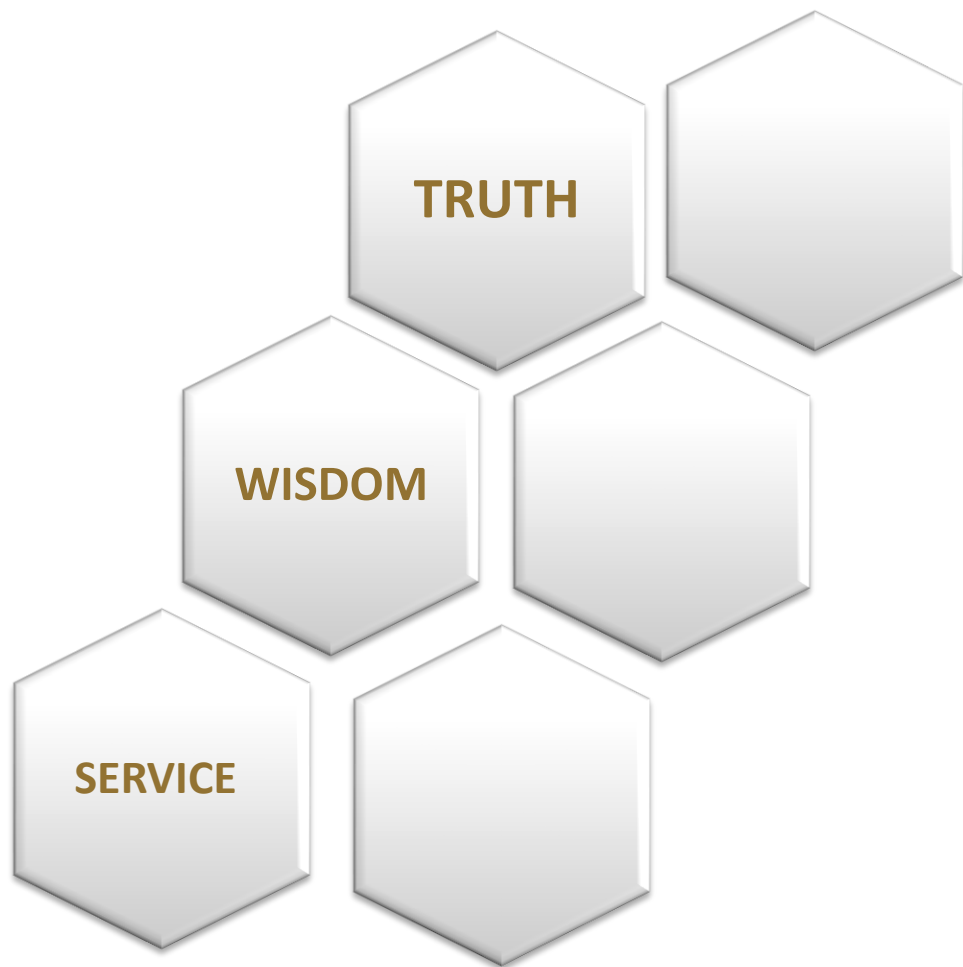
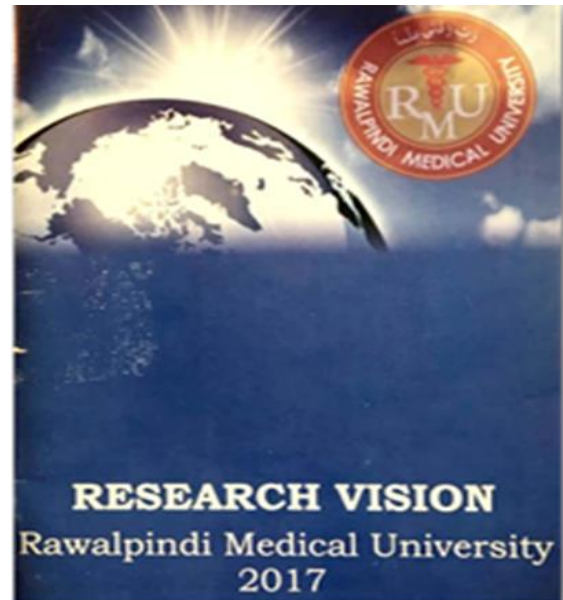


# Mission



# Vision

**To Promote Research Culture in the University  
&  
Facilitate Research Process from  
Conception of an idea to its  
Transformation into Research Thesis  
and Articles  
&  
Generation of Evidence-Based  
Interventions Leading to Excellence in  
Patient Care.**





*As a Vice Chancellor of Rawalpindi Medical University, the mere realization that RMU IS STRIVING HARD TO TAKE LEAD in public sector institutions for academic excellence, research and innovation gives me immense pride. Rawalpindi Medical University has taken the initiative of establishing state of the art research unit and development of Research curricula, research planer, and research guide for university residents in harmony with latest global advancement in medical training. Our aim is to create a centre of excellence for future endeavours for innovations in research and medical education having the strong impact on health care service delivery and national health. Our mission is to promote evidence based practices and professionalism for a greater good for humanity.*

