4th CHIANG MAI UNIVERSITY INTERNATIONAL MEDICAL RESEARCH PROPOSAL COMPETITION

Faculty of Medicine, Chiang Mai University, 110 Inthawarorot Rd. , Sri Phum, Muang, Chiang Mai, Thailand 50200

OFFICIAL MASTER COMPETITION GUIDEBOOK

Competition Theme: From Spark to Solution: Redefining the Boundaries of Medicine

Organized by: Faculty of Medicine, Chiang Mai University, Thailand

In Collaboration with AMSA-Thailand (Official Outreach Partner) and ResearchNav by Research AMSA-THAILAND (Academic & Operations Partner)

Official Submission Portal: Click Here to Submit Proposal via Google Forms

Promotional Materials for Medical Schools:

Medical institutions and student representatives wishing to promote this competition may download our official promotional posters here: https://drive.google.com/drive/folders/1PhM5b7jRV-M22B2qTB6lG5-NJJCIUjz8?usp=sharing

HOW TO NAVIGATE THIS MASTER GUIDEBOOK (READ FIRST)

To provide complete transparency and ease of reading, this Master Guidebook is divided into **three (3) comprehensive parts**.

EASY WAY TO NAVIGATE THIS DOCUMENT:

1. **Using the Left Sidebar (Document Tabs / Outline):** Click the **"Document Outline / Tabs" icon** on the top-left corner of your screen (or swipe from the left on mobile/tablet) to jump directly to any section or sub-tab.

Section / Module	Target Audience & Core Content	Direct Access / Navigation
PART I: GENERAL COMPETITION GUIDEBOOK	**Essential Overview for All Applicants:** Competition introduction, theme philosophy, 4 research tracks, key dates, awards, hybrid oral presentation rules, dress code, venue, transportation, and contacts.	**Scroll down to Part I below**
PART II: OFFICIAL PROPOSAL SUBMISSION GUIDELINES	**Mandatory Formatting & Structure Rules:** Technical 2-page PDF specifications, Page 1 metadata & keywords, the 6 required proposal sections, diagram/reference policies, and pre-submission checklist.	**Click the "Part II: Submission Guidelines" tab on the left**
PART III: PROPOSAL PEER REVIEW & SELECTION PROTOCOL	**Evaluation Rubric & Scoring Architecture:** Cluster-specific expert matching, the 100-point rubric breakdown (Domains 1–4), >40% minimum domain thresholds, 3rd-reviewer arbitration, and tie-breaking hierarchy.	**Click the "Part III: Selection Protocol" tab on the left**

PART I: GENERAL COMPETITION GUIDEBOOK

1. WHAT IS CMU-iMRPC?

The **4th Chiang Mai University International Medical Research Proposal Competition (4th CMU-iMRPC)** is a premier international research ideation and proposal defense platform for undergraduate medical students worldwide, organized by the Faculty of Medicine, Chiang Mai University, in collaboration with AMSA-Thailand (Official Outreach Partner) and ResearchNav by Research AMSA-Thailand (Academic & Operations Partner).

This competition is designed to foster scientific curiosity, methodological rigor, and translational thinking among future physician-scientists. Rather than requiring completed empirical datasets or laboratory results, CMU-iMRPC evaluates the **conceptual brilliance, hypothesis formulation, and study design** of early-stage medical research proposals.

How the Competition Works:

- **Preliminary Proposal Phase:** Teams of **1 to 3 undergraduate medical students** submit a rigorous **2-page research proposal (PDF)**. Submissions are evaluated independently by two specialist faculty reviewers matched to the proposal's academic discipline and methodology.
- **Final Oral Presentation Defense (Top 10 Finalists):** The **Top 10 highest-scoring teams** globally will be shortlisted as Finalists to defend their proposals live before a distinguished panel of judges on **31 January 2027** (organized in a **Hybrid Format**: on-site at Chiang Mai University for domestic teams in Thailand, and via Zoom Live for international teams outside Thailand).

Key Benefits for Participants:

- **Comprehensive Academic Feedback:** Every submitting team—regardless of finalist status—receives an **Official Evaluation Summary Report** detailing their composite scores and structured qualitative feedback from faculty specialists (Strengths, Limitations, and Recommendations).

- **Skill Development & Mentorship:** Sharpen your grant-writing, study architecture, scientific pitching, and live Q&A defense skills.
- **Special Keynote Session & Global Networking:** Engage with leading clinical researchers and build an international research network with peers from medical schools worldwide.

