

No.	General Research Fields	Specific Topics / Main Objectives	Responsible for implementation	Expected Outcomes	Sustainable Development Goals (Egypt Vision 2030)	National Strategy for Science, Technology and Innovation	Cost / Expected Funding Resources
1	Experimental Therapeutics & Advanced Disease Modeling	1. Neurological, Cardiac, and Inflammatory disease modeling. 2. Behavioral and biochemical assessments. 3. Surgical vs. Chemical induction of diseases. 4. Disease progression markers. 5. Intervention efficacy. 6. Evaluation of natural protectants and antioxidants.	Staff members & Postgraduate students	15 International Publications	Goal 3: Good Health and Well-being	Health Sector: Clinical Research	Beni-Suef University Research Fund
2	Drug Discovery, Development & Repurposing	1. Design and evaluation of active compounds. 2. Structure-activity relationship studies. 3. Lead optimization and target identification. 4. Drug repurposing for chronic and resistant	Staff members & Postgraduate students	12 International Publications & 2 Patents	Goal 9: Industry, Innovation and Infrastructure	Strategic Pharmaceutical Industries	Science, Technology & Innovation Funding Authority (STDF)

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		diseases. 5. Metabolic and viral infection repurposing. 6. Reducing development costs.					
3	Preclinical Safety & Advanced Toxicology	1. Preclinical efficacy and safety protocols. 2. Acute, chronic, and organ toxicity (Nephrotoxicity, Hepatotoxicity). 3. Determination of Lethal Dose 50. 4. Early biomarker discovery using molecular and biochemical approaches. 5. High-throughput toxicological screening. 6. Regulatory safety standards.	Staff members & Postgraduate students	10 International Publications	Goal 3: Good Health and Well-being	Health Sector: Drug Safety	Academy of Scientific Research and Technology (ASRT)

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4	Molecular Oncology & Chemotherapy Protection	1. Cancer pathogenesis mechanisms and signaling pathways. 2. Chemical, physical, and natural anticancer therapy. 3. Protection against chemotherapy-induced multiple organ toxicity. 4. Adjuvant protective drugs. 5. Tumor microenvironment targeting. 6. Chemosensitization techniques.	Staff members & Postgraduate students	15 International Publications	Goal 3: Good Health and Well-being	Strategic Health Research (Cancer)	Science, Technology & Innovation Funding Authority (STDF)
5	Systemic Pharmacology (GIT, Renal, Cardio, & Hepatic)	1. Protective effects in colitis, gastric ulcer, and renal fibrosis models. 2. Myocardial infarction and heart failure therapy. 3. Endothelial	Staff members & Postgraduate students	20 International Publications	Goal 3: Good Health and Well-being	Health Sector: Internal Medicine Research	Beni-Suef University Research Fund

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		dysfunction and vascular remodeling. 4. Liver fibrosis and Non-Alcoholic Fatty Liver Disease therapy. 5. Microbiota-gut-brain axis interventions.					
6	Metabolic, Endocrine, & Immunopharmacology	1. Diabetes mellitus mechanisms and Pancreatic cell protection. 2. Obesity and Lipid metabolism. 3. Thyroid and hormonal regulation. 4. Rheumatoid arthritis and Autoimmune therapy. 5. Cytokine storm management and Immunomodulators. 6.	Staff members & Postgraduate students	15 International Publications	Goal 3: Good Health and Well-being	Health Sector: Chronic Diseases	Science, Technology & Innovation Funding Authority (STDF)

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		Biological therapeutics.					
7	Specialized Pharmacology (Neuro, Respiratory, & Ocular)	1. Alzheimer's, Parkinson's, and Neuroinflammation. 2. Psychopharmacology (Anxiety, Depression, Schizophrenia). 3. Asthma, Chronic Obstructive Pulmonary Disease, and Lung fibrosis. 4. Glaucoma, Retinopathy, and Ocular drug delivery. 5. Behavioral screening for neuro-protectants.	Staff members & Postgraduate students	15 International Publications	Goal 3: Good Health and Well-being	Health Sector: Brain and Respiratory Research	Beni-Suef University Research Fund
8	Precision Medicine, Genomics, & Targeted	1. Personalized dosing and Genetic polymorphism impact. 2.	Staff members & Postgraduate	12 International Publications	Goal 9: Industry, Innovation	Strategic Modern	Academy of Scientific Research

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	Delivery	RNA Interference and Targeted gene therapy. 3. Stem cell and Regenerative pharmacology. 4. Nanotechnology delivery safety and Bio-distribution. 5. Biosimilars efficacy and Monoclonal antibodies. 6. Lipid-based and Polymeric nanoparticles.	students	& 1 Patent	and Infrastructure	Biotechnology	and Technology (ASRT)
9	Rational Drug Use, Public Health, & Safety Data	1. Optimization of therapeutic guidelines and Rational prescribing. 2. Drug-drug interactions and Adverse Drug Reaction monitoring. 3. Pediatric and Geriatric dose-response profiles. 4.	Staff members & Postgraduate students	10 International Publications	Goal 3: Good Health and Well-being	Health Sector: Rational Drug Use	Ministry of Health & University Fund

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		Medication adherence and Patient safety protocols. 5. Pharmacovigilance databases and Risk assessment. 6. Occupational and Environmental toxin protection.					
10	Digital Transformation & Artificial Intelligence	1. Artificial Intelligence for drug-target affinity. 2. Virtual screening and In-silico metabolic modeling. 3. Machine Learning in toxicity prediction. 4. Deep Learning for biomarker discovery. 5. Artificial Intelligence in rational drug use and guideline	Staff members & Postgraduate students	10 International Publications & 1 Patent	Goal 9: Industry, Innovation and Infrastructure	Strategic Digital Transformation	Science, Technology & Innovation Funding Authority (STDF)

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		optimization. 6. Quantitative Structure-Activity Relationship models.					