



## Biomedical Internship

### Major Focussed Research Areas under Biomedical Internships

- Cancer research
- Infectious diseases
- Neurological disorders
- Cardiovascular research
- Immunology
- Genetic studies
- Drug development
- Medical imaging
- Public health studies
- Epidemiology

#### Cancer research

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1. Utilize advanced imaging devices for early detection of specific types of cancer.
2. Develop and optimize biomedical devices for targeted drug delivery to cancer cells.
3. Investigate the use of biomedical technologies to enhance the efficacy of immunotherapies.
4. Explore wearable biomedical devices to monitor and analyze lifestyle factors for cancer prevention.
5. Develop and improve diagnostic biomedical devices for the early detection of various types of cancer.
6. Utilize biomedical imaging techniques to study the molecular processes involved in cancer metastasis.
7. Assess the efficacy of biomedical devices in monitoring and optimizing cancer treatment outcomes.
8. Explore the use of biomedical technologies for precision medicine applications in cancer treatment.
9. Develop biomedical devices to study the impact of the tumor microenvironment on cancer progression.

#### Infectious diseases

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1. Develop rapid diagnostic biomedical devices for the early detection of infectious diseases.
2. Utilize point-of-care biomedical testing devices for quick and accurate diagnosis in

resource-limited settings.

3. Investigate the use of biomedical technologies for the development of novel vaccines against infectious agents.
4. Explore wearable biomedical devices to monitor and analyze biomarkers related to infectious diseases for early detection.
5. Develop and optimize biomedical devices for targeted drug delivery in the treatment of infectious diseases.
6. Utilize advanced imaging and sensing biomedical technologies to study the dynamics of infectious agents in the body.
7. Assess the effectiveness of biomedical devices in monitoring and managing infectious disease outbreaks.
8. Explore the use of point-of-care biomedical devices for rapid and on-site testing of infectious agents.
9. Develop portable and affordable biomedical devices for remote monitoring and management of infectious diseases.
10. Investigate the role of biomedical technologies in tracking and controlling the spread of infectious diseases.

#### Neurological disorders

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1. Develop advanced neuroimaging biomedical devices for early detection and diagnosis of neurological disorders.
2. Explore the use of wearable biomedical devices to monitor and analyze neurological biomarkers for early intervention.
3. Investigate the development of biomedical technologies for targeted drug delivery to the central nervous system.
4. Utilize neurostimulation devices for the treatment of neurological disorders and modulation of neural circuits.
5. Develop portable and non-invasive biomedical devices for monitoring and managing neurodegenerative conditions.
6. Explore the use of biomedical imaging techniques to study the structural and functional changes in the brain associated with neurological disorders.
7. Assess the effectiveness of brain-machine interface (BMI) devices in restoring motor or cognitive function in neurological conditions.
8. Investigate the role of wearable biomedical technologies in facilitating early rehabilitation and recovery from neurological injuries.
9. Develop neurofeedback devices for real-time monitoring and modulation of brain activity in neurological disorders.
10. Explore the use of artificial intelligence (AI) integrated biomedical devices for personalized treatment plans in neurological conditions.

#### Cardiovascular research

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1. Develop advanced cardiovascular imaging devices for early detection and diagnosis of heart diseases.

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2. Explore the use of wearable biomedical devices to monitor and analyze cardiovascular biomarkers for early intervention.
3. Investigate the development of biomedical technologies for targeted drug delivery to the cardiovascular system.
4. Utilize implantable biomedical devices for continuous monitoring and management of cardiac conditions.
5. Develop cardiovascular intervention devices for minimally invasive treatments and surgeries.
6. Explore the use of biomedical imaging techniques to study the structural and functional changes in the heart and blood vessels.
7. Assess the effectiveness of cardiac assist devices and artificial hearts in supporting heart function.
8. Investigate the role of wearable biomedical technologies in promoting cardiovascular health and preventing diseases.
9. Develop remote monitoring biomedical devices for post-surgery or post-treatment cardiovascular care.
10. Explore the use of artificial intelligence (AI) integrated biomedical devices for personalized cardiovascular risk assessment and management.