**Prof. Dr. Muhammad Umar, S.I**

Vice Chancellor & CEO

Rawalpindi Medical University & Allied Hospitals

## Contributors:



Prof. Bushra Khaar



Dr. Uzma Hayat



Prof. Shagufta Sial



Dr. Sara Rafi

## SECTION-1 Research Model RMU

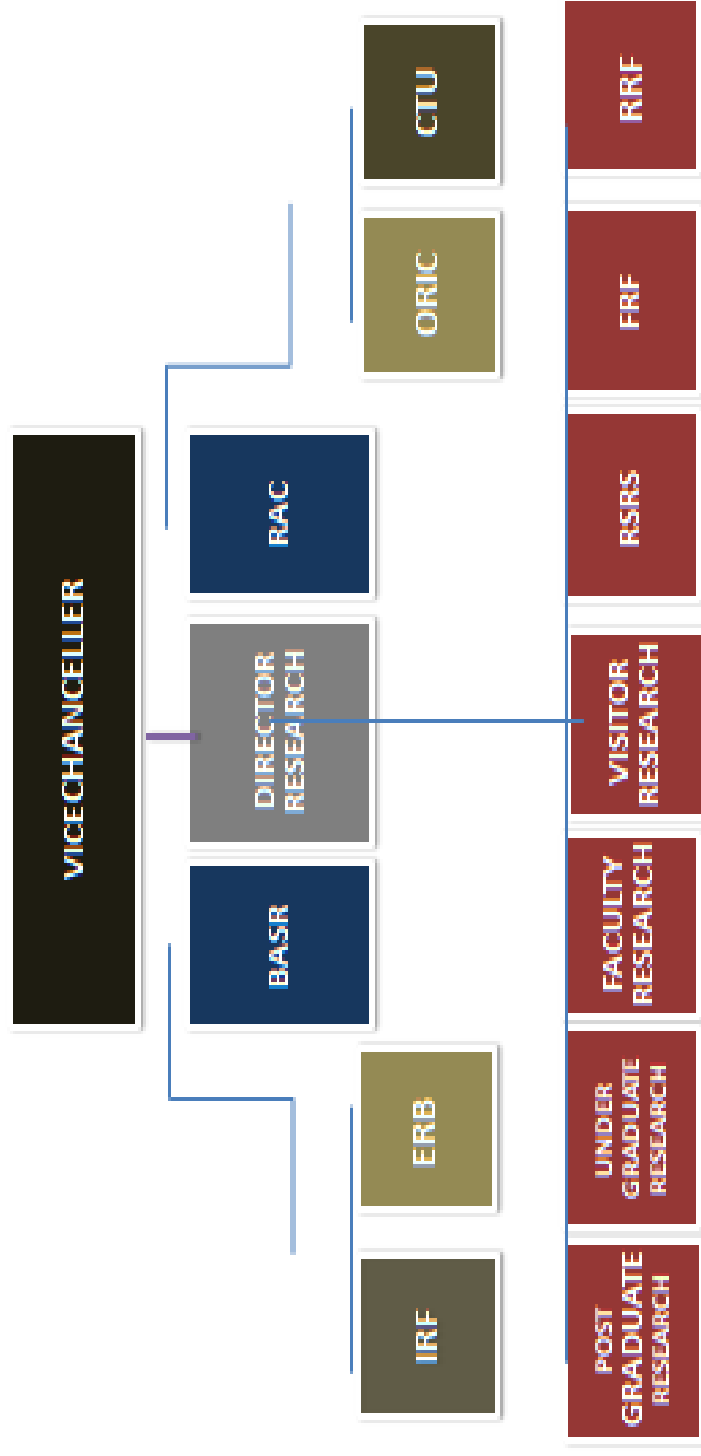
Research Model of Rawalpindi Medical University aspires to establish

### 8 Steps – RMU Research Model



itself as a premier institutional model for innovative research training and evidence based patient care with prominence among peer institutions. The strategic research goals of RMU constitute of establishment and maintenance of Self Sustainable Model for high impact institutional research.

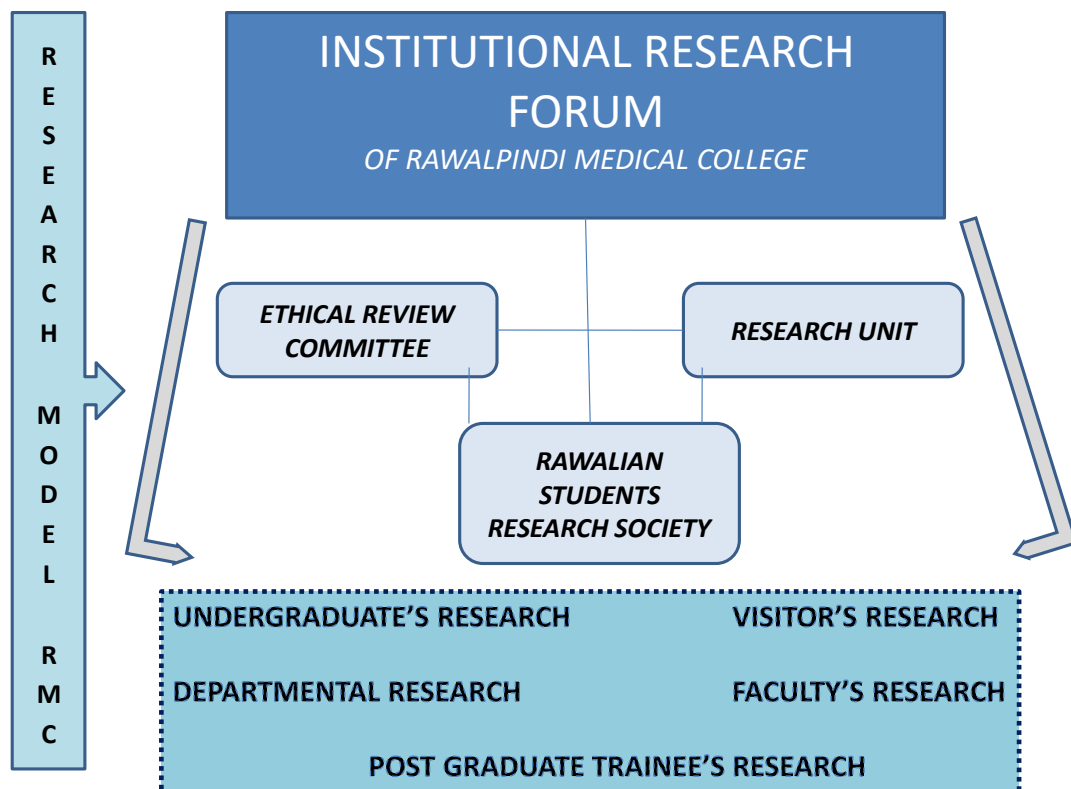
## ORGANOGRAM OF RESEARCH UNIT



## Research Unit of RMU

The Research Unit of Rawalpindi Medical university was first established in February 2014. It was initially located at liver centre of Holy Family Hospital but in December 2015, then it was shifted to Department of Medical Education, New teaching Block of RMU. At present it is situated in a completely renovated purposed built unit within the main campus of RMU where it was inaugurated on 10<sup>th</sup> March 2021. The core team of the research unit comprises of the director research, the additional and assistant directors, statistical expert and concerned IT staff. Together, this team facilitates research activities at all levels of the university be-it under graduate, post graduate, residents, visitors, all faculty members and international collaborative research projects. Research Unit is carrying out all the following research related activities:

- Administration of all research related activities of Rawalpindi Medical University and Allied Hospitals.
- Facilitation and guidance of undergraduates, post graduate trainees ,university residents and faculty of RMU regarding Health Systems Research e.g. research proposal formulation, basic and advanced research methodologies, data entry, analysis& interpretation and manuscript writing.
- At the research unit, individual and group consultations regarding topic selection, literature search, referencing system, plagiarism detection, research proposal formulation, study methods and materials, sample size calculation, sampling technique, selection of study variables, data collection tools, data collection techniques, pretesting, pilot study, data entry & analysis, manuscript writing etc are provided. Free of cost individual or groups counselling and assistance is being provided to all undergraduates, post graduate trainees, faculty and even visitor researchers of RMU.
- Research Unit also provides facilitation to visitor researchers and collaborative researchers of RMU through (ORIC) THE OFFICE OF RESEARCH INOVATION AND COMMERCIALIZATION., to present at IRF and conduct studies at RMU and Allied hospitals, along with progress monitoring by ORIC team.
- Research workshops and training courses are regularly conducted by Research Unit.



## Institutional Research Forum/Ethical Review Board

The Institutional Research Forum of RMU was established by Prof Muhammad Umar, the Vice Chancellor of RMU. Since January 2014 all the research activities of RMU and Allied Hospitals and collaborative research is being facilitated.

Institutional Research Forum meeting is held every month to oversee various aspects of research related activities, their quality assurance, ethical approval and appraisal of all the research studies of all cadres and department of RMU. Any researched intended to conduct research project or data collection at our RMU and Allied Hospitals have to get approval from IRF of RMU.

