Purpose
Affiliates of the University of Arizona College of Medicine – Phoenix (COM-PHX) have formed a partnership to catalyze and support collaborative research in the Phoenix metropolitan area. Partners are: Banner University Medical Center – Phoenix (BUMC-PHX), St. Joseph’s Hospital and Medical Center/Barrow Neurological Institute (SJHMC/BNI), Phoenix Children’s Hospital (PCH), and Maricopa Integrated Health System (MIHS). The Collaborative Research and Research Training Program develops cross-institutional research collaborations to enhance medical education, career development, and extramural research funding for COM-PHX and its affiliates.

Goals include:
- Help early career investigators develop successful collaborations.
- Encourage senior investigators to invigorate research programs by establishing new collaborative and innovative lines of investigation.
- Facilitate collaborations that enrich bench to bedside and bedside to bench research.
- Encourage development of innovative, multidisciplinary, collaborative projects, including multidisciplinary team approaches to issues in human health.
- Promote faculty career development by linking established mentors to early stage investigators.
- Establish resources to engage medical students/graduate students/residents/fellows in significant biomedical research projects.
- Ensure balanced, rapid, peer review of applications, and timely allocation of funds. Assess program impact by measuring external funding success, publications, collaborative basic/clinical science and handoffs, new, viable educational/research programs, workforce enhancement, and healthcare outcomes.

Key Dates and Submission Procedure
- Request for Proposals (RFP) issued 5 November 2015
- Application Deadline 5PM MST 29 January 2016
- Peer Review early March, 2016
- Executive Review mid March, 2016
- Earliest anticipated awards April, 2016
- Round Three contemplated submission June, 2016
- Forms & guidelines are available at http://phoenixmed.arizona.edu/vrp
- Applications must be submitted by 5 PM MST on 15 January 2016 as a single searchable PDF to: PBC-VRPGrants@email.arizona.edu
- Questions may be addressed to
  Burt Feuerstein, MD, PhD
  Research Administration
  University of Arizona College of Medicine – Phoenix
  Telephone: 602-827-2006; Email: PBC-VRPGrants@email.arizona.edu
Mechanisms

**P1 Collaborative Medical Student/Graduate Student/Resident/Fellow Projects** (maximum $5,000 over one year): Proposals with a faculty investigator and a medical/graduate student or resident/fellow as eligible partners.

**P2 Collaborative Projects** (maximum $80,000 over one to two years): Proposals with at least two faculty investigators from different partnering institutions.

**P3 Collaborative Program Development Projects** (maximum $200,000 over one to two years): Proposals for each program development project contain at least three thematically related collaborative subprojects, each with at least two faculty investigators from different partnering institutions, and at least an administrative core.

Funds and Funding Restrictions

The partners allocated funding for Round Two of this program.

Present funds: ~$1,600,000

Indirect costs are NOT supported

**P1 Restrictions** – Funding limited to equipment and/or supplies not otherwise available and necessary for the project, and mentee travel to a conference to present the work.

**P2 and P3 Restrictions**

- **Collaborative New Work.** Funds are for unfunded collaborative projects. There can be no duplication or overlap of past or present activity. Expectation is for projects to evolve into collaborative, innovative aims.

- **Allowable costs**
  - Maximum 5% coverage of co-principal investigator salaries - maximum at NIH cap. Purpose is compensation for clinical release time. *Lead investigator(s) must indicate real percent effort on the project within the budget justification section.*
  - Costs of materials, reagents, resources, and procedures
  - Technical help
  - Travel for activity essential to achieving project goals: for example, to learn a new technique or present results at a conference
  - For P3 only, administrative support.