## Immunology

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1. Develop advanced technologies for profiling immune cells and studying immune system dynamics.
2. Utilize high-throughput sequencing devices for in-depth analysis of immune system responses.
3. Investigate the development of biomedical devices for personalized immunotherapies.
4. Explore the use of flow cytometry and other immunological assays for rapid immune cell characterization.
5. Develop point-of-care immunodiagnostic devices for quick and accurate assessment of immune status.
6. Utilize advanced imaging technologies to visualize immune responses at the cellular and molecular levels.
7. Assess the effectiveness of wearable biomedical devices for continuous monitoring of immune parameters.
8. Investigate the role of biomedical technologies in studying the microbiome's influence on the immune system.
9. Develop devices for targeted delivery of immunomodulatory agents for therapeutic purposes.
10. Explore the integration of artificial intelligence (AI) in analyzing complex immunological data for precision medicine.

## Genetic studies

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1. Utilize advanced sequencing technologies for high-throughput genomic analysis in genetic studies.

2. Explore the use of next-generation sequencing devices for comprehensive genomic profiling.
3. Development of handheld DNA sequencers for portable and rapid genetic analysis.
4. Develop advanced bioinformatics tools and platforms for the analysis of large-scale genetic data.
5. Investigating the role of CRISPR-based gene-editing technologies in precision genetic studies.
6. Develop point-of-care genetic testing devices for rapid and on-site analysis of specific genetic markers.
7. Explore the use of genomic imaging technologies for visualizing chromosomal structures and variations.
8. Assess the effectiveness of wearable devices for continuous monitoring of genetic and epigenetic changes.
9. Investigate the integration of artificial intelligence (AI) in interpreting and predicting genetic variations.

#### Drug development

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1. Investigate the use of nanotechnology-based drug delivery systems for targeted and personalized therapies.
2. Explore the development of 3D bioprinting techniques for creating customized drug delivery implants.
3. Investigate the potential of artificial intelligence (AI) and machine learning in predicting drug interactions and optimizing treatment regimens.
4. Explore the use of organoids and microfluidic devices for more accurate in vitro drug testing and toxicity studies.
5. Investigate the development of mRNA-based therapeutics for targeted modulation of gene expression in specific tissues.
6. Explore the use of CRISPR-based technologies for precise gene editing in the context of developing gene therapies.
7. Investigate the development of biocompatible sensors for real-time monitoring of drug levels in the body.
8. Explore the potential of synthetic biology in creating engineered microorganisms for drug synthesis and delivery.
9. Investigate the use of quantum computing for optimizing drug discovery pipelines and predicting drug-target interactions.
10. Explore the development of exosome-based drug delivery systems for enhancing the transport of therapeutic molecules.

#### Medical imaging

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1. Develop advanced imaging techniques using quantum sensors for ultra-high-resolution medical imaging.
2. Explore the use of AI algorithms for real-time image enhancement and noise reduction in medical imaging.

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3. Investigate the development of multimodal imaging systems for comprehensive and integrated patient diagnostics.
4. Explore the potential of augmented reality (AR) and virtual reality (VR) in enhancing medical imaging visualization and surgical guidance.
5. Investigate the use of hyperspectral imaging for improved tissue characterization and disease detection.
6. Develop portable and wearable medical imaging devices for point-of-care diagnostics and remote monitoring.
7. Explore the integration of molecular imaging techniques for targeted visualization of specific biomarkers and cellular processes.
8. Investigate the use of terahertz imaging for non-invasive and high-resolution imaging in medical diagnostics.
9. Develop imaging probes and contrast agents for more precise and specific imaging of biological structures and functions.
10. Explore the potential of quantum computing in processing and analyzing vast amounts of medical imaging data for faster and more accurate diagnostics.