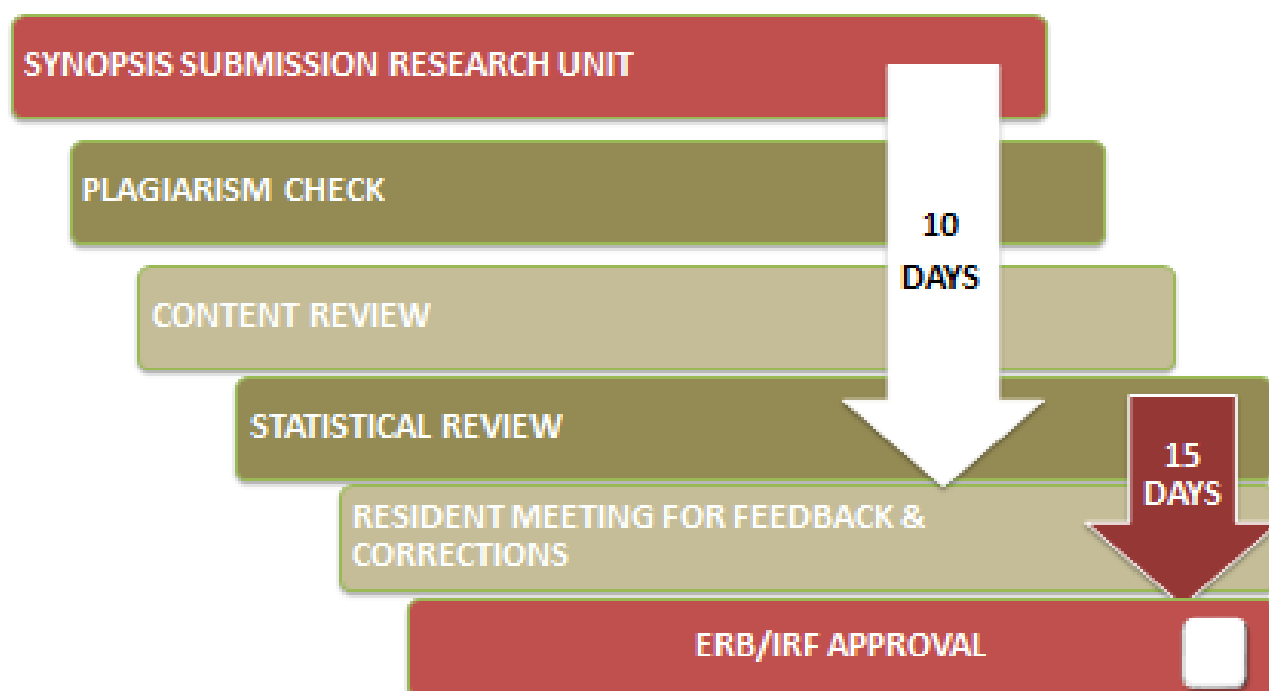


IRF COMPOSITION	
Chairman	VC Prof. Muhammad Umar
Co-Chair	Prof. Hamama-Tul-Bushra Khaar
Member	Prof. Shagufta Sial
Member	Prof. Jahangir Sarwar Khan
Member	Prof. Syed Irfan Ahmed
Member	Prof. Mohammad Khurram
Member	Prof. Naeem Akhtar
Member	Prof. Syed Arshad Sabir
Member	Prof. Asad Tameezuddin
Member	Dr. Faiza Aslam
Member	Dr. Ahmed Hassan Ashfaq
Member	Dr. Hina Mehmood
Member	Dr. Abdul Qudoos
Liaison Officer IREF (Dy.Dir DME)	Dr. Shazia Zeb
Research Coordinator	Dr. Uzma Hayat
Member( community rep)	Mr. Usman Khalil
Member legal	Mr. Mohammad Tariq

The standard procedure is as follows:

1. The resident has to download the relevant Research Application Performa from the official website of RMU ([rmur.edu.pk/research/research forums/downloads/Research Application Performa for Post Graduate Trainees of RMU](http://rmur.edu.pk/research/research%20forums/downloads/Research%20Application%20Performa%20for%20Post%20Graduate%20Trainees%20of%20RMU))
2. After filling it in electronically and after endorsement by supervisor/Head of department/resident, five copies along with research proposal, data collection tool and research supervisory certificate (**sample attached in appendix**) should be submitted at research unit of RMU, as per time line given in relevant pathway.
3. Then applicants had to make a five minutes presentation on PowerPoint and present at the monthly meeting of ethical review board (IRF) for approval that is held every month.
4. After approval from ethical review board, the synopsis presented to the BASR (Board of Advance Studies and Research).
5. It is mandatory that the synopsis is approved from the BASR before start of data collection and thesis.
6. Approval of IRB Letter of sample is attached in the **appendix**

## Process for Ethical Review Board – Synopsis Approval



## Board of Advance Studies and Research

Composition of BASR	
Chairman	VC Prof. Muhammad Umar
Member	Prof. Hamama-Tul-Bushra Khaar
Member	Prof. Idrees Anwar
Member	Prof. Mohammad Khurram
Member	Prof. Samia Sarwar
Member	Prof. Lubna Ejaz
Member	Prof. Shagufta Sial
Member	Prof. Syed Arshad Sabir
Member	Prof. Naeem Akhtar
Member	Prof. Jahangir Sarwar Khan
Member	Prof. Tehzeebul Hassan
Member	Prof. Fareed Aslam Minhas
Member	Prof. Rai Mohammad Asgher
Member	Prof. Syed Irfan Ahmed
Member	Prof. Fawad Khan Niazi

Member	Prof. Naeem Zia
Member	Prof. Waseemudin
Member	Prof. Nadeem Akhter
Member	Dr. Rizwana Qayyum
Member	Dr. Mudassar Sharif
Member	Dr. Sana Bilal
Member	Dr. Sadia Khan
Member	Dr. Arsalan Manzoor
Member	Dr. Faiza Aslam
Member	Dr. Humaira Bilquees
Member	Dr. Asher Alamangir
Member	Dr. Khola Noreen
Member (assistant registrar)	Miss Sundus Iqbal
Member	Mrs. Jacoline Sommer
Member (legal advisor)	Mr. Tariq Mahmood
Member (community rep)	Mr. Usman Khalil

### **Role and Responsibilities of Board of Advance Studies And Research**

The responsibilities of Board of Advanced Studies and Research are prescribed as under serial no 27 of Rawalpindi Medical University Ordinance 2017 (V of 2017) as follows: The Board of Advanced Studies and Research shall:

- Advise an authority on all matters connected with the promotion of advanced studies and research publication in the university
- Consider and report to an Authority with regard to research degree of the University
- Propose regulations regarding the award of a research degree
- Appoint supervisors for a post graduate research student and to approve the title and synopsis of the Thesis and dissertation
- Recommend panel of examiners for evaluation of a research examination &
- Perform such other functions as may be prescribed by the Statutes.

### **SOP of BASR Meeting:**

1. Research proposals are submitted to Research Unit for pre-review.
2. The synopsis are technically reviewed w.r.t content, similarity index and statistical aspect & corrections made after the suggestions proposed by reviewers, synopsis is presented for BASR approval
3. Relevant information is communicated to assistant registrar by the Research Unit for coordination and conduction of BASR meeting
4. After the detailed review meeting, the Board categorises the synopsis as approved, conditionally approved (major revisions or minor revisions) or rejection.

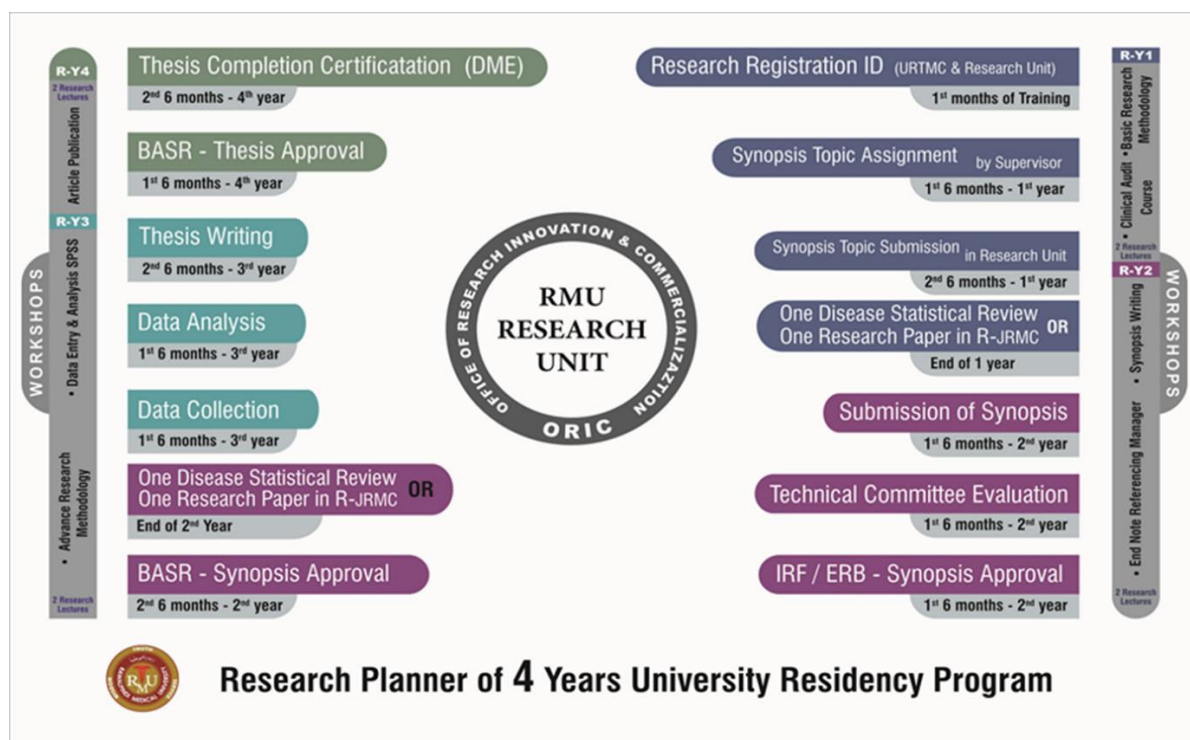
5. The BASR recommendations are disseminated to the concern in the form of a letter indicating approval or otherwise
6. Conditionally Approved synopsis are issued Final Approval Letter after the set conditions are met
7. In case of any grievance, researcher can submit appeal to VC office for reconsideration of BASR decision.

BASR approval letter is issued to all approved synopsis as given in [appendix](#)



## Post Graduate Research Pathways

RMU has structured the University Residency research into two pathways, separately for four year training specialities and five year training specialities. The respective resident will follow his/her own pathway. For residency program research work on synopsis and thesis writing starts from entry into university by getting registration ID number from the research unit. It has been structured in 06 monthly & annual time scale goals. Essential steps are included in eligibility criteria of yearly, midterm and final assessments. Compulsory workshops have been designed to train residents along the pathway of research conduction. The charts below show the structure and timeline description of the tasks required.

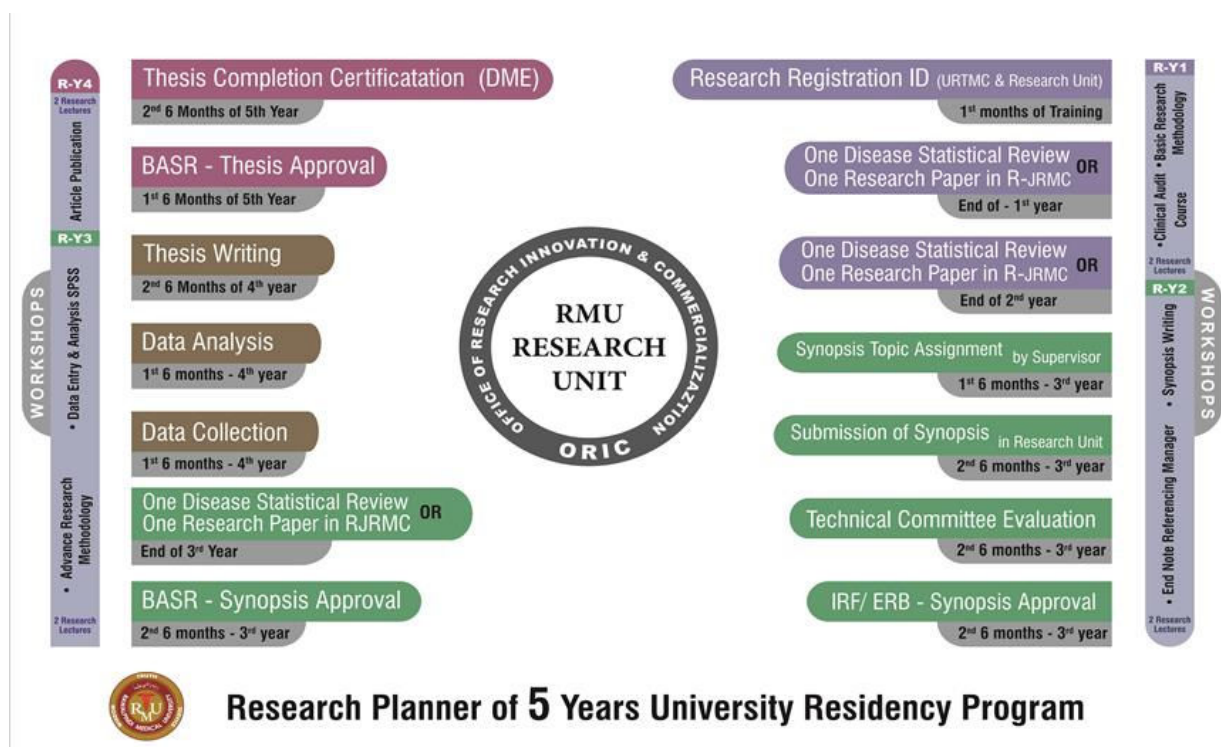


## 4 Year Residency

MILESTONE	TIMELINE
Research registration id	1 <sup>st</sup> Month Y1
Synopsis topic assignment and submission to Research Unit	1 <sup>st</sup> 06 Month Y1
Single disease statistical review or 1 paper in RJRMC	Before end of year 1 Y1
Submission of synopsis	1 <sup>st</sup> 06 Month Y2
Technical committee evaluation	1 <sup>st</sup> 06 Month Y2
IRF/ERB synopsis approval	1 <sup>st</sup> 06 Month Y2
Basar synopsis approval	Last 06 Month Y2
1 disease statistical review or 1 research paper in RJRMC	optional Y3
Data collection	1 <sup>st</sup> 06 Month Y3
Data analysis	Last 06 Month Y3
Thesis writing	1 <sup>st</sup> 06 Month Y4
BASAR thesis approval	Last 06 Month Y4
Thesis completion certificate by DME	Last 06 Month Y4

## 4 Year Residency Workshops

Name of Workshops	Year
Clinical Audit	Y1
Basic Research Methodology	Y1
Research lectures	Y1
Synopsis Writing	Y2
Referencing Manager	Y2
Research lectures	Y2
Advance Research Methodology	Y3
Data Entry & Analysis SPSS	Y3
Writing an Article / Publications	Y4
Research lectures	Y4



Five year residents must complete their yearly research assignments even if on rotation e.g one disease statistical review has to be submitted within the first year of residency. Only synopsis can be submitted once in their respective speciality department.

### 5 year residency program

MILESTONE	TIMELINE	YEAR OF TRAINING
Research Registration ID	1 <sup>ST</sup> 06 Month	Y1
1 disease statistical review or 1 research paper in RJRMC	Before end of Y1	Y1
1 disease statistical review or 1 research paper in RJRMC	Before end of Y2	Y2
Synopsis topic assignment and submission to research unit	1 <sup>ST</sup> 06 Month	Y3
Technical committee evaluation	1 <sup>ST</sup> 06 Month	Y3
IRF/ERB synopsis approval	LAST 06 Month	Y3
BASAR synopsis approval	LAST 06 Month	Y3
1 disease statistical review or 1 research paper in RJRMC	OPTIONAL	Y4
Data collection	1 <sup>ST</sup> 06 MONTHS	Y4
Data analysis	LAST 06 Month	Y4
Thesis writing	1 <sup>ST</sup> 06 Month	Y5
BASAR thesis approval	LAST 06 Month	Y5
Thesis completion certificate by DME	BEFORE END OF Y5	Y5

### 5 Year Residency (workshop)

Name of Workshops	Year
Clinical Audit	Y1
Basic Research Methodology	Y1
Research lectures	Y1
Synopsis Writing	Y2
Referencing Manager	Y2
Research lectures	Y2
Advance Research Methodology	Y3
Data Entry & Analysis SPSS	Y3
Writing an Article / Publications	Y4
Research lectures	Y4
Writing Thesis	Y5
Research lectures	Y5

## 4 Year Residency (Gantt Chart)

Name of Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 1		1 week							1 week			
Year 2			1 weeks									
Year 3		1 week					1 week					
Year 4			1 week						1 week			

## 5 Year Residency (Gantt Chart)

Name of Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 1		1 week							1 week			
Year 2			1 weeks									
Year 3		1 week					1 week					
Year 4			1 week						1 week			
Year 5		1 week						1 week				



**Details about Research competency required for MD Internal Medicine along with brief details of Teaching Strategies, Type of Assessment, weightage given to the competency & Tools of Assessment:**

Competency to be assessed	Teaching & learning strategies	Type of Assessment for the competency to be assessed	% weightage of the competency	Tools of Assessment
Research	Large group Interactive sessions on Research, hands on training & workshops, practical work of research including literature search, finding research question, synopsis writing, data collection, data analysis, thesis writing	Formative leading to continuous internal assessment Multi source & 360 degree evaluation (Logbook & portfolio)&also Summative assessment	10%	Approval of research topic and synopsis & thesis from URTMC, Board of Advanced studies and Research and ethical review board, Requirement of Completion certificate of research workshops as eligibility criteria for examinations, Defense of Thesis examination

## Continuous Internal Assessment:

Competencies included CIA	Phases of CIA	Time Line for end of various phases of CIA	Weightage of CIA	Tools for Assessment of CIA
1. Medical knowledge 2. Patient care (40% both) 3. Interpersonal & communication skills 4. Professionalism (40% both) 5. Practice based learning 6. System based learning (10% both) 7. Research 10%)	Phase -1 ➤ CIA Year 1 ➤ CIA Year 2	till end of Year 2	Equal to or more than 75% of the total marks of all formative assessments/ 360° Evaluations	<ul style="list-style-type: none"> <li>• Multi source feedback/360 degree evaluation</li> <li>• MCQs for knowledge</li> <li>• Mini-CEX</li> <li>• Case based discussion</li> <li>• CPC presentations</li> <li>• TOACS/OSCE</li> <li>• Charts stimulated recall</li> <li>• Teaching rounds</li> <li>• Directly observed procedures</li> <li>• Research activities</li> </ul>
	Phase -2 ➤ CIA Year 3 ➤ CIA Year 4 ➤ CIA Year 5 for five year training program	till end of Year 4 Or Year 5 for 5 year training program	Equal to or more than 75% of the total marks of all formative assessments/ 360° Evaluations	

# Disease Statistical Review

Research writing guidelines

Disease statistical review

Synopsis writing

Thesis writing

## Report writing:

### **Purpose of this assignment:**

Health problems and the relevant available interventions (preventive, diagnostic, treatment) need continued review for their better understanding in regional context, examining trends, finding clues to undiscovered facts, and developing more & better interventions. This work is assigned to the future health consultants to incline and inculcate habit of **study of medical data** for better understanding of health problems, health data and provoke research thinking.

### **How will you perform this work!**

Review literature pertinent to major as well as rare health problems in your clinical specialty but better to cover diseases of the region. Discuss with your subject supervisor, seniors & fellows and choose one disease or health problem for the purpose. Define an outline of the work/ information you intend to obtain as under.

1. Declare the condition / disease
2. Declare sources of information. This may be real time patients or their records but that must belong to area of your actual work settings and **with verifiable references**. ( $n \leq 30$  and if records, should not be older than last 3 years).
3. **Enlist study variables according to relevance** (Epidemiological, clinical and or preventive, diagnostic, treatment **within the disease**.
  - a. Epidemiological (like age, weight, BMI, gender, living place, social/economic class etc ...)
  - b. Clinical (like presenting signs & symptoms, course of illness, diagnostic findings, and management modalities and outcomes, etc.
4. **Descriptive analysis work:**
  - a. Enter the data in computer (MS Excel, SPSS etc) under each variable you selected (for all cases in your study)
  - b. Do descriptive analysis of the information you collected on all variables (Pooled data) as under.
    - i. Nominal / Categorical variables (sum up and calculate for **%age and number** in categories or classes of each variable) or any relevant summarization

- ii. Quantitative / Ratio or interval scale variables (sum up all and calculate for measures of central tendency and dispersion etc) or any relevant summarization.
- iii. Calculate Trends over time, where applicable / any relevant
- iv. Cross-tabulate under any logical need. / if any relevant
- v. Present your work in text, tabulated and graphic form accordingly.

## 5. Interpretation and inference

- i. a brief debate on the findings or summary values. (i to v of S. No 4 work)
- ii. Explain the findings, specifically if findings seem different from historical trends
- iii. May use some references where relevant

## 6. Report writing: Major contents of the report be as under:

- a. Intro of the disease selected, reasons why you choose it,
- b. All work done under S.No.4 and 5.
- c. **Your reflection** (your viewpoint on good and bad if any, of this assignment) on of this assignment.

## 7. Report formatting guide

A good report should be completed in not less than 500 words. Use standard font "Times New Roman" or "Arial" in 12 point-size, single space lines, one inch margins all around on a standard A4 size paper and use of footers for page numbers. Writing style should be in third person

The report should have a

- i. Title page (as shown in fig: 1)
- 1. Content page (section with page number) Must include sub-headers :
  - 2. Introduction (scope and Background of the disease)
  - 3. Materials & methods: Inclusion and exclusion criteria if any you used.
  - 4. Mention sampling source and number (30-50 patients)
  - 5. Attach as annexure "Data collection Performa" if used.
  - 6. Supervisor remarks
  - 7. References

**Format of sample Disease Statistical Review is available on RMU website**

# Synopsis Writing

The synopsis is a brief outline of your research work with 1500 words as the maximum limit. A synopsis must have the following headings:

**Title:** Should reflect the objectives of the study. in consideration PICO (population, intervention, control, and outcomes) and FINER (feasible, interesting, novel, ethical, and relevant) criteria in framing a research question or title of the study.

## **Introduction:**

Introduction provides background information and rationale for the research.

Build an argument for the research and present your research question(s) and aims.

Use literature citations in Vancouver style. Example.....text..... . (1)

It may include the literature review of the following:

- o Introduce the title
- o Background
- o Relevance, importance and applicability
- o Rationale/purpose of study specify
- o Introduce the research question
- o Identify research gap
- o Why it is important to fill the gap
- o What is known(past references)
- o Narrow down from known to unknown
- o What is unknown that is your research question

Introduction should not exceed 01-02 pages and should not exceed 250-300 words.

## **Rationale:**

Write down why you want to do this study. What you want to achieve by doing this research. (One paragraph)

## **Objective:**

Write clearly objective of your study aligned with research question

Write using annotation.

## **Hypothesis:**

Write your hypothesis accordingly to type of study and if applicable.

**Operational Definitions:** Is the definition of the exposure and outcome variables of interest in context to the objective in a particular study and their means of measurement/determination.

## **Material & Methods:**

- Study Design
- study duration
- sample size

- Sampling Technique
- inclusion criteria & exclusion criteria

#### **Data collection:**

A detailed account of how the researcher will perform research; how s/he will document his variable.

It includes:

- Identification of the study variables
- Methods for collection of data
- Data collection tools (proforma / questionnaire)

Give method of conduction of study and data collection procedures for each study variable in detail.

#### **Data Analysis Procedure:**

Relevant details naming software to be used, which descriptive statistics and which test of significance if and when required, specifying variables where it will be applied.

#### **Ethical Considerations**

**Estimated Cost Of The Project:** estimated cost if any and declaration certificate of cost to be borne by the researcher

#### **Outcome & Utilization:**

Outcome of the study what it will help to establish.

#### **Plan of Work:**

Use A Gantt chart showing your timeline for research work of your thesis.

#### **References:**

- Must be in Vancouver Style
- At-least 10 to 15 references,
- use latest (70% should not be older than 05 years)

#### **Annexure:**

Consent forms in Urdu and English must be study specific.

Study Performa

Collaboration letter if any

Declaration if any

If conducting a clinical trial, include consort flow diagram in data collection section and DRAP and bioethics documents properly filled as per requirements.

### **Format layout of Synopsis**

- Each section of the synopsis must be started on a new page.
- The section in part 1, from "Supervisor's Certificate" up to the list of "Abbreviation", should be serially numbered in Roman number while the rest should be serially numbered in Arabic numerals.
- The synopsis must not contain more than **1000** words. Five hard copies printed on out 80-100 A4 size pages duly tape bind, computer-printed with double space, on one side of each page. Soft copy of synopsis should be send to [basr.rmu.pk@gmail.com](mailto:basr.rmu.pk@gmail.com). For BASR Approval and on for ERB/IRF Approval send to [irf.rmu.pk@gmail.com](mailto:irf.rmu.pk@gmail.com)
- It must have 3-cm margin, at all 4 sides of each page.
- All pages must have serial numbers at lower right hand corner.
- It must not contain any typographical errors or spelling mistakes.
- The font size should be 12 for body and 14 for headings. Title page main heading should be size 16-18.

**Format of sample synopsis is available on RMU website**

## Thesis Writing Guideline:

After completion of data collection and analysis thesis writing is the next step. Before thesis is written down all sections should be carefully outlined and discussed with supervisor. The thesis represents original research and the work must be in the context of existing knowledge and theories and free of plagiarism.

- Each section of the thesis must be started on a new page.
- Thesis must contain 12,000 to 15,000 words i.e, about 80-100 A4 size pages, typed or computer-printed with double space, on one side of each page.
- All pages must have serial numbers at upper right hand corner.
- It must not contain any typographical errors or spelling mistakes.
- Font size should be 12.
- Font style should be New Times Roman or Ariel

**The most common sections and their sequence are outlined below:**

- Title page
- Declaration page
- Dedication page ;only two to three lines
- Acknowledgement
- Table of contents
- List of tables
- List of figures
- Abbreviations
- Section 1 Abstract (450 words)
- Section 2 Introduction(2000-2500 words)
- Section 3 literature review (2000-2500 words)
- Section 4 Methodology
- Section 5 Analysis of data and results
- Section 6 Discussion (2000 words)
- Section 7 Conclusion and recommendation
- Section 8 Bibliography (Vancouver style referencing )
- Section 9 Appendices



# **Title page, abstract, foreword, abbreviations, table of contents**

## **Title page**

A title page provides the reader with practical information about your thesis:

- Authors name(s)
- Department name
- Name of programme/study line
- Name of supervisor
- Date and place of submission
- Illustration –RMU monogram
- Book binding in maroon colour

## **Declaration page / Dedication page / Acknowledgement**

If you want to dedicate your work to someone only in two to three lines or if you want to declare or acknowledge contribution of someone in your research work you can use these pages.

## **Table of contents**

Table of contents gives the reader a quick overview of your work. The index shows first level headings and page numbers for each section. It may also display second and third level headings (subheadings) if used within each section.

## **List of tables/List of figures**

If any tables or figures are enlist them according to their page number.

**Abbreviations.** It contains all the significant abbreviations used in the thesis.

## **SECTION 1: Abstract**

The object of the abstract is to help the reader to quickly ascertain the purpose and conclusions of your thesis or in other words to understand why your thesis is important. An abstract is written under following headings:

- Introduction
- Outcome measures
- Study design
- Setting
- Subjects (inclusion and exclusion)
- Data collection procedure
- Conclusion

An abstract presents your problem formulation, methods and main results and describes how the thesis makes a difference in your field. An abstract is rarely more than half to one page long.

## **SECTION 2: Introduction**

The introduction presents the justification for the study and includes much of the same content as addressed in the synopsis but it will be more extensive and should be

## **SECTION 3: Literature Review**

Review of literature provides background information and rationale for the research (2000-2500 words).

An argument must be built for the research and research question(s)/aims are to be presented. International and local literature published within last five years must be cited. Citations should be in Vancouver style. Example.....text..... . (1)

## **SECTION 4: Methodology**

In this section you will describe detail of your research methodology. The following items must be included as sub-headings with relevant details. (2000-2500 words)

- Hypothesis
- Objectives
- Operational definitions
- Materials and methods
  - i. Study design
  - ii. Study population
  - iii. Study setting
  - iv. Study duration
  - v. Sampling technique
  - vi. Size of sample
  - vii. Inclusion exclusion criteria
  - viii. Data collection detail procedure
  - ix. Analysis details (tests and software used)

This section describes the method or methods you have used to answer the question(s) raised in your problem formulation. Your information concerning methods should both allow the

reader to assess the validity of your results (particularly for quantitative research) ultimately make it possible for another researcher to get the same results by completing the same work as you.

### **SECTION 5: Analysis of data and results**

In this section you have to report the results of your study – your data and its analysis. Remember that you are not only expected to present raw data, it should be analysed and presented in overview for this purpose. You may therefore need to describe very briefly how you collected your raw data and how you processed and analysed it. Data may be displayed in the form of tables or figures where it enables you and the reader to make sense of it, but in a lot of qualitative research is merely the explanation in words that constitutes the results.

### **SECTION 6: Discussion**

The discussion is the key section of your thesis. The purpose of the discussion is to explain the central results and potential implications of your study. This is where you scrutinize your results and where the choice of method(s) is discussed including the possible influence of methodological bases and errors on data validity. The discussion should also address general limitations and weaknesses of the study and comment on these. Importantly, you have to discuss conflicting explanations for your results and defend your thesis argument by systematically relating your problem formulation and empirical findings to the existing body of knowledge and/or theory as outlined by your literature review. The discussion of your results and final thesis argument should form the basis for your conclusions. It should comprise of 2000-2500 words.

### **SECTION 7: Conclusions**

The conclusions section is where you summarize your answer(s) to the questions posed in your problem formulation. What is the strongest statement you can make based on your findings?

#### **Recommendations or Perspectives**

The final section involves the last part of your academic performance; how to launch the results and conclusions into the future. Is there a need for further investigation and how? What are the perspectives of your results and conclusions? The perspectives are where you once again broaden the thesis, and point out where your results can be implemented. Recommendations are sometimes included in the conclusions.

## **SECTION 8: Bibliography/References**

The list of references contains a formalized description of all the sources, e.g. journal articles, reports, books etc. that are cited directly in the text of your thesis. In some cases 'references' are interchanged with 'literature list' or 'bibliography' However, please note that a bibliography may contain additional material of interest, without linking to a direct in-text citation.

You should apply the referencing system suggested/required by thesis guidelines. Here at research unit RMU, we recommend "Vancouver Standard" Make sure all references cited in the thesis appear in the list of references.

## **SECTION 9: Appendices**

In addition to the regular report sections described in the previous modules, you may need to add an appendices section. The appendices section typically includes various materials or data that lend support to your text in the previous sections, but are too lengthy or detailed to be incorporated in these. The following must be attached along your thesis with appendices:

- Approved copy of your synopsis
- Board of Advanced Studies and Research, RMU approval letter
- Ethical review board (IRF/ERB)
- Similarity index less than 20% pdf report
- Supervisory certificate
- Study performa
- Consent form according to "Helsinki Declaration"

All appendices should be numbered and directly referenced to in the relevant text section.

## Layout

- The section in part 1, from "Supervisor's Certificate" up to the list of "Abbreviation", should be serially numbered in Roman number while the rest should be serially numbered in Arabic numerals.
- The thesis must contain 12000-15000 words. Five hard copies printed on out 80-100 A4 size pages duly hardbound (leather coat), computer-printed with double space, on one side of each page. Soft copy of thesis should be send to [basr.rmu.pk@gmail.com](mailto:basr.rmu.pk@gmail.com). For BASR Approval .
- It must have 3-cm margin, at all 4 sides of each page.
- All pages must have serial numbers at lower right hand corner.
- It must not contain any typographical errors or spelling mistakes. •
- The font size should be 12 for body and 14 for headings. Title page main heading should be size 16-18.
- Font should be New Times Roman or Ariel or Verdana.

## Annexure-1

### Consent Form designed for specific research

I \_\_\_\_\_ am willing to participate voluntarily in this research study (.....title.....) of Dr.....(NAME).....AT ...(STUDY SITE)..... I am aware of the study objectives and I also know there is no harm or benefit to me if I participate. However, researcher ensured me that my data will remain confidential. I allow them to use this data for scientific purpose. And that I can opt-out of the research at anytime.

Signature: \_\_\_\_\_

## Annexure -2

اجازت نامہ برائے شمولیت تحقیق

میں \_\_\_\_\_ رضا کارانہ طور پر اس تحقیق میں حصہ لینے کو تیار ہوں۔ میں اس تحقیق کے مقاصد سے آگاہ ہوں اور میں جانتا ہوں کہ اس میں شرکت کرنے سے میرے لیے کوئی نفع یا نقصان نہیں ہے۔ محقق نے مجھے یقین دہانی کروائی ہے کہ میری معلومات خفیہ رکھی جائیں گی۔ میں تحقیقی مقصد کے لیے اپنی معلومات کے استعمال کی اجازت دیتا رہتی ہوں۔

دستخط \_\_\_\_\_

**Note:** In case patient is unable to consent, please add guardians consent form.

## Annexure-3

### STUDY PERFORMA:

Serial No_____	Reg No._____
Name_____	Father Name: _____
Age: _____	Gender: _____
Contact No. _____	
Date of Admission: _____	Date of Outcome: _____
Address: _____	

Please add variables as per your study requirements.



# Institutional Research And Ethics Forum

Rawalpindi Medical University & Allied Hospitals Rawalpindi

Structured review worksheet (For MD & MS PGTs)

(Review of ethical & technical aspects of the research study proposal)

Review level: 1<sup>st</sup>/ 2<sup>nd</sup>/3<sup>rd</sup>

Name of the Reviewer:

Department:

Designation:

Contact No:

Title of synopsis:

Comments

Remarks

1. TITLE OF STUDY APPROPRIATE	Yes <input type="checkbox"/> No <input type="checkbox"/>	Remarks
2. OBJECTIVES APPROPRIATE	Yes <input type="checkbox"/> No <input type="checkbox"/>	
3. Study Hypothesis (if any) mentioned appropriately	Yes <input type="checkbox"/> No <input type="checkbox"/>	
4. OPERATIONAL DEFINITIONS (if any) given accordingly/appropriately	Yes <input type="checkbox"/> No <input type="checkbox"/>	
5. INTRODUCTION		
a. Topic introduced well:	Yes <input type="checkbox"/> No <input type="checkbox"/>	
b. Background of Research Question given	Yes <input type="checkbox"/> No <input type="checkbox"/>	
c. Relevant Literature reviewed	Yes <input type="checkbox"/> No <input type="checkbox"/>	
d. Study Rationale mentioned	Yes <input type="checkbox"/> No <input type="checkbox"/>	
6. SUBJECTS & METHODOLOGY		
e. Study design appropriate	Yes <input type="checkbox"/> No <input type="checkbox"/>	
f. Sampling Technique & Sample Size appropriate	Yes <input type="checkbox"/> No <input type="checkbox"/>	
g. Major study variables mentioned	Yes <input type="checkbox"/> No <input type="checkbox"/>	
h. Data Analysis Plan given accordingly	Yes <input type="checkbox"/> No <input type="checkbox"/>	
7. REFERENCES		
i. Updated (within last 5 years)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
j. Reference Style Appropriate	Yes <input type="checkbox"/> No <input type="checkbox"/>	
8. ETHICAL ASPECTS OF THE STUDY ADDRESSED ACCORDINGLY	Yes <input type="checkbox"/> No <input type="checkbox"/>	

Date & Time...

Name of the Reviewer:



## Annexure-4

### Technical Review Committee Certificate Research unit, Rawalpindi Medical University

This is to certify that the synopsis/thesis  
entitled \_\_\_\_\_

, submitted by \_\_\_\_\_ is hence approved by the  
Expert Technical Review Committee for presentation to BASR for approval.

**Subject Expert**  
Department of \_\_\_\_\_

**Managing Director**  
**JRMC**  
Rawalpindi Medical University

**Technical expert**  
Department of Medical Education  
Rawalpindi Medical University

**Statistical expert**  
Research Unit  
Rawalpindi Medical University

**Director**  
Research Unit  
Rawalpindi Medical University

## Rawalpindi medical university - Research Unit

### Supervisors Certificate for Synopsis Approval by BASR & ERB

This is to certify that the synopsis  
entitled\_\_\_\_\_

\_\_\_\_\_

And submitted by\_\_\_\_\_ University Resident MS/MD of  
\_\_\_\_\_ department .He/ She has worked under my supervision to my  
satisfaction and embodies original work. Therefore, I recommend his/her synopsis  
to be submitted for BASR/ERB approval.

Date:

Signature and Stamp of

Supervisor/Co-supervisor

## Supervisors Certificate for Thesis Approval by BASR & ERB

This is to certify that the thesis

entitled \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

And submitted by \_\_\_\_\_ Research ID No \_\_\_\_\_ for

approval by BASR embodies original work done by him/her under my supervision.

Signature

Name in Block Letters

Designation

Date:

## **Supervisors Certificate for Thesis Approval by BASR & ERB**

This is to certify that the thesis

entitled\_\_\_\_\_

\_\_\_\_\_

And submitted by\_\_\_\_\_ Research ID No\_\_\_\_\_ for

approval by BASR embodies original work done by him/her under my supervision.

Signature

Name in Block Letters

Designation

Date:

## Certificate Sample



**RAWALPINDI MEDICAL UNIVERSITY**  
**RESEARCH UNIT**

**CERTIFICATE BY RESEARCH SUPERVISOR FO RESEARCH SYNOPSIS APPROVAL  
BY BASR/ERB**

This is to certify that the synopsis entitled "Comparison between pre-operative oral  
[redacted] [redacted]  
Randomized controlled Trial" And submitted by [redacted]  
Resident of Surgical Unit-I, BBH. She has worked under my supervision to my satisfaction  
and embodies original work. Therefore, I recommend her synopsis to be submitted for BASR/ERB  
approval.

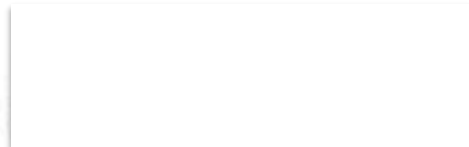
 **Prof. Dr. Naveem Zia**  
Professor of Surgery RMC  
Head of Surgical Unit-I, BBH

Date: 26-04-2021

Signature and Stamp of Supervisor/Co-supervisor



OFFICE OF THE VICE CHANCELLOR  
RAWALPINDI MEDICAL UNIVERSITY  
RAWALPINDI.  
Ph.051-9290360, 051-9290755  
Fax No.051-9290519,  
No. M-25/5150/RMAU, Dated: 17-05-2021



Subject: APPROVAL OF SYNOPSIS BY BASR RMU

Synopsis entitled **"COMPARISON BETWEEN PRE-OPERATIVE ORAL CARBOHYDRATE LOADING AND CONVENTIONAL FASTING IN COLORECTAL SURGERY; A RANDOMIZED CONTROLLED TRIAL"** bearing research ID RMU-042/04/2021/URP, supervised by Prof. Dr. Naem Zia (Professor of General Surgery) submitted by you for M.S. (General Surgery) was discussed in your presence in the 5<sup>th</sup> meeting of Board of Advanced Studies and Research held on 5<sup>th</sup> May 2021, has been approved by the Vice Chancellor on behalf of The Board of Advanced studies & Research.

A handwritten signature in black ink, appearing to be "S. Zia", written over the printed name of the Director Research Unit.

Director Research Unit  
Rawalpindi Medical University  
Rawalpindi

A handwritten signature in black ink, appearing to be "S. Zia", written over the printed name of the Assistant Registrar.

Assistant Registrar  
Rawalpindi Medical University  
Rawalpindi



**RESEARCH AND ETHICAL COMMITTEE**  
Rawalpindi Medical University & Allied Hospitals  
Rawalpindi

Ref.No. 81 /IREF\RMU\2021

Dated: 23-04-2021

Subject: **APPROVAL OF RESEARCH PROJECT OF POST GRADUATE TRAINEE**

The research proposal titled as **“POSITIVE PREDICTIVE VALUE OF INTRACEREBRAL HEMORRHAGE (ICH) SCORE IN PREDICTING 30 DAYS MORTALITY IN PATIENTS PRESENTING WITH STROKE”** submitted by \_\_\_\_\_, Post Graduate Trainee, Department of Medicine Holy Family Hospital Rawalpindi, RMU conforms to the accepted ethical standards established by Institutional Research Forum of RMU. Therefore her research proposal has been approved by Institutional Research Forum and The Research and Ethical Committee of RMU and she is allowed to initiate her research project at Rawalpindi Medical University and Allied Hospitals.

**Professor Hammama-tul-BushraKhaar**  
The Head of Research and Ethical Committee,  
Institutional Research Forum,  
RMU & Allied Hospitals,  
Rawalpindi