- **Unallowable costs.**
  - Office Supplies
  - Computers and laptops
  - Other infrastructure costs such as lab renovations

Eligibility

*Round Two partners eligible for this program include faculty members as defined by the partner institutions at BUMC-PHX, SJHMC/BNI, PCH, MIHS and COM-PHX.* P1 Projects require an eligible PI from a partner institution and a Valley of the Sun –
based mentee. P2 projects and P3 subprojects each must include investigators from at least two partner institutions. Partners provide a list of eligible investigators and their research interests to Partnership Administration. Administration facilitates collaborations by publishing the lists and planning partnering sessions. Partner investigators become eligible after their institutions commit funds to the program and meet investigator requirements. The Partnership encourages all Valley of the Sun faculty to participate in proposal review and educational activities.

**Junior Investigators** are faculty with appointments below the level of Associate Professor or equivalent. For P2 and P3 proposals, junior investigators must provide a substantial career plan including an investigative focus, and a mentoring plan guided by one or more established investigators. A strong support letter(s) from mentor and from department chair and/or institutional official committing to the junior investigator’s career plan, including space and financial support, is essential for a successful application.

**Senior Investigators** are faculty with appointments above the level of Assistant Professor or equivalent. For P2 and P3 proposals, senior investigators must provide a clear and concise explanation of how the plan supports a new and innovative line of investigation. Any departure from this criterion must be discussed with Partnership Administration.

**Multiple Awards**

*P1 applicants* may submit two applications per cycle with two mentees.

*P2/P3 applicants* may submit one application for each mechanism per cycle. They may receive - in total - two awards during any five year period. The five year period begins with the start date of the initial award. The Partnership will not consider a second award until completion of all prior awards (including extensions).

**Ineligible Investigators.** The program funds faculty as defined by the individual Partnership institutions. It will not fund medical students, graduate students, residents, or fellows as co-principal investigators, although it may pay these individuals to carry out the project. In general, at least two P2 and P3 investigators must be listed as eligible at contributing partners. However, please contact Partnership Administration for eligibility questions. Since partner relationships are multifaceted, there may be some flexibility in eligibility rules.

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**Application Format**

**P1 Application Information.**

*P1 Medical Student/Graduate student/Resident/Fellow Projects.*

This mechanism funds a maximum of $5,000 to cover collaborative projects performed by a faculty investigator and a Valley of the Sun based mentee. The P1 narrative is limited to 5 pages. Sections on Compliance, Responsible Conduct of Research, References, and Appendix are not subject to page limitations. Suggested
Page lengths are noted in parentheses. All Applications must be *single spaced, 11 point Arial font, with half inch margins*. All applications require the following sections in order.

- **Cover Page (s).** Project Mechanism and Title, Investigator, Performance Site(s), Grant Administrator Name and Contact Information, New Application or Resubmission, Applicant Signature, Department Head Signature (UA Faculty), Signature from Responsible Institutional Officer (BUMC-PHX, PCH, MIHS, and SJHMC/BNI Faculty). Signatures from responsible institutional/departamental officials confirm applicant eligibility, availability of resources necessary to carry out project aims, and general acceptance of responsibilities described in the support letters.

- **Resubmission information** (1 pg.). Write a letter less than 1 page long addressing the reviewers’ comments and indicating where changes are located in the proposal. Mark changed text in the proposal using track changes or changes in font. Please choose YES to resubmission on the cover page.

- **Abstract.** A summary of the project including significance, specific aims, and anticipated results and impact. Limit length to less than 500 words and use clear language free of jargon.

- **Table of Contents.** This lists all cover and project content by page number.

- **Budget and Budget Justification.** Complete a detailed budget form for the year the proposal covers, indicating costs envisioned to complete the work. All costs should be justified in the Budget Justification statement by describing each line item. For example, describe the role of the investigators, their expertise, and time committed to the project. List details of supplies and quantities needed.

- **Investigators, key personnel, and possible reviewers.** Include all project participants and identify their institution and title regardless of salary support. Include mentors and research staff. Provide names of two expert reviewers not in conflict and their contact information.

