<u>(Sq Feet by room)</u>
Forensic/Criminalistic Lab Division						
Crime Scene Investigations (CSI) Division						
1	Crime Scene Analyst or Lab Scientist	40	Equipped Mobile Crime Scene Truck	50	Garage	500
4	Crime Scene Lab Technician	100	CSI Computerized Equipment for Scene Analysis and Reconstruction	75	Lab	500
			Miscellaneous Kits and Equipment with Cameras and Forensic Photography Equipment	55	Lab	500
					Office	250
					Lab Storage	250
					Storage	500
5	Subtotal	140	Subtotal	180		2,500
Conference/Classroom with Audiovisual Equipment						
1	Conference Coordinator	25	Audiovisual Equipment	25	Conference Room	1,000
2	Audiovisual and IT Technician	50	Computers and IT Misc	25	Storage	250
3	Subtotal	75	Subtotal	25		1,250

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>	<u>Building Area</u>		
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD</u>	<u>Room</u>	<u>(Sq Feet by room)</u>
Forensic/Criminalistic Lab Division						
Forensic and Medical Library Division - To be available for Students and Staff of ISP/Other Universities						
1	Medical Librarian	40	Books, CD's, DVD's, etc	100	Library Main Area	1,000
2	Library Technicians	50	20 Computers	Total	Office	250
			Audiovisual Equipment		Storage	500
3	Subtotal	90	Subtotal	100		1,750

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>		<u>Building Area</u>		
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD</u>	<u>Room</u>	<u>(Sq Feet by room)</u>	
Medical Reference Laboratory Division							
Forensics Autopsy Services and Mortuary Services Division							
2	Forensics Pathologist	150		Body Weight Equipment	25	Reception	500
4	Forensics Technologists	100		Body Coolers and Refrigerators	100	Registration	500
4	Medical Death Investigators	100	4	Autopsy Tables	5	Autopsy Suite	1,000
1	Histotechnologist	25	10	Cameras	5	Body Cooler I	500
2	Lab Technologist	50		Body Bags and Miscellaneous Supplies	25	Body Cooler II - Decomposed Bodies	250
6	Morticians and Mortuary Technicians	160		Embalming Tables and Prep Room Supplies	50	Investigation Office	500
2	Medical Transcribers	50				Forensic Techs Office	500
1	Receptionist	25				Pathologist and Transcribers Office	1,500
22	Subtotal	660		Subtotal	210		5,250

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>		<u>Building Area</u>	
Title	\$000 USD	Items Needed	Item	\$000 USD	Room	(Sq Feet by room)
Medical Reference Laboratory Division						
X-Ray and Forensic Imaging Division						
1	Chief Technician	30	Portable X-Ray Machine and Accessories	25	Office	500
2	X-Ray Technicians	50	64 Slice CT Scanner	Donated	X-Ray Room	1,500
1	Consultant Radiologist part-time	30	X-Ray Supplies and Accessories	15	Storage	500
2	Lab Assistant	50	4 Computers	10	X-Ray Room Readouts	500
6	Subtotal	160	Subtotal	50		3,000
Medical Records Division						
1	Medical Records and IT Coordinator	40	IT Equipment and Computer Server and Backup	50	Office	250
2	Medical Records Assistants and Technicians	50	3 Computers	5	Records Room	1,000
			File Cabinets, Shelves, etc.	5	Storage	500
			2 Copy Machines	40		
3	Subtotal	90	Subtotal	100		1,250

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>		<u>Equipment</u>		<u>Building Area</u>	
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD Room</u>	<u>(Sq Feet by room)</u>
Medical Reference Laboratory Division					
Forensics and Anatomic Histoathology Division					
1	Histotechnologist	30	2	Automated Tissue Processors VIP100	30 Office 500
2	Histologic Technicians and Lab assistants	50	2	Automated Tissue Strainer VIP Model	30 Histology Lab Space 1,000
			2	Microtomes	10 Storage 500
			4	Embedding Chambers	10
			4	Dictation Machines	10
				Grossing Station Hood	5
				Computers and Miscellaneous Supplies	10
				Automated Immuno Stain Equipment	50
3	Subtotal	80	Subtotal	155	2,000
Cytology Division					
1	Cytotechnologist	40		Cytology Pap Smear Kits	20 Office 250
2	Lab Assistants	50		BD-Tripath Inc. Cytology Machine Surepath. Contract via Assoc. of NE Pathologists (Paid)	50 Records Room 1,000
				Miscellaneous Supplies	25 Storage 250
3	Subtotal	90	Subtotal	95	1,500

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>			<u>Equipment</u>	<u>Building Area</u>		<u>(Sq Feet by room)</u>
<u>Title</u>	<u>\$000 USD</u>	<u>Items Needed</u>	<u>Item</u>	<u>\$000 USD</u>	<u>Room</u>	
Medical Reference Laboratory Division						
Clinical Chemistry Division						
1	Clinical Biochemist	40	2	Automated Chemistry Analyzer	100	Office 250
2	Histologic Technicians and Lab assistants	50		Automated Immuno Chemistry Analyzer	50	Clinical Chemistry Lab 1,000
2	Lab Assistants	40	2	Urinalysis Analyzer	5	Storage 250
				Stat Electrolyte Analyzer	5	
				Co-oximeter IL682	10	
5	Subtotal	130	Subtotal		170	1,500
Hematology and Coagulation Division						
1	MT-Hematologist	40	2	Automated Hematology Analyzer	100	Office 250
2	Medical Lab Technicians (MLT)	50		Beckmann Coagulation Equipment and Analyzer	25	Records Room 1,000
2	Lab Assistants	40		Miscellaneous Equipment and Supplies	25	Storage 250
				Flow Cytometer	10	
				Abbott Celldyn1800	20	
				Blood Gas Analyzer (Bayer Rapid Lab 865)	10	
5	Subtotal	130	Subtotal		190	1,500

National Institute for Forensic Sciences (NIFS)

<u>Human Resources</u>		<u>Equipment</u>		<u>Building Area</u>	
<u>Title</u>	\$000 USD	Items Needed	<u>Item</u>	\$000 USD Room	(Sq Feet by room)
Medical Reference Laboratory Division					
Medical Microbiology and Immunology Division					
1	PhD/MT in Microbiology	40	Automated Incubator Module - Bacterial Detection system Fisher Scientific Microprobe 15-88-30	25	Office 250
2	Med Lab Tech - Microbiology	50	Automated Blood Culture Analyzer - BD Bactec 9120	50	Microbiology Lab 1,000
2	Lab Assistants	40	Automated Immunochemistry Analyzer	50	Storage 250
			Urinalysis Analyzer	5	
		2	Microscopes	10	
			Immunology and Serology Kits	10	
			Miscellaneous Equipment - Parasitology	20	
5	Subtotal	130	Subtotal	170	1,500

National Institute for Forensic Sciences (NIFS)

This Forensic Lab Division can perform special functions to generate surplus revenue from outside interests given the flexibility and breadth of its equipment capability

Upside Revenue Potential

Forensic Criminalistics Laboratories Division

<i>Item</i>	<i>Annual Potential Revenue (\$ million USD)</i>
Forensic Analyses (such as Trace Evidence, Crime Scene Analysis, Paternity Testing, Physical Evidence Analysis, Drug Analysis, Clinical & Forensic Toxicology, Fiber/Hair Analysis, Forensic Chemical Analysis, etc. for Police Law Enforcement Agencies, Private Agencies, etc.) – 6000 in total @ \$300/test	1.8
Medio-Legal Consultancy Services & Litigation Support Approx. 6,000/year @ \$500 each	3.0
Expected Research Grants from Federal Agencies to Assist in DNA Analysis on Criminal Cases/Backlogs	1.0
Fees from Educational Conferences to Law Enforcement and Other Agencies (5-Day CSI courses and workshops in Forensic Biology, Forensic Chemistry, DNA Analysis, Crime Scene Reconstruction, Accident Reconstruction, Mass Disaster Investigations/ Management, Digital Forensics, etc) 100 students/class X 6 /year @ \$500/student	0.3
Library registration and fees from patrons (\$10,000/yr @ \$100 each = \$1.0 Million and Museum Patrons (\$20,000/yr @ \$10 each = \$0.2 Million)	1.2
	6.3 Million

National Institute for Forensic Sciences (NIFS)

This Medical Ref Lab can perform special functions to generate surplus revenue from outside interests given the flexibility and breadth of its equipment capability

Upside Revenue Potential (cont.)

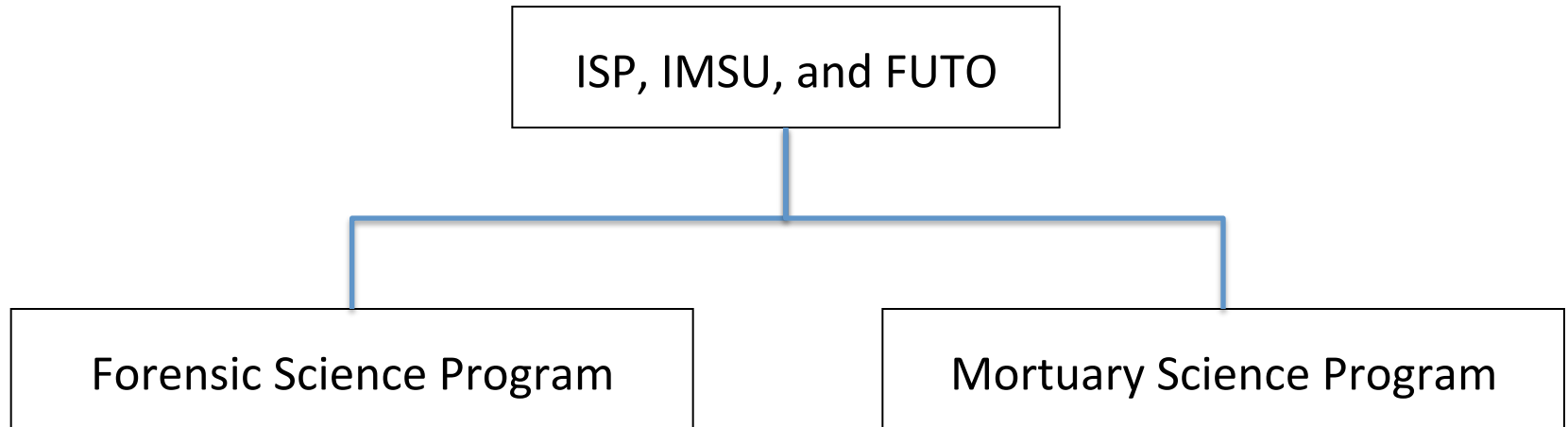
Medical Reference Laboratories Division

<i>Item</i>	<i>Annual Potential Revenue (\$ million USD)</i>
Forensic Autopsies & Mortuary Services -----Approx. 3, 000 Autopsies & Embalming / Body Storage Cases @ \$400+\$350= \$750/case	2.3
Surgical Specimens+ Pathology Reports ---Approx 5,000/year @ \$300/Case	1.6+
Pap Smears /Cytology Cases-----Approx 100,000/year @ \$30/case	3.0
Expected Research Grants for Cancer of Breast, Female Genitalia, Liver, Brain, Colon, Kidney Diseases, HIV, Malaria, and Infectious Diseases----- from NIH, National Cancer Institute in U.S. and Bill Gates Foundation and Other Agencies	1.0
Expected Grants/Consultancy Fees from Drug Manufacturers of Generic Drugs and Drug Development/Clinical Drug Trials---- such as Pfizer, etc	5.0

12.9 Million

Other Charts

National Institute for Forensic Sciences (NIFS)



Forensic Lab Division

Sections

- DNA Analysis Section
 - DNA Analyzer
 - Consumables
 - Miscellaneous Equipment
- Fingerprint Section
 - Fingerprint Analysis Equipment
- Hair and Fiber Section
 - Microscope
 - Miscellaneous Equipment
- Ballistics Section
- Forensic Chemistry Section
 - UV Analyzer
 - Spectrophotometer
 - SEM Microscope
 - Miscellaneous Equipment
- Forensic Toxicology Section
 - TLC – Toxilab Kits
 - HPLC – Chromatography
 - GC Spectrophotometer
 - GC Mass Spectrometer
 - Robotic Chemistry Analyzer

Medical Reference Lab Division

Sections

- Clinical Chemistry

- Automated Chem Profile Analyzer
- Urinalysis Analyzer
- Immunochemistry Analyzer

- Hematology

- Hematology Analyzer
- Coagulation Profile Analyzer
- Flow Cytometer

- Immunohematology

- Cross matching equipment & Kits
- Miscellaneous Equipment
- Microscopes (X 3)

- Microbiology and Immunology Lab

- Microbiology-Bacteriology Culture and Sensitivity Analyzer
- Immunology Analyzer
- Microscopes (X 3)
- Miscellaneous Equipment & Kits

- Molecular Biology Lab

- Molecular Biology & DNA Profile Analysis Equipment
- DNA Paternity Testing Equipment

- Drug Analysis, Therapeutic Monitory Pharmacokinetics Lab

- GC Mass Spectrophotometer
- LCMS Equipment (at a later date)
- HPLC Chromatography

Medical Reference Lab Division (cont.)

Anatomic Pathology Section

Autopsy Suite

- Autopsy Tables (X 4)
- Miscellaneous Equipment including Cameras (X3)
- Computers (X 2)

Cytology Section

Immunopathology Section

Histopathology Section

- Tissue Processor (X 2)
- Microtomes (X 2)
- Cryostat (X 1)
- Refrigerator (X 1)
- Freezer (X 1)
- Tissue Stainer/Automater
- Embedding Chamber
- Xylene & Alcohol Recycler
- Computers (X 5)
- Microscopes (X 4)

Electron Microscopy Section

Mortuary Science Program

Goals

- Education
- Training
- Research
- Services
- Consulting

Equipment

- Embalming Pump Equipment (X 3)
- Embalming Prep Tables (X 3)
- Miscellaneous Equipment and Supplies

Storage Facility

- 50 Body Storage Capacity
- Room for expansion