## Public health studies

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1. Explore the integration of big data analytics and machine learning in predicting and preventing disease outbreaks.
2. Investigate the use of wearable health monitoring devices for real-time data collection in public health surveillance.
3. Explore the potential of blockchain technology for enhancing the security and transparency of public health data management.
4. Investigate the development of mobile health (mHealth) interventions for personalized and community-based health promotion.
5. Explore the use of social media and digital platforms for targeted health communication and behavior change campaigns.
6. Investigate the impact of environmental factors on public health, utilizing advanced sensors and monitoring technologies.
7. Explore the potential of telehealth and virtual care systems in improving access to healthcare services in underserved communities.
8. Investigate the use of geospatial analysis and mapping tools for identifying and addressing health disparities at a community level.
9. Explore the development of AI-driven models for predicting and optimizing public health policy outcomes.
10. Investigate the integration of genomics and personalized medicine approaches in population-wide health initiatives.

## Epidemiology

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1. Explore the use of artificial intelligence and machine learning in modeling and predicting disease spread in populations.
2. Investigate the development of real-time digital surveillance systems for early detection of

infectious disease outbreaks.

3. Explore the potential of wearable devices and mobile health technologies for real-time data collection in epidemiological studies.
4. Investigate the use of genomic epidemiology to understand the genetic basis of disease transmission and evolution.
5. Explore the integration of social network analysis and big data for understanding the dynamics of disease transmission in communities.
6. Investigate the development of advanced statistical models for analyzing complex and dynamic epidemiological data.
7. Explore the use of blockchain technology for secure and transparent data sharing in collaborative international epidemiological studies.
8. Investigate the impact of climate change on disease patterns and develop strategies for climate-resilient public health interventions.
9. Explore the potential of tele-epidemiology and remote sensing for monitoring and predicting disease outbreaks in remote or inaccessible areas.
10. Investigate the integration of citizen science and participatory surveillance in enhancing epidemiological data collection and analysis.

## Fee Structure

Note 1: Fee mentioned below is per candidate.

Note 2: Fee of any sort is NON REFUNDABLE once paid. Please cross confirm all the details before proceeding to fee payment

<b>2 Days Total Fee: Rs 2609/-</b>
<b>Reg Fee Rs 783/-</b>
<b>5 Days Total Fee: Rs 6522/-</b>
<b>Reg Fee Rs 1957/-</b>
<b>10 Days Total Fee: Rs 10000/-</b>
<b>Reg Fee Rs 3000/-</b>
<b>15 Days Total Fee: Rs 15789/-</b>
<b>Reg Fee Rs 4737/-</b>
<b>20 Days Total Fee: Rs 23333/-</b>
<b>Reg Fee Rs 5500/-</b>

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30 Days Total Fee: Rs 37059/-
<b>Reg Fee Rs 5500/-</b>
45 Days Total Fee: Rs 56471/-
<b>Reg Fee Rs 5500/-</b>
2 Months Total Fee: Rs 70000/-
<b>Reg Fee Rs 5500/-</b>
3 Months Total Fee: Rs 106667/-
<b>Reg Fee Rs 5500/-</b>
4 Months Total Fee: Rs 141667/-
<b>Reg Fee Rs 5500/-</b>
5 Months Total Fee: Rs 178333/-
<b>Reg Fee Rs 5500/-</b>
6 Months Total Fee: Rs 213333/-
<b>Reg Fee Rs 5500/-</b>
7 Months Total Fee: Rs 250000/-
<b>Reg Fee Rs 5500/-</b>
8 Months Total Fee: Rs 285000/-
<b>Reg Fee Rs 5500/-</b>
9 Months Total Fee: Rs 320000/-
<b>Reg Fee Rs 5500/-</b>
10 Months Total Fee: Rs 356667/-
<b>Reg Fee Rs 5500/-</b>
11 Months Total Fee: Rs 391667/-

**Reg Fee Rs 5500/-**

**1 Year Total Fee: Rs 428333/-**

**Reg Fee Rs 5500/-**

**Please contact +91-9014935156 for fee payments info or EMI options or Payment via Credit Card or Payment using PDC (Post Dated Cheque).**