2. COMPETITION THEME & ELIGIBLE RESEARCH TRACKS

Annual Theme: *"From Spark to Solution: Redefining the Boundaries of Medicine"*

The 4th CMU-iMRPC invites undergraduate medical students to challenge conventional paradigms across both preclinical and clinical domains. Our theme embodies three core pillars that directly govern our 100-point evaluation rubric:

- **"From Spark to..." — Feasibility & Scientific Rigor (30%):** Transforming an initial spark into reality requires a methodologically sound bridge. Proposals must demonstrate internal validity, robust controls, and biological, clinical, or technical plausibility.
- **"Redefining the Boundaries..." — Novelty & Originality (25%):** Advancing medicine requires questioning established dogma. Submissions must present original, non-derivative inquiries evaluated against current global medical literature.
- **"...to Solution" — Need, Anticipated Findings & Future Impact (35%):** A meaningful solution must address an unmet healthcare need. Proposals must define concrete expected outcomes and construct a clear logical bridge connecting those anticipated findings to real-world patient care or health system benefits.

3. Broad Eligibility Across All Medical Fields & Four (4) Main Research Tracks

CMU-iMRPC welcomes proposals across **all disciplines and subspecialties of medicine and biomedical sciences**. While submissions are categorized under **four (4) main tracks** to facilitate specialist reviewer assignment, the competition is **not**

restricted to these categories alone; any scientific inquiry related to human health and medical sciences is fully eligible.

All submissions across all tracks and disciplines will **compete together in a single unified pool** for the Top 10 Finalist slots and overall awards.

To ensure rigorous, peer-level evaluation:

- **Preliminary Proposal Review Phase:** Each submission is independently assessed by two faculty specialists directly matched according to their clinical/academic discipline and specific research methodology.
- **Final Oral Presentation Defense Phase:** The finalist judging panel will comprise domain experts and methodologists aligned with the diverse fields of the presented proposals to deliver targeted, deep-dive evaluation.

Applicants should select the single primary track that best represents the core focus of their project:

1. **Track 1: Basic & Pre-clinical Sciences**
    - Investigating fundamental mechanisms of disease, biological pathways, and early-phase translational laboratory models.
    - *Representative areas include (but are not limited to):* Anatomy, Physiology, Biochemistry, Pharmacology, Pathology, Medical Genetics, Immunology, Microbiology, Molecular Biology, Cell Biology, Multi-omics, and Drug Discovery/Target Identification.
2. **Track 2: Clinical Specialties**
    - Advancing patient-centered care, diagnostic strategies, therapeutic modalities, and clinical management.
    - *Representative areas include (but are not limited to):* Internal Medicine, Surgery, Pediatrics, Obstetrics & Gynecology, Orthopedics, Neurology, Ophthalmology, Otolaryngology, Psychiatry, Radiology, Anesthesiology, Emergency Medicine, and Critical Care.
3. **Track 3: Public Health & Health Systems**
    - Addressing population health, disease prevention, healthcare access, equity, and health policy.
    - *Representative areas include (but are not limited to):* Epidemiology, Global Health, Preventive & Community Medicine, Primary Care

Innovation, Occupational & Environmental Health, Health Economics, and Healthcare Systems Research.

4. **Track 4: Medical Technology & Artificial Intelligence**
    - Leveraging computational tools, digital innovation, and engineering solutions to address healthcare challenges.
    - *Representative areas include (but are not limited to):* Artificial Intelligence (AI) and Machine Learning in Medicine, Clinical Decision Support Systems, Bioinformatics, Medical Devices, Wearable Technologies, Telemedicine, and Biomedical Engineering.

4. GENERAL RULES, ELIGIBILITY & ACADEMIC EQUITY

Participant Eligibility

- **Undergraduate Medical Students:** All team members must be currently enrolled undergraduate medical students (MBBS, MD, or equivalent degree) at any accredited medical school worldwide.
- **Team Composition:** Teams may consist of **1 to 3 members**.
- **Cross-Institutional Collaboration:** Cross-institutional teams (students from different medical schools or countries teaming up) are **fully permitted**, provided all members are currently enrolled undergraduate medical students.
- **Faculty Advisor / Mentor (Optional):** Teams may optionally list a faculty advisor or research mentor. Having a mentor is **not mandatory**, and independent student proposals are evaluated with absolute equity without any penalty.
- **Mandatory Proof of Enrollment (Finalists):** Shortlisted Top 10 Finalist teams must submit official proof of enrollment (valid Student ID Card or Institutional Verification Letter) within **five (5) calendar days** of the finalist announcement. Failure to provide valid documentation will result in immediate disqualification, and the slot will be awarded to the next reserve runner-up.

Submission Scope & Academic Integrity

- **Language:** All proposals, presentation slides, and oral defenses must be conducted strictly in **English**.

- **Developmental Stage:** Proposals may be at any stage prior to journal publication—from novel conceptual study designs to ongoing projects. **Empirical results or preliminary datasets are neither required nor scored.**
- **Publication Exclusion Policy:** Studies that have already been published in full or accepted for publication in a peer-reviewed academic journal prior to the submission deadline are **strictly ineligible**. However, projects previously presented at student congresses, symposia, or academic conferences remain **fully eligible**.
- **Anti-Plagiarism & Deadlines:** Any submission containing plagiarism or scientific misconduct will be immediately disqualified. Late submissions after the official deadline will not be accepted. All decisions made by the evaluation committee and judging panel are final.