- **Support Letters.** *UA Faculty* must provide a chair’s letter. *BUMC-PHX, PCH, MIHS, and SJHMC/BNI faculty* must provide a letter from a senior responsible institutional official. These required letters confirm eligibility, availability of resources necessary to complete project aims, and support for faculty academic career development. Some applications will also require letters from mentors and/or other collaborators confirming support for the project.

- **Biosketches.** Investigators and key personnel provide NIH style biosketches. We will ONLY accept the new format for this second grant cycle. ([NIH notice NOT-OD-15-032](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-032.html)).

- **Resources** – this section describes available resources, space, equipment and supplies necessary to implement the project.

- **Current and Pending Support.** Applicants provide information regarding all
active and pending research support, including title, funding agency, identification code, major goals of the project, start and end dates, investigator’s role, and annual direct costs.

- **Research Plan.** Please number the following items as noted in a Research Plan section of the proposal.
  1. **Specific Aims** (0.25 pg.) indicate feasible, well-defined goal(s) for the project. The aim(s) should address a gap in knowledge. The investigator should help the student/resident/fellow develop aim(s).
  2. **Research Strategy**
     A. **Background, Significance, Impact, Innovation** (1 pg.). This section provides enough information to let a clinical or basic scientist easily understand and review the project. It is based on the applicants’ thorough, comprehensive review of literature, but requires a sharp focus on knowledge gaps targeted by the aim(s). This section clarifies each aim’s impact, significance, and rationale.
     B. **Previous Related Work** (0.5 pg.). This section provides evidence that applicants can perform the project. Applicants should tie each piece of information/data they present here to an activity in the project, and provide an interpretation. Applicants can incorporate this information into Research Design and Methods.
     C. **Research Design and Methods** (2 pg.)—This section describes the aims. The approach must be feasible. Statistical consultation is highly recommended. Statistical flaws are seen as moderate weaknesses. Each aim requires these segments:
        i. Rationale
        ii. Design
           a. Where appropriate, design includes a formal power calculation.
           b. Consider appropriate positive and negative controls.
        iii. Analytic methods
           a. Where appropriate, provide statistically justified methods for data manipulation.
        iv. Expected outcomes
        v. Interpretation of possible results.
        vi. Potential problems and alternative strategies.
  D. **Timeline and Deliverables** (0.25 pg.). Applicants construct a feasible timeline for project activities and sequence, including outcomes and results dissemination. Applicants should disclose mentee time available for the project. The choice of project should in part be based on time the mentee can devote to the project.
  E. **Future Plans** (0.25 pg.). Applicants indicate possible future studies and funding building on this application.
3. **Mentoring Plan** (0.5 pg.). This section lays out mentoring interactions between the Investigator and the student, resident, or fellow, and how mentoring deficiencies will be ameliorated. Areas important to address: 
a) Match of investigator experience to project. b) Investigator’s experience in general mentoring activities. c) Responsibilities of student/resident/fellow and investigator. d) Substantive plan for interactions – i.e. agenda items, regularly scheduled student/resident/fellow meetings with investigator. e) Plan to ameliorate mentoring deficiencies – for example: investigator has relatively little mentoring experience, or cannot provide statistics expertise.

4. **Career Development Plan** (0.25 pg.). This is for mentees and Junior faculty in P1 and P2. This section indicates educational experiences the student/resident/fellow needs to complete the project (such as coursework, reading material, conferences, tutorials) and methods they will use to distribute project results (publication, conference, etc.).

5. **Collaborative Arrangements**. Provide any applicable collaborations associated with this project. Not required for this mechanism.

