

**Minimally Invasive Medical Technologies Center (MIMTeC)
Bylaws**

**National Science Foundation
Industry/University Cooperative Research Center (I/UCRC)**

University of Minnesota
University of Cincinnati

Revision #2
December 1, 2009

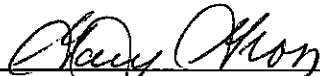
Center Director Approval



Art Erdman, Ph.D.
University of Minnesota



Carl Montemagno, Ph.D.
University of Cincinnati



IAB Board Approval
Chairman

DOCUMENT HISTORY

Original (Baseline) Version Approved and Signed
(Three Originals Signed)

August 18, 2008

Revision 1 - Minor Edits

September 11, 2008

Revision 2 – IAB modifications / Clarifications

December 1, 2009

ARTICLE I – INTRODUCTION

- 1.1 The following Bylaws will be used to govern the Minimally Invasive Medical Technologies Center (MIMTeC), a National Science Foundation (NSF) Industry/University Cooperative Research Center (I/U CRC).
- 1.2 The Bylaws can be amended at any time by an affirmative vote of two thirds (Quorum) of the members of the Industrial Advisory Board (IAB).
- 1.3 The MIMTeC I/U CRC is a university consortium comprised of the following participating universities:
 - University of Minnesota (Lead Academic Institution)
 - University of Cincinnati (Partnering Academic Institution)
- 1.4 These Bylaws form a part of the Membership Agreement with participating Sponsors. If there are any inconsistencies between the Bylaws and the Membership Agreement, the terms and conditions outlined in the Membership Agreement take precedence over the Bylaws provided the inconsistent terms of the Membership Agreement have been approved by the Center Director, the Site Directors, and two thirds of the IAB representatives.

ARTICLE II – MIMTeC PURPOSE

- 2.1 **Vision Statement:**

To be a nationally-recognized leader in research that meets the needs of companies who design, manufacture and market devices for minimally invasive medical diagnosis and treatment.
- 2.2 **Mission Statement:**
 - 2.2.1 To develop enabling technologies, design tools, and methodologies for advanced minimally invasive medical devices for the benefit of center members and society.
 - 2.2.2 To enlarge the cadre of scientists and engineers capable of advancing minimally invasive medical technologies.

ARTICLE III – SPONSORSHIP

- 3.1 Sponsorship constitutes membership. One company is equal to one membership per sponsorship. Each company may have more than one sponsorship. The MIMTeC I/U CRC sponsorship (membership) fees are \$50,000 per year for the first three years and will be used to support Center research. Membership is renewable for additional three year increments at the same fee.

- 3.2 A participating university that receives and uses sponsorship (membership) fees will provide a 25% cost share match in connection with the sponsor's cash fees to support Center research in accordance with the requirements of the NSF I/U CRC Program.
- 3.3 All Sponsors (members) will sign the same Membership Agreement unless otherwise approved by the Center Director, all University Site Directors, and two thirds of the representatives of the IAB. A common exception is when a NSF SBIR company applies for membership into MIMTeC wherein appropriate modifications have to be made to the agreement to accommodate the fact that bulk of the membership fees may be paid by NSF on behalf of the company (see Article IX of this document).
- 3.4 The fiscal year for the center is defined as July 1st to June 30th.
- 3.5 Sponsorship commitments for research to commence in a given fiscal year will be made in writing by June 1st of the preceding fiscal year.
- 3.6 Sponsorship payments will be due by June 30th of the year preceding start of membership, and on June 30th of the year preceding any year of continued membership. In extenuating circumstances, this can be delayed until July 31 of a membership year with permission from the Center Director.
- 3.7 Sponsors of a given year of research will constitute the "class" of that year.

ARTICLE IV – ORGANIZATION

- 4.1 Although individual Sponsors of the Center join the Center through one of the University Sites, there is only one IAB for the Center. The IAB will select a Chairperson for a one year term. A two thirds majority of the voting IAB members is required to elect a Chairperson. At the chairperson's discretion, this term will be automatically extended to a maximum of two continuous years, unless the IAB, at the end of the first year, requests the removal of the Chairperson by a two-thirds vote. To accommodate continuity of procedural matters, as well as institutional memory of previous IAB decisions, it is strongly encouraged that the chairperson serve the full two year term.
- 4.2 An Organization may have more than one Center sponsor and will be entitled to have one voting representative on the IAB for each current-funded sponsorship.
- 4.3 All Sponsors will participate in the strategic planning of the Center. The IAB will assist the participating faculty in identifying pre-competitive, generic, industry-related, research problems in minimally invasive medical technologies; recommend research projects for future work; assist in identifying appropriate industrial internship opportunities for graduate students and postdoctoral students; assist the Center Director and Site Directors in identifying new sponsors; and review the research and educational accomplishments of the Center. This will be accomplished through interaction and standard processes.

- 4.4 The Center Director will be responsible for all Center activities.
- 4.5 The Site Directors at the Lead and Affiliated Universities will be responsible for Center activities at their university and will report directly to their respective appropriate university administrators and to the Center Director. The Site Directors will provide liaison between the Center and the appropriate academic departments of the member universities.
- 4.6 Site Principal Investigators will manage specific research projects funded by the Center and will report directly to the appropriate Site Director, the appropriate university administrators, and to the Sponsors supporting the project.
- 4.7 A Center External Evaluator, appointed by the NSF, will assist the Center Director, Site Directors, and the IAB to organize the Center and provide an independent assessment of the operation. The Center External Evaluator will report directly to the I/U CRC Program Manager at the NSF. Travel expenses for the Center External Evaluator will be paid by the participating universities from I/U CRC sources and shall be limited to travel to the IAB meetings and one program review trip to each participating university per calendar year. The participating university hosting the IAB meeting will incur the cost of the Center External Evaluator travel expenses for that meeting.

ARTICLE V – ADMINISTRATION

- 5.1 The Center Director and Site Directors will work with the IAB on strategic plans for the Center and on recruiting new Sponsors.
- 5.2 The Center Director in cooperation with the Site Directors will submit an annual operating and research budget to the IAB for review and recommendations. This will be available for review prior to the Spring IAB Meeting each year.
- 5.3 The Site Directors, upon authorization of the IAB and the Center Director, will authorize the use of membership fees by the Project Principal Investigators in support of Center research.

ARTICLE VI – INDUSTRY ADVISORY BOARD RESPONSIBILITIES

- 6.1 Each Sponsor (member) has one voting IAB member per paid membership. Each Sponsor can have multiple memberships.
- 6.2 IAB members must attend both meetings during the fiscal year (spring and fall).
- 6.3 IAB members must participate in the process of reviewing and selecting research to be funded.

6.4 IAB members must vote on issues before IAB.

ARTICLE VII – REPORTING

- 7.1 The Center Director shall provide an annual report to the Sponsors and to the NSF. This report will summarize the year's activities.
- 7.2 The Center Director shall provide project status for each funded research project at a minimum of quarterly.
- 7.3 The Site Directors/Principal Investigator (PI) shall provide interim reports to the Center Director and to the Sponsors as necessary at the completion of major research tasks. These interim reports will be distributed via the Center web site and e-mail notification to all sponsors once posted.
- 7.4 All administrative issues, concerns, or conflicts regarding the activities of research and reporting are responsibilities of the Center Director.

ARTICLE VIII – MEETINGS

- 8.1 The Center Director, Site Directors and the IAB Chairperson will establish the schedule of activities and meetings for the Center as well as the agenda for the semiannual research review meetings.
- 8.2 The participating universities and IAB Members will meet twice a fiscal year (spring and fall). The meeting site will rotate between the two universities sites.
- 8.3 The IAB will meet twice a year to review research results, select projects, review budgets, and discuss the strategic plans for the Center. A Sponsor may send more than one representative to the IAB meetings, but may only vote on Center matters corresponding to the number of memberships they possess.

ARTICLE IX – RESEARCH PROJECT SELECTION PROCEDURE

- 9.1 A project selection process will be developed and adopted by the members of the IAB.
- 9.2 Projects are typically two - three years in length and reviewed every six months at the biannual IAB meetings. The IAB retains the right to stop funding projects at any time if the Board reaches the consensus that adequate progress has not been made, the research project is not relevant to any IAB member or adequate funding is no longer available for the entire portfolio of projects.

- 9.3 All Center Sponsors (members) may participate in the selection and review of research projects. However, only one designated representative from each organization may vote for projects. Individual organizations may acquire multiple Center memberships and will have a corresponding number of voting representatives on the IAB.
- 9.4 Sponsors may propose general industry-oriented research topics of interest to their organization. A portfolio of relevant research topics will be compiled based on the interest of the Sponsors. These research topics will be posted on the Center web site (restricted) and will form the basis for cooperative discussions among the faculty and the industrial members. Each participating university will develop a set of pre-proposals consistent with the goals of their group, the interest of the Sponsors, and the mission of the Center. The pre-proposals will be posted on the Center web site prior to the Spring IAB meeting. These pre-proposals will utilize a standard request for proposal (RFP).
- 9.5 The IAB will officially consider new proposals at the Spring meeting and only when funding is available to support additional projects. The IAB may request proposals for review at the Fall meeting if deemed necessary for portfolio or other reasons.
- 9.6 In order to facilitate new proposals of interest to the IAB, sharing of new proposal ideas in advance of the Spring meeting is required. This will allow the IAB to review the idea, vote on appeal and provide specific feedback to the PI to revise the concept to craft a project proposal that is more appealing to IAB members. The following steps have been recognized by the IAB as the preferred method for proposing new proposals:

9.6.1 Non-IAB initiated proposals

- 9.6.1.1 New proposal ideas are shared with the IAB for judging interest well in advance of the Spring meeting. Proposals will provide clear, unambiguous descriptions of explicit deliverables/assets at project completion.
- 9.6.1.2 The IAB will vote on interest of the topic in a separate teleconference/web meeting and provide specific feedback for proposal revision, if necessary.
- 9.6.1.3 If there is not interest from a majority of IAB members, the idea may be:
- 9.6.1.3.1 Discontinued from further consideration by the PI and not presented at the next Spring meeting.
- 9.6.1.3.2 Modified and resubmitted for consideration by the PI preferably before or at the next Spring meeting.
- 9.6.1.4 If there is interest from the IAB (majority vote or full enrollment by a single IAB member).

9.6.1.4.1 PI will provide additional details of the project (1 page summary) along with supplemental review of literature and patent data to describe uniqueness of the idea.

9.6.2 IAB member initiated proposal

9.6.2.1 Proposal idea will be shared with the IAB in advance, but will not be required to follow non-IAB initiated proposal process for pre-Spring meeting voting.

9.6.2.2 At the PI or initiating IAB member's explicit request, IAB feedback can be provided for *optional* consideration by the PI and initiating IAB member.

9.7 Center researchers will present new research proposals in a session separate from the project review session. Sponsor representatives will complete Level of Interest Feedback Evaluation (LIFE) forms at the end of each presentation. The LIFE form consists of a four-item scale measuring the level interest among IAB members for a specified research project and includes a "comments" section for open-ended responses.

9.7.1 LIFE forms shall be completed by each IAB member based on relevancy of the research to the Board member's organization.

9.7.2 Review of the research must be done with continuity as a foundation. The decisions on whether to fund or not to continue funding must be based on (1) LIFE form, Center goals, relevancy to the IAB members organization, and previous actions and comments from IAB during the immediate past meeting.

9.8 A closed IAB meeting will be held for selecting new projects. The LIFE form scores and comments will serve only as a basis for discussion. Prior to the actual process of project selection at each meeting, the IAB will convene to review the project selection and voting process which will be based on either a consensus-driven decision making process, or a multi-voting procedure, or a combination of the two, i.e the multi-voting procedure could be used as a starting point for discussion, or as a method for determining funding that can not be reached by consensus. The mode of project selection is completely under control of the IAB members officiating at the meeting.

9.9 The multi-voting procedure, if it is used, will use a weighted voting schema to help distribute votes across the projects. The total number of votes available to each voting member will be based on the total number of projects that could be funded for that funding cycle, which in turn is computed from the total funds available divided by the agreed level of annual funding for each project (currently \$50,000/yr per project). Each IAB member could distribute their votes evenly across all projects, or weight them across projects (some projects receiving more votes than others), or apply all their votes to one single project.

9.9.1 Following the compilation of the votes for the projects, the IAB will decide funding based on a ranking list created by tallying the total votes received per project. The IAB will also have the power at its discretion to have a second level of discussion to

address projects on the borderline in terms of funding, or in situations wherein 2 or more projects have equal number of votes.

9.9.2 Any project receiving a number of votes equal to the total number of votes any one sponsor can cast will be automatically funded (this provision enables any one sponsor to assure funding for an individual project, should the sponsor feel strongly that it should be funded).

9.10 The IAB need not supply funding to the maximum number of projects that could be funded in that year.

9.11 At the conclusion of the annual IAB meeting, the IAB chair in coordination with the Center Director will notify the PI of the decision on funding of the research for the coming year. Notification will be by letter.

ARTICLE X – PROJECT REVIEW PROCEDURE

10.1 At each semi-annual IAB meetings, Center researchers will review their research progress to date via short project review presentations and a poster session. Center Sponsors will complete LIFE forms after each project presentation.

10.2 A closed IAB meeting will be held following the research review sessions during which time sponsors will review LIFE feedback. The Board will discuss each project and provide the PI written recommendations and suggestions to help guide the research.

10.2.1 Criteria for review will include

- Relevancy to IAB interests
- On schedule
- Meeting goals and objectives as agreed to by the IAB

10.2.2 The IAB will use the following guidelines in determining the status of the on-going research projects, however the IAB reserves the right to terminate a project at any time according to Article IX.

Fall Meeting

- Continued – project is to continue, taking into consideration IAB feedback
- 6 month probation – project is on probation and is at risk of termination at the Spring meeting. PI should work carefully with IAB project mentors to address concerns and formulate plan to resolve probation status
- Completed – project has been completed

Spring Meeting

- Continued – project is to continue taking into consideration IAB feedback

- Probation lifted/Continue – project is removed from probation status and is placed in continued status
- Suspended (terminated) – Work activities should cease immediately. PI, Site and Center Directors are to work with IAB to close-out program.
- Completed – project has been completed

10.3 IAB members may choose to become “Project Mentors” for projects of particular interest to their organization. These Project Mentors may arrange to meet with research project PI’s and graduate students at the semi-annual IAB meetings for more in-depth discussions and collaboration on the research project. At the discretion of the IAB, time may be scheduled into the semi-annual IAB meetings to facilitate these mentoring relationships.

10.4 At the conclusion of the annual IAB meeting, the IAB chair in coordination with the Center Director will notify the PI of the decision on funding of the research for the coming year. Notification will be by letter.

ARTICLE XI – PUBLICATION

11.1 Researchers engaged in MIMTeC research shall be permitted to disclose the methods and results of their research after a review by the Sponsors for proprietary materials as outlined in the Membership Agreement.

11.2 At any time, a Site Director may request permission to publish Center information presented in summaries, semiannual reports, annual reports, or final reports; or arising out of or resulting from research projects; in the form of abstracts, presentations, or manuscripts. To receive permission, the Site Director shall submit to the Center Director a “Request for Permission to Publish” containing the information to be published in the form in which publication will be sought. The Center Director shall submit the Request to the Sponsors by sending the Request to the primary contact for each Sponsor by certified mail or read receipt requested, as well as posting the Request to the Center website. Such information may be published in a substantial form (as submitted with the Request) if within sixty (60) days after the receipt of the Request from the Center Director, the Sponsor has not objected in writing to the Center Director to the publication of such information. This submission to the IAB will utilize a standard form. The Sponsor may object if the publication contains patentable subject matter that requires protection and/or the publication contains Sponsor’s confidential information. In such cases, publication will be delayed ninety (90) days to allow for patent applications to be filed or confidential information to be removed. It is understood that in no case can this provision for delay of publication cause an unreasonable delay in the normal academic progress of a graduate student of participating University with respect to preparation and submission of a graduate thesis or dissertation.

11.3 Any confidential information provided by Sponsors to a Project PI or other members of the Center shall be provided under the protection of an independent confidentiality agreement between the Sponsor and the appropriate university.

ARTICLE XII – BENEFITS

- 12.1 All Sponsors will have non-exclusive rights to the entire MIMTeC research portfolio under the conditions outlined in the Membership Agreement.
- 12.2 All Sponsors will have an opportunity to directly contribute to MIMTeC research and education programs by serving as industrial mentors and/or thesis committee members as appropriate and consistent with the policies and procedures of participating Universities.
- 12.3 All Sponsors will have an opportunity to propose case study problems, specific research problems, and focus areas for research.
- 12.4 All Sponsors will have an opportunity to host postdoctoral research associates and/or graduate students as industrial interns.
- 12.5 Each Sponsor that joins the Center by paying a cash membership fee will vote on the selection of research projects supported by membership fees.
- 12.6 Each Sponsor that joins the Center on an approved In-Kind basis will vote on the selection of research projects funded by membership fees if approved by two-thirds of the cash paying membership (In-Kind may constitute hardware, instruments, and software). In-Kind Sponsors will otherwise vote on all other Center matters and will participate in the evaluation and discussion of research projects.

ARTICLE XIII – NEW UNIVERSITY AFFILIATES AND INDUSTRIAL SPONSORS

- 13.1 From time to time, new universities may request membership into the MIMTeC as an affiliated site. Each new university requesting membership shall initially obtain concurrence from the Center Director, Site Directors, the I/U CRC Program Manager at the NSF prior to submitting a “Letter of Intent” to join MIMTeC. New universities requesting membership as an affiliated site must demonstrate their ability to perform synergistic research within the focused research areas of the Center and their willingness to work within the structure, policies and procedures of the MIMTeC. Upon concurrence by the Center, the new university requesting membership as an affiliated site may continue application per the applicable procedures of the current NSF I/U CRC program solicitation.
- 13.2 A new university requesting membership into the MIMTEC shall review their research objectives and program plans, and, obtain and submit within their Planning Grant Proposal a “Letter of Support” from the Site Director at each of the current Center university members.
- 13.3 From time to time, new Companies, Corporations, or Organizations may request, or be requested, to join a university affiliated site of the MIMTeC as a Sponsor (member). These new Companies, Corporations, or Organizations may join the MIMTeC upon signature of the existing consortium Membership Agreement, acceptance of the current Bylaws, and

upon payment of the NON-PRORATED annual membership fee. Application of these new membership fees shall be made to existing research programs at the affiliated site unless a new “interim” research program is otherwise approved by the Center Director, Site Directors, and the Chairman of the IAB. Continued funding of the “interim” research program is subject to IAB approval at the next annual IAB meeting under the terms of these Bylaws.

ARTICLE XIV – INTELLECTUAL PROPERTY

14.1 The language outlined in the membership agreement will be followed in its entirety.

ARTICLE XV – PUBLICITY

15.1 Any and all publication / marketing activities shall be approved by the IAB chair.

ARTICLE XVI – OUTREACH AND BROADER IMPACTS

16.1 The Center will maintain a web site for dissemination of information. This web site will contain a public section and member’s only section.

16.2 The MIMTeC website will contain all documentation produced from the Center meetings, including presentation materials, reports, manuscripts, and standard forms / formats.

ARTICLE XVII – FINANCIAL

17.1 Membership dues shall be made by the 30th of June of the fiscal year preceding the year for which membership is being paid. In extenuating circumstances, payment can be made no later than the following 31st of July. This requires discussion with the Center Director and IAB Chair.

17.2 Financial summaries are required of the Center Director at each of the two meetings.

17.3 Unspent funds for a project can be carried forward for each project, if the same project has been funded in the prior year or with IAB approval.

17.4 IAB members will use their best effort to get the funding to the Center as quickly as possible to minimize impact on the research.

17.5 Site Directors and Site Principal Investigators share responsibility for assuring student funding outside of MIMTeC to accommodate projects that are suspended (terminated) prior to completion to prevent students from being unfunded prior to full matriculation.

17.6 Site Directors and Site Principal Investigators will be very selective when combining funding from other sources to MIMTeC projects. Any additional funds combined with MIMTeC funding or used on a MIMTeC project will be subject to the same guidelines, bylaws and restrictions of MIMTeC. In the event that “mixed” funding is required and/or necessary, the non-MIMTeC funded work and outcomes must be explicitly documented and communicated to the IAB in advance, otherwise all project assets will default to IAB member ownership. This will be done to assure that all assets derived under a project that receives any MIMTeC funding are fully available to IAB members as outlined in the MIMTeC Membership agreement.

ARTICLE XVIII – SBIR Phase II Company Membership (Adopted by IAB 12-13-07)

18.1 Membership Requirement Exceptions for a Small Business Innovation Research (SBIR)/ Small Business Technology Transfer Program (STTR) Company.

Whereas an SBIR/STTR company’s membership may be co-funded by the NSF, and whereas this funding commitment may be limited to one or two years instead of the required three-year participation for I/U CRC membership, the membership requirement for such an SBIR company may, at the company’s request, be limited to the specific duration of funding provided by NSF through its supplemental grant funding procedure. Such an exception will be documented in the standard I/U CRC contract, stating that:

“Because Company X is an SBIR/STTR-funded company whose membership is being supported in part by the NSF, the membership requirement will be limited to ____ years, consistent with the duration of funding Company X has received from NSF for this purpose. The Company will have the right to continue its participation for additional years in its sole discretion, whether such membership is funded through NSF or through other independent means.”

This contract will be approved, based upon signature by the authorized representative of the Company, by the I/U CRC Director or University Site director and by an authorized representative of the sponsoring university’s Sponsored Research Office.

ARTICLE XIX – TBD

ARTICLE XX – TBD