5. KEY DATES & COMPETITION TIMELINE

Milestone / Phase	Official Date	Details & Notes
Proposal Submission Period	**1 November – 10 December 2026**	Submit 2-page PDF proposal via the Official Online Portal
Peer Review & Expert Evaluation	**December 2026 – Early January 2027**	Independent evaluation by two specialist faculty reviewers per proposal
Top 10 Finalist Announcement	**10 January 2027**	Official announcement of the 10 Finalist teams (plus reserve list)
Finalist Verification Deadline	**15 January 2027** *(Within 5 days)*	Mandatory submission of Proof of Enrollment & Hybrid attendance confirmation
Final Round: Hybrid Oral Presentation	**Sunday, 31 January 2027**	Live Oral Defense (On-site at CMU for Thai teams; Zoom Live for International teams)

6. AWARDS, PRIZES & RECOGNITION

Winners of the Final Oral Presentation Round will receive official plaques/trophies, certificates of achievement, and cash prizes (listed in THB and approximate USD equivalent):

Award Category	Cash Prize	Recognition & Honors
1st Place (Championship Award)	**$150 USD**	Official Championship Plaque + Certificate of Excellence
2nd Place (First Runner-Up)	**$90 USD**	Official Runner-Up Plaque + Certificate of Excellence
3rd Place (Second Runner-Up)	**$40 USD**	Official Runner-Up Plaque + Certificate of Excellence
Popular Vote Award	*No Cash Prize*	Official Popular Vote Plaque + Certificate of Recognition
All Top 10 Finalist Teams	—	Official Finalist Certificate of Participation & Full Evaluation Report
All Submitting Teams	—	Official Evaluation Summary Report with Faculty Reviewer Feedback

7. PROPOSAL REGISTRATION & SUBMISSION PORTAL

All proposals must be uploaded as a **single PDF file (strictly maximum 2 A4 pages, under 10 MB)** through our official Google Form portal:

- **Official Proposal Submission Form:** https://forms.gle/zhHtTkneA3xFtfNH8
- **Recommended PDF File Naming Format:** [ShortProjectTitle]_[CorrespondingAuthorLastName].pdf

- *Before uploading, please ensure you have thoroughly reviewed **Part II (Official Proposal Submission Guidelines)** and **Part III (Proposal Peer Review & Selection Protocol)**.*

8. FINAL ROUND: HYBRID ORAL PRESENTATION GUIDELINES

8.1 Hybrid Participation Commitment

- **Mandatory Hybrid Attendance Policy:** By submitting a proposal, teams agree to the following condition:
  *"If selected as one of the Top 10 Finalists, our team commits to participating in the Final Oral Defense on 31 January 2027 (via **Zoom Live** for international teams studying outside Thailand, or **on-site at Chiang Mai University** for domestic teams studying in Thailand)."*

8.2 Time Allocation per Team (Total: 20 Minutes per Slot)

Each of the 10 Finalist teams is allocated a strict **20-minute block**:

- **Oral Presentation Pitch: 7 Minutes** (Strict time limit)
- **Live Q&A Defense with Judging Panel: 10 Minutes**
- **Stage / Technical Transition: 3 Minutes**

8.3 Presentation Slide Deck Requirements

- **Cover Slide:** Must display the exact **Project Title** (matching the proposal submission), **Author Names & Institutional Affiliations**, and **Faculty Advisor/Mentor** (if applicable).
- **Required Slide Content:**
  a. Background, Unmet Knowledge Gap & Rationale
  b. Novelty & Conceptual Innovation
  c. Research Question, Central Hypothesis & Objectives
  d. Conceptual Framework & Study Methodology (including controls, sample size rationale, and study timeline/plan)
  e. Anticipated Findings, Translational Linkage & Future Healthcare Impact
  f. Key References (Vancouver, AMA, or APA format)

- **Visual Aids:** Teams are encouraged to utilize clear flowcharts, tables, schematics, and diagrams on their slides.
- **Language:** Strictly **English** (any local terms must include an English translation).

8.4 Oral Round Scoring Policy & Criteria Announcement

- **Independent Final Round Scoring:** The final championship rankings (1st, 2nd, 3rd Place) are determined **100% by performance during the Oral Presentation and Q&A Defense**. Preliminary proposal scores do **NOT** roll over or combine into the final oral tally.
- **Contextual Access for Oral Judges:** The oral judging panel will have access to preliminary proposal scores and peer-review critiques to formulate targeted, in-depth defense questions during the 10-minute Q&A.
- **Official Oral Rubric Release:** The detailed Oral Presentation Scoring Rubric will be officially published alongside the Top 10 Finalist Announcement on **10 January 2027**.

8.5 Protocol for International Finalists (Zoom Live Hybrid Defense)

International finalist teams competing virtually via Zoom Live must adhere to the following live participation protocol:

2. **Mandatory Attendance:** Virtual finalists are required to be present for the **Opening Ceremony**, both **Scientific Symposia**, their assigned **Oral Defense Slot**, and the **Award Ceremony & Brief Post-Event Media Interview**.
3. **Pre-Defense Tech Check & Virtual Green Room:**
    - The final presentation running order and assigned time slots will be provided in advance.
    - Prior to their scheduled defense slot, each virtual team will enter a designated **Zoom Breakout Room**.
    - Staff will conduct a thorough technical verification (camera, microphone audio, screen-sharing of slides, and internet stability) and provide a final briefing.
    - Teams will wait in the Zoom Breakout Room until summoned by the stage floor manager.
4. **Live Main Stage Connection:**

    - When their turn arrives, the team will be brought into the Main Stage session, streaming directly onto the large main auditorium display screens before the on-site audience and judging panel for their live 7-minute pitch and 10-minute Q&A defense.
5. **Post-Event Activities:**
    - Following the conclusion of the defenses, virtual teams must rejoin for the official Award Announcement and a brief post-event interview session conducted by the organizing committee.

Note: Both on-site and online presentations are assessed under identical evaluation standards and unified scoring rubrics by the same panel of expert judges, guaranteeing complete fairness and equal opportunity for all participants.

9. EVENT DAY AGENDA, DRESS CODE, VENUE & LOGISTICS

9.1 Event Day Overview & High-Level Schedule

Date: Sunday, 31 January 2027
Official Event Hours: 08:30 – 17:00 ICT (UTC+7 / Thailand Time)

- **08:30 – 09:00:** Finalist Registration & International Hybrid Technical Check-In
- **09:00 – 17:00:** Official Competition Program & Scientific Sessions

Key Event Components & Highlights:

- **Top 10 Finalist Oral Defenses:** Live presentations and deep-dive defense sessions by the global Top 10 Finalist teams (20 minutes per team slot: 7-min pitch, 10-min Q&A defense, 3-min transition).
- **Two (2) Distinguished Scientific Symposia (in English):** Featuring 45-minute keynote lectures delivered by leading Thai authority researchers and physician-scientists, exploring frontline translational medical breakthroughs.
- **Catering & Hospitality:** Complimentary lunch, coffee breaks, and refreshments will be fully provided throughout the day for all on-site attendees.
- **Award & Recognition Ceremony:** Official announcement of the Championship, Runner-Up, and Popular Vote awards.

(Note: The detailed, minute-by-minute order of proceedings and exact presentation order will be officially communicated directly to the shortlisted Top 10 Finalist teams following the finalist announcement).

9.2 Dress Code (For Both On-Site & Zoom Live Finalists)

- **Business Professional OR University Uniform:** Finalists must wear formal business professional attire (suit/blazer, collared shirt, tailored trousers/skirt) appropriate for an international medical conference, OR their official **Medical School / University Student Uniform**.
- **Color Palette:** Solid, professional tones are recommended (black, navy blue, charcoal, white, or muted colors).

9.3 On-Site Venue & Parking Information

- **Official Venue: Conference Room, 2nd Floor, The 50th Anniversary Building**, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand.
- **Google Maps Location Link:** https://share.google/aoTT3LOxHwS1wTPbO
- **Parking Facilities on Campus:**
    - **Primary Parking:** Suandok Park Building on Suthep Road (over 1,000 parking spots available).
    - **Alternative Parking:** In front of the Center of Medical Excellence (opposite Suandok Park Building) or designated parking zones around the Faculty of Medicine campus.

9.4 Transportation Guide to & within Chiang Mai

- **Traveling to Chiang Mai:**
    - **By Air:** Fly directly into **Chiang Mai International Airport (CNX)**, located just 10–15 minutes from the Faculty of Medicine campus.
    - **By Train / Intercity Bus:** Scenic railway services connect Bangkok (Krung Thep Aphiwat Central Terminal) to Chiang Mai Railway Station, and VIP coaches arrive at Arcade Bus Terminal.
- **Getting Around Chiang Mai & Campus:**
    - **Ride-Hailing Apps: Grab, Bolt, and Maxim** are widely available, affordable, and convenient for direct drop-off at The 50th Anniversary Building.

    - **Iconic Red Songthaew (รถแดง):** Shared red pickup taxis operate throughout the city and Suthep Road.
    - **CMU Shuttle Bus:** Free electric campus shuttle buses operate across Chiang Mai University phases.

10. OFFICIAL CONTACT CHANNELS

For any inquiries regarding eligibility, submission guidelines, or competition logistics, please reach out to us via our official channels:

- **Official Competition Email:** mrpc.cmu@gmail.com
- **Project Director / President:** Pacharakorn Sawasdee — pacharakorn_saw@cmu.ac.th
- **Instagram:** @imrpc.cmu
- **Facebook Page: CMU International Medical Research Proposal Competition**

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Faculty of Medicine, Chiang Mai University, 110 Inthawarorot Rd. , Sri Phum, Muang, Chiang Mai, Thailand 50200

OFFICIAL PROPOSAL SUBMISSION GUIDELINES & SPECIFICATIONS

Competition Theme: From Spark to Solution: Redefining the Boundaries of Medicine
Organized by: Faculty of Medicine, Chiang Mai University, Thailand
Document Classification: Official Call for Proposals & Applicant Instructions
Official Submission Portal: https://forms.gle/NLQKyFKECwBNgxbo6

Rather than restricting applicants to rigid fill-in forms, CMU-iMRPC provides full creative freedom regarding document layout and narrative design, bounded strictly by mandatory technical specifications and required thematic sections.

1. ELIGIBILITY, EQUITY & SUBMISSION SCOPE

- **Participant Eligibility:** Currently enrolled undergraduate medical students (MBBS/MD or equivalent) worldwide. Teams may consist of **1 to 3 members**. Cross-institutional teams are permitted, provided that all members are currently enrolled undergraduate medical students.
- **Mandatory Verification Policy:** Shortlisted Finalist teams must provide official proof of enrollment (Student ID card or Institutional Verification Letter) within **five (5) calendar days** of the finalist announcement. Failure to present valid documentation will result in immediate disqualification, and the finalist slot will be awarded to the next runner-up on the reserve list.
- **Submission Scope & Developmental Stages:** We welcome proposals across all disciplines of medicine and biomedical sciences at any stage of development—from novel study designs and research methodologies to ongoing investigations with preliminary data. Completed empirical datasets are **neither required nor evaluated**.
- **Publication Policy & Academic Equity:** To preserve absolute fairness, studies that have already been published in full or accepted by a peer-reviewed academic journal prior to the submission deadline are **strictly ineligible**. However, research that has previously been presented at academic conferences, symposia, or student congresses remains fully eligible.
- **Reviewer Evaluation Mandate:** Evaluators are strictly instructed to judge submissions solely on conceptual soundness, biological/clinical plausibility, originality of the

hypothesis, clarity of anticipated findings, and methodological validity. Submissions will **NOT** be penalized for the absence of preliminary empirical data.

2. AUTHOR, INSTITUTIONAL & MENTOR ATTRIBUTION

All proposals must provide clear academic attribution and correspondence details directly on Page 1:

- **Author Information:** Full legal names, medical school/university affiliations, and country of all student team members (1 to 3 co-authors).
- **Faculty Advisor / Mentor:** Full name, academic title, department, and institution of the primary faculty advisor or research supervisor supporting the project.
  (Note on Mentorship: Having a faculty advisor or mentor is **strictly optional and not mandatory**. Proposals developed independently by student teams without a mentor are fully eligible and will be evaluated with absolute equity under the exact same criteria without any penalty).
- **Corresponding Contact:** Designated corresponding author's institutional email address and contact telephone/mobile number for official competition communications.

3. TECHNICAL FORMATTING SPECIFICATIONS

Applicants may design their own layout, typography hierarchy, and visual flow provided the proposal complies strictly with the following technical parameters:

Parameter	Mandatory Specification
Document Length	**Strictly maximum two (2) pages** (A4 size). All document content—including headers, author attribution, keywords, all mandatory textual sections, any optional workflow diagram, and Key References—must fit strictly within this 2-page boundary. Any content appearing on page 3 or beyond will be completely truncated and excluded from scoring.
Page Setup & Margins	Standard A4 page size with minimum margins of **1 inch (2.54 cm)** or **0.75 inch (1.9 cm)** on all four borders.
Typography (Body Text)	**Arial (11 pt)**. Consistent font family must be used throughout the text. (Bold, italics, and underlining are permitted for emphasis).
Line Spacing	**1.15 line spacing** with standard paragraph spacing. (Single line spacing is permitted within metadata blocks, tables, reference lists, and figure captions).

Parameter	Mandatory Specification
Page 1 Header Metadata Block	The top of Page 1 must clearly display: 1. **Project Title** (Concise, informative, and specific) 2. **Author(s) & Affiliation(s):** Student names and university/medical school 3. **Faculty Advisor / Mentor (Optional):** Name, title, and department/institution 5. **Corresponding Email:** Official email for correspondence 6. **Keywords:** Exactly **3 to 5 keywords** reflecting core subject, pathology, methodology, or technology 7. Select one research track from the four tracks below
Eligible Research Tracks	• Basic & Pre-clinical Sciences • Clinical Specialties • Public Health & Health Systems • Medical Technology & Artificial Intelligence
File Format & Size	**PDF (.pdf) format only.** Files must be flattened, text-selectable, and under **10 MB** in file size.

4. MANDATORY PROPOSAL STRUCTURE & REQUIRED HEADINGS

To ensure objective, standardized evaluation against our 100-point rubric, every submitted proposal **must explicitly incorporate the following six (6) core sections** using the designated headings:

Section 1: Background & The Unmet Knowledge Gap

- Articulate the clinical, biological, or public health burden of the condition under investigation.
- Critically evaluate why existing diagnostics, therapeutic options, or mechanistic models are inadequate.
- Explicitly define the specific, unresolved knowledge gap or mechanistic blind spot that this proposed study directly addresses.

Section 2: Novelty & Conceptual Innovation

- Clearly differentiate the proposed work from existing studies published in global biomedical databases (e.g., PubMed/MEDLINE).
- Describe the unique intellectual angle (e.g., an uncharacterized molecular pathway, a novel therapeutic target, a creative cross-disciplinary application, or a newly conceptualized diagnostic tool). Submissions must demonstrate non-derivative inquiry.

Section 3: Research Question, Central Hypothesis & Objectives

- State one focused, clearly formulated primary research question.
- Articulate a testable, falsifiable central scientific hypothesis.
- List defined Primary Objective and Secondary/Exploratory Objectives.

Section 4: Methodology & Study Design

- Define the study architecture and experimental model (e.g., in vitro cellular model, transgenic animal system, prospective clinical cohort, randomized crossover trial, diagnostic accuracy study, or machine learning/bioinformatics pipeline).
- Detail primary independent/exposure variables and primary/secondary dependent/outcome measures.
- Describe control groups (positive/negative), randomization, blinding protocols, and strategies to minimize bias and confounding.
- Outline the proposed analytical/statistical framework and sample size calculation or power justification rationale.

Section 5: Scientific Plausibility & Ethical Considerations

- Justify the biological, clinical, and technical plausibility of the proposed protocol within established scientific principles.
- Outline adherence to ethical standards, human subject protections (IRB/ethics review principles, informed consent), animal welfare regulations (IACUC / 3Rs principles), or laboratory biosafety protocols.

Section 6: Anticipated Findings, Translational Linkage & Future Impact

(Crucial Selection Criterion — Evaluated under Domain 2B & 2C)

- **Anticipated Findings & Deliverables:** Clearly state what concrete, measurable findings, phenotypic changes, biomarkers, or algorithmic readouts are expected if the central hypothesis is supported.
- **Translational Linkage:** Provide an airtight logical bridge connecting these direct deliverables to downstream healthcare impact. How do the immediate study outputs translate into clinical utility, disease prevention, or therapeutic innovation?
- **Future Impact & Next-Phase Horizon:** Detail the ultimate translational value for patient survival, healthcare equity, or medical systems, and outline the logical subsequent research milestone (e.g., in vivo validation, clinical trial, or guideline integration).

5. FIGURES, DIAGRAMS & REFERENCES

- **Conceptual Workflow Diagram (Optional):** Inclusion of a workflow diagram, flowchart, or mechanistic schematic is entirely optional and neither expected nor required. There is NO direct score or bonus points allocated for including a figure.

Furthermore, including a diagram does NOT inherently improve or elevate the evaluation in Domain 4 (Proposal Quality), as evaluators assess Domain 4 strictly on narrative clarity, logical flow, and precision of scientific writing. Applicants should only include up to one (1) high-resolution figure if it genuinely clarifies complex methodology without displacing critical textual details or exceeding the 2-page limit.

- **Key References (Mandatory):** Include **3 to 5 key citations** in standardized Vancouver or AMA reference format. Citations should focus on seminal literature demonstrating the knowledge gap and supporting methodological feasibility, and must be fully contained within the 2-page boundary.

6. EVALUATION RUBRIC & SELECTION THRESHOLDS

Proposals are evaluated independently by two specialist faculty reviewers matched by academic department and methodological cluster across a 100-point scale:

Minimum Threshold Requirement: To qualify for the Top 10 Finalist shortlist, proposals must achieve a composite score strictly greater than 40% across each core domain:

- **Domain 1 (Feasibility & Reliability):** Score strictly **> 12.0 / 30.0 points** (> 40.0%)
- **Domain 2 (Need & Future Impact):** Score strictly **> 14.0 / 35.0 points** (> 40.0%)
- **Domain 3 (Novelty & Originality):** Score strictly **> 10.0 / 25.0 points** (> 40.0%)

7. FINAL ROUND (ORAL PRESENTATION) TRANSITION & SCORING POLICY

- **Independent Final Scoring:** Final championship ranking and competition awards will be decided solely on performance during the on-site Oral Presentation defense. Preliminary proposal scores do NOT roll over or combine into the final oral tally.
- **Contextual Access for Oral Judges:** Oral round judges will receive full access to preliminary proposal scores and reviewer critiques to formulate targeted, deep-dive defense inquiries.
- **Oral Criteria Announcement:** The specialized oral presentation evaluation rubric will be officially published alongside the announcement of the shortlisted Top 10 Finalists.

8. PRE-SUBMISSION APPLICANT CHECKLIST

Before submitting the final PDF, ensure all following requirements are met:

- ☐ Proposal length is strictly **two (2) pages maximum** (A4 size), inclusive of all text, diagrams, and references.
- ☐ Body text adheres to **Arial 11 pt** with **1.15 line spacing**.
- ☐ Page 1 header clearly displays the **Project Title**, **Selected Research Track**, **Author Names & Affiliations**, **Faculty Advisor Details (if applicable / optional)**, **Corresponding Email**, and **3 to 5 Keywords**.
- ☐ All six (6) mandatory section headings are explicitly included in the text.

- [ ] Section 6 clearly outlines **Anticipated Findings** with an explicit **Translational Linkage** to healthcare impact.
- [ ] Exactly 3 to 5 key references are formatted in Vancouver or AMA style and contained within the 2-page limit.
- [ ] If a diagram is included, it is understood to be purely optional, carries no direct points, and does not improve Domain 4 scores.
- [ ] The file is exported as a readable, non-password-protected **PDF document** under 10 MB.



MedCMU

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Faculty of Medicine, Chiang Mai University, 110 Inthawarorot Rd. , Sri Phum, Muang, Chiang Mai, Thailand 50200

OFFICIAL PROPOSAL PEER REVIEW & SELECTION PROTOCOL

Competition Theme: From Spark to Solution: Redefining the Boundaries of Medicine
Organized by: Faculty of Medicine, Chiang Mai University
Document Classification: Official Academic Guidelines & Evaluator Protocol

This protocol delineates the standard operating procedure for the preliminary evaluation phase, establishing an objective, cluster-specific expert peer-review mechanism designed to select the Top 10 global finalist teams for the on-site oral presentation defense at Chiang Mai University.

1. ELIGIBILITY & SUBMISSION SCOPE

- **Participant Eligibility:** Currently enrolled undergraduate medical students (MBBS/MD or equivalent) worldwide. Teams may consist of **1 to 3 members**. Cross-institutional teams are permitted, provided that all members are currently enrolled undergraduate medical students.
- **Author & Mentor Attribution:** Submissions must explicitly state the full names and institutional affiliations of all student authors, primary faculty advisor/mentor details, and corresponding contact information on Page 1.
- **Proof of Enrollment (Verification Policy):** Shortlisted Finalist teams must provide official proof of enrollment (Student ID card or Institutional Verification Letter) within **five (5) calendar days** of the finalist announcement. Failure to present valid documentation will result in immediate disqualification, and the finalist slot will be offered to the next runner-up on the reserve list.
- **Submission Scope & Stages:** We welcome proposals across all disciplines of medicine and biomedical sciences at any stage of development—from novel study designs and research methodologies to ongoing investigations with

preliminary data. Completed empirical datasets are neither required nor evaluated.

- **Publication Policy & Academic Equity:** To preserve absolute fairness, studies that have already been published in full or accepted by a peer-reviewed academic journal prior to the submission deadline are **strictly ineligible**. However, research that has previously been presented at academic conferences, symposia, or student congresses remains fully eligible.
- **Reviewer Evaluation Mandate:** Reviewers are explicitly instructed to appraise submissions solely on conceptual merit, biological/clinical plausibility, originality of the hypothesis, clarity of anticipated findings, and methodological rigor of the proposed design. Submissions must NOT be evaluated or penalized based on the presence or absence of empirical data or laboratory results.

2. INDEPENDENT PEER REVIEW & CLUSTER-SPECIFIC EXPERT MATCHING

Submissions may originate from any field across all medical disciplines, including but not limited to:

- **Basic & Pre-clinical Sciences:** Anatomy, Physiology, Biochemistry, Pharmacology, Pathology, Medical Genetics, Immunology, Microbiology, Molecular Biology, Multi-omics, etc.
- **Clinical Specialties:** Internal Medicine, Surgery, Pediatrics, Obstetrics & Gynecology, Orthopedics, Neurology, Ophthalmology, Otolaryngology, Psychiatry, Radiology, Anesthesiology, etc.
- **Public Health & Health Systems:** Epidemiology, Global Health, Preventive Medicine, Occupational Health, Health Economics, Planetary Health, etc.
- **Medical Technology & Innovation:** Artificial Intelligence in Healthcare, Medical Devices, Bioinformatics, Biomedical Engineering, Digital Health, etc.

To ensure peer-level appraisal, each proposal is directly assigned to **two (2) independent faculty reviewers** matched according to:

1. **Disciplinary & Clinical Alignment:** The corresponding academic department or specialized medical field.

2. **Methodological Expertise:** The specific research methodology proposed (e.g., laboratory assays/animal models, clinical trials, observational cohorts, epidemiological analytics, computational pipelines, or machine learning algorithms).

Evaluators review each submission independently using the standardized 100-point rubric.

3. EVALUATION RUBRIC & SCORING ARCHITECTURE (100 POINTS)

Reviewers independently grade each proposal across four core domains comprising five focused, mutually exclusive criteria on a 1 to 5 scale with fixed integer multipliers:

Domain	Evaluation Criterion	Raw Scale	Multiplier	Maximum Score
Domain 1: Feasibility & Reliability (30%)	1A. Methodological Rigor & Internal Validity	1 – 5	× 3	15 Points
	1B. Biological, Technical & Ethical Plausibility	1 – 5	× 3	15 Points
Domain 2: Need & Future Impact (35%)	2A. Significance of the Knowledge Gap	1 – 5	× 2	10 Points
	2B. Potential Impact & Expected Value of Outcome	1 – 5	× 4	20 Points
	2C. Specificity of Anticipated Findings & Translational Linkage	1 – 5	× 1	5 Points
Domain 3: Novelty & Originality (25%)	3. Originality & Non-Derivative Thinking	1 – 5	× 5	25 Points
Domain 4: Proposal Quality (10%)	4. Clarity, Scientific Narrative & Logic	1 – 5	× 2	10 Points

Domain	Evaluation Criterion	Raw Scale	Multiplier	Maximum Score
TOTAL	**6 Core Criteria**			**100 Points**

Mandatory Principle for Evaluating Novelty: Reviewers must evaluate novelty based on their specialized expertise and the current state of global medical literature (e.g., PubMed/MEDLINE), rather than relying solely on the background literature or claims cited by the applicants.

4. MINIMUM DOMAIN THRESHOLDS (QUALITY SAFEGUARD)

To ensure balanced scientific excellence and prevent the shortlisting of unbalanced proposals (e.g., speculative concepts lacking methodological validity), submissions must achieve scores strictly greater than 40% across each core domain:

- **Domain 1 (Feasibility & Reliability - 30 pts):** Score strictly greater than **12.0 / 30.0 points** (> 40.0%)
- **Domain 2 (Need & Future Impact - 35 pts):** Score strictly greater than **14.0 / 35.0 points** (> 40.0%)
- **Domain 3 (Novelty & Originality - 25 pts):** Score strictly greater than **10.0 / 25.0 points** (> 40.0%)

Note on Domain 4: Domain 4 (Proposal Quality - 10 points) does not carry a disqualification threshold, ensuring that English stylistic nuances do not penalize substantive scientific merit.

5. REVIEWER DISCREPANCY & THIRD-REVIEWER ASSESSMENT PROTOCOL

To protect submissions against single-evaluator variance and unverified outlier penalties, a **Third Expert Reviewer** from the relevant discipline and methodological cluster is assigned when either of the following conditions is met:

1. **Total Score Discrepancy:** The difference in total composite score between the two reviewers exceeds **15.0 points** (out of 100.0).
2. **Threshold Divergence:** A proposal's average score falls below a Minimum Domain Threshold, but the individual scores awarded by the two reviewers in that specific domain diverge significantly:

- **Domain 1 (Feasibility & Reliability):** Score difference exceeds **10.0 points** (out of 30.0)
- **Domain 2 (Need & Future Impact):** Score difference exceeds **10.0 points** (out of 35.0)
- **Domain 3 (Novelty & Originality):** Score difference exceeds **10.0 points** (out of 25.0)

Final Score Calculation

When a third review is commissioned, the final composite score is calculated as the **unweighted arithmetic mean of all three reviewers**:

Final Score = (Reviewer 1 Score + Reviewer 2 Score + Reviewer 3 Score) / 3

- The proposal's threshold compliance is then re-evaluated based on the calibrated three-reviewer domain average.

6. MASTER RANKING, FINALIST SELECTION & ORAL PRESENTATION TRANSITION

6.1 Shortlisting the Top 10 Finalists

Proposals that satisfy all minimum domain thresholds are ranked in descending order according to their final composite scores. The **Top 10 ranked proposals** will be officially invited to represent their institutions in the on-site oral presentation defense at Chiang Mai University.

6.2 Deterministic Tie-Breaking Hierarchy

If two or more proposals achieve identical total scores at the cutoff rank, ties are resolved sequentially:

1. **First Priority:** Higher composite score in **Domain 2 (Need & Future Impact - 35 pts)**
2. **Second Priority:** Higher composite score in **Domain 1 (Feasibility & Reliability - 30 pts)**
3. **Third Priority:** Higher composite score in **Domain 3 (Novelty & Originality - 25 pts)**

4. **Fourth Priority:** Higher composite score in **Domain 4 (Proposal Quality - 10 pts)**

6.3 Oral Presentation Round & Final Winner Determination

- **Independent Final Scoring:** The final championship ranking and winners will be determined **solely on performance during the on-site Oral Presentation round**. Scores from the preliminary proposal review round will **NOT** be carried forward or combined into the final oral competition tally.
- **Contextual Access for Oral Judges:** While preliminary scores do not roll over, the oral presentation judging panel will have full access to the preliminary proposal scores and reviewer comments for background context and targeted defense questioning.
- **Evaluation Criteria Announcement:** The specialized evaluation rubric and scoring criteria for the on-site Oral Presentation round will be officially published alongside the announcement of the shortlisted Top 10 Finalists.

7. OFFICIAL EVALUATION REPORT & REVIEWER FEEDBACK

Following the completion of the review process, all participating teams—regardless of qualification status—will receive an Official Evaluation Summary Report detailing their final composite score and structured qualitative feedback categorized into:

- **Key Strengths & Methodological Highlights**
- **Limitations & Methodological Concerns**
- **Recommendations for Future Development**