6. **Compliance Plan.** Applicants must report on plans to comply with federal, state, and local regulations including those regarding human subjects, vertebrate animals, and biohazards. Institutional officers will help applicants plan for appropriate compliance measures. Institutional Human Subject, Vertebrate Animal, and Biosafety approval and other regulatory obligations are not required at time of submission, but must be initiated immediately following award notification. All approvals must be obtained within 3 months of award start date set by Valley Research Partnership Administration after communication with investigators. If approvals are not obtained within the required time frame, the award may be revoked or deferred unless Partnership Administration receives an acceptable justification for the delay. For submission planning, applicants may view these resources:

7. **Responsible Conduct of Research (RCR).** The Valley Research Partnership expects faculty, medical students, graduate students, residents, and fellows to practice responsible and ethical conduct of research. The P1 application must include a RCR training description for medical students, graduate students, residents, and fellows that conforms to University of Arizona [http://rgw.arizona.edu/research-compliance/rcr](http://rgw.arizona.edu/research-compliance/rcr) and NIH policy.
P2 Application Information.

P2 Collaborative Projects. This mechanism funds a maximum $80,000 over one to two years and requires at least at two faculty investigators from different partnering institutions. The P2 narrative is limited to 8 pages. Suggested page lengths noted in parentheses. Responsible Conduct of Research, Compliance Plan, References, and Appendix are not included in page limits. All applications must be single spaced, 11 point Arial font, with half inch margins. All applications require the following sections in order.

- **Cover Page (s).** Project Mechanism and Title, Investigator(s), Performance Site(s), Grant Administrator Name and Contact Information, New Application or Resubmission, Applicant Signature, Department Head Signature (UA Faculty), Signature from Responsible Institutional Officer (BUMC-PHX, PCH, MIHS, and SJHMC/BNI Faculty). Submit one cover page for each faculty investigator. A P2 proposal requires at least 2 cover pages. Proposals previously submitted under different investigator, title, or mechanism are resubmissions. Signatures from responsible institutional/departmental officials confirm applicant eligibility, availability of resources necessary to carry out project aims, and general acceptance of responsibilities described in the support letters.

- **Resubmission information** (2 pg.). Write a letter less than 2 pages long addressing the reviewers’ comments and indicating where changes are located in the proposal. Mark changed text in the proposal using track changes or changes in font. Please choose YES to resubmission on the cover page.

- **Abstract.** A summary of the project including significance, specific aims, and anticipated results and impact. Limit length to less than 500 words and use clear language free of jargon.

- **Table of Contents.** This lists all cover and project content by page number.

- **Budget and Budget Justification.** Complete a detailed budget form for each partner and for each year of the proposal, indicating costs envisioned to complete the project. All costs should be justified in the Budget Justification statement by describing each line item. For example, describe the role of the investigators, their expertise, and time committed to the project. List details of supplies and quantities needed.

- **Investigators, key personnel, and possible reviewers.** Include all project participants and identify their institution and title regardless of salary.
support. Include mentors and research staff. Provide names of two expert reviewers not in conflict and their contact information.

- **Support Letters.** UA Faculty must provide a chair’s letter. BUMC-PHX, PCH, MIHS, and SJHMC/BNI faculty must provide a letter from a senior responsible institutional official. These required letters confirm eligibility, availability of resources necessary to complete project aims, and support for faculty academic career development. Some applications will also require letters from mentors and/or other collaborators confirming support for the project.


- **Resources** – this section describes available resources, space, equipment and supplies necessary to implement the project.

- **Current and Pending Support.** Investigators and key personnel provide information regarding all active and pending research support, including title, funding agency, identification code, major goals of the project, start and end dates, roles, and annual direct costs.

- **Research Plan.** Please number the following items as noted in a Research Plan section of the proposal.
  1. **Specific Aims** (0.5 pg.) indicate feasible, well-defined goal(s) for the project. The aim(s) should address knowledge gaps.
  2. **Research Strategy**
     A. **Background, Significance, Impact, Innovation** (2 pg.). This section provides enough information to let a clinical or basic scientist easily understand and review the project. It is based on the applicants’ thorough, comprehensive review of literature, but requires a sharp focus on knowledge gaps targeted by the aim(s). This section clarifies each aim’s impact, significance, and rationale.
     B. **Previous Related Work** (1 pg.). This section provides evidence that applicants can perform the project. Applicants should tie each piece of information/data to an activity in the project, and provide an interpretation of the work/data they present. Applicants can incorporate this section into Research Design and Methods. Preliminary data are not required for the P2. However, explanation for absence of preliminary data will help reviewers score the project.
     C. **Research Design and Methods** (3 pg.). This section describes the aims. The approach must be feasible. Statistical consultation is highly recommended. Statistical flaws are seen as moderate weaknesses. Each aim requires these segments:
       a. Rationale
       b. Design
         i. Where appropriate, design includes a formal power
calculation.
   ii. Consider appropriate positive and negative controls.

c. Analytic methods
   i. Where appropriate, provide statistically justified methods for data manipulation.

d. Expected outcomes

e. Interpretation of possible results.

f. Potential problems and alternative strategies.

D. Timeline and deliverables (0.25 pg.). Applicants construct a timeline for project activities and sequence that includes outcomes and results dissemination.

E. Future Plans (0.25 pg.). Applicants indicate possible future studies and funding building on this application.

3. Mentoring Plan (Junior Investigator) (0.5 pg.). This section lays out interactions between a Junior Investigator and a mentor, and how any mentoring deficiencies will be ameliorated. Areas important to address:
   a) Match of mentor experience to Junior Investigator's research career objectives.
   b) Mentor’s experience in general mentoring activities.
   c) Responsibilities of Junior Investigator and mentor.
   d) Substantive plan for interactions – i.e., agenda items, regularly scheduled investigator/mentor meetings.
   e) Plan to ameliorate mentoring deficiencies – for example: bolstering mentoring experience for the project if the mentor has relatively little mentoring experience, or plans for help in areas that mentor has little strength (for example, statistics expertise).

4. New Investigative Research (Senior Faculty) (0.5 pg.). This section provides a clear and concise explanation of how the project supports a new and innovative line of collaborative investigation.

5. Collaborative Arrangements (0.25 pg.). Applicants provide a concrete plan for collaborative activities.

6. Career Development Plan (0.25 pg.). This is for mentees and Junior Faculty in P1 and P2. This section indicates educational experiences applicant’s need to complete the project (such as coursework, reading material, conferences, tutorials) and develop their career, along with methods used to disseminate project results.

7. Compliance Plan. Applicants must report on plans to comply with federal, state, and local regulations including those regarding human subjects, vertebrate animals, and biohazards. Institutional officers will help applicants plan for appropriate compliance measures. Institutional Human Subject, Vertebrate Animal, and Biosafety approval and other regulatory obligations are not required at time of submission, but must be initiated immediately following award notification. All approvals must be obtained within 3 months of award start date set by Valley Research Partnership Administration after communication with investigators. If
approvals are not obtained within the required time frame, the award may be revoked or deferred unless program administration receives an acceptable justification for the delay. For submission planning, applicants may view these resources:


8. Responsible Conduct of Research Plan. The Valley Research Partnership expects faculty, medical students, graduate students, residents, and fellows to practice responsible and ethical conduct of research. This application must include a RCR training description for medical students, graduate students, residents, and fellows that conforms to University of Arizona (http://rgw.arizona.edu/research-compliance/rcr) and NIH policy (http://grants.nih.gov/grants/policy/nihgps_2012/nihgps_ch11.htm#_Toc271265113). References

9. Appendix. This includes unavailable published/accepted abstracts/manuscripts; patents; surveys/data collection instruments.

P3 Application Information.

P3 Collaborative Program Development Projects.
This mechanism funds a maximum of $200,000 over one to two years to initiate collaborative program development projects. The P3 is meant to seed a NIH P01-like effort that is an integrated, multi-project program revolving around a central theme and common goal. The effort involves independent investigators who share knowledge and resources. The mechanism requires three substantive components.

1) Overall. An overall description of the P3 developed by the Principal Investigator (PI).

2) Subprojects. At least three thematically related, hypothesis driven, collaborative research subprojects. Each collaborative subproject must have at least two Project Leaders from different partnering institutions. Thus, the three collaborative research projects require a minimum of six Project Leaders (two from each subproject).

3) Core projects. An administrative core is required. The program may also contain additional cores. A core is a project with aims that are not hypothesis driven and serve all collaborative research projects. Cores are not reviewed on innovation. Examples might include a microscopy core, a pathology core, or a statistical core.
All Applications must be *single spaced, 11 point Arial font, with half inch margins.* All applications require the following components. Suggested page lengths noted in parentheses.

1. **Overall.** The Overall Component provides a general overview of the program developed and led by the PI. It requires the following sections in order.
   
   o **Cover Page.** Title, Principal Investigator (PI), Performance Site(s), Grant Administrator Name and Contact Information, New Application or Resubmission, PI Signature, Department Head Signature (UA Faculty), Signature from Responsible Institutional Officer (BUMC-PHX, PCH, MIHS, and SJHMC/BNI Faculty). One Overall PI is responsible for the overall component and for leading the P3 project. Signatures from responsible institutional/departmental officials confirm the overall PI’s eligibility, availability of resources necessary to carry out project aims, and general acceptance of responsibilities described in the support letters.
   
   o **Abstract.** A summary of the overall project including significance, specific aims, and anticipated results and impact. Limit length to less than 500 words and use clear language free of jargon.
   
   o **Table of Contents.** This lists all overall, subproject, and core contents by page number for the entire program.
   
   o **Support Letters.** UA Faculty must provide a chair’s letter. BUMC-PHX, PCH, MIHS, and SJHMC/BNI faculty must provide a letter from a senior responsible institutional official. These required letters confirm eligibility, availability of resources necessary to complete program aims, and support for faculty academic career development. Some applications will also require letters from other collaborators confirming support for the program.
   
   
   o **Current and Pending Support.** The PI provides information regarding all his/her active and pending research support, including title, funding agency, identification code, major goals, start and end dates, role, and annual direct costs.
   
   o **Specific Aims** (1 pg.). List the goals of program research and summarize the expected outcomes.
   
   o **Overall Research Strategy** (5 pg.). Summarize the overall theme, goals, specific aims, and expected impact of the program on the broad field of research addressed by the project. Provide a succinct description of interactions among the parts of the program. Furthermore, indicate goals for the overall coordination and integration of all the components (subprojects and cores) of the P3. You may choose to appoint a scientific advisory board and describe the scientific expertise and responsibilities of the board members. However, you should not contact or appoint board members at
time of P3 submission.

- **Administrative Management** (1pg.). Explain the plans for organizational and administrative management of the overall program, and for coordination and communication within the program. Explain the methods that will be used for monitoring progress in the projects and effective use of the shared resource cores.

- **Future Plans** (0.25 pg.). PI indicates possible future studies and funding building on this application.

### 2. Collaborative Subprojects

Each subproject should reflect a distinct, separate, scientifically meritorious research effort led by independent investigators, the Project Leaders. In addition, the individual subprojects should be clearly interrelated and synergistic so that the research ideas, efforts, and outcomes of the program as a whole will offer a distinct advantage over pursuing the individual subprojects separately. The narrative for each collaborative subproject is limited to 8 pages. Responsible Conduct of Research, Compliance Plan, References, and Appendix are not included in page limits. Suggested page lengths noted in parentheses. Each subproject requires the following sections in order.

- **Cover Pages.** Title, Project Leaders, Performance Site(s), Grant Administrator Name and Contact Information, New Application or Resubmission, Project Leader Signature, Department Head Signature (UA Faculty), Signature from Responsible Institutional Officer (BUMC-PHX, PCH, MIHS, and SJHMC/BNI Faculty). Submit one cover page for each Project Leader. Signatures from responsible institutional/departmental officials confirm applicant eligibility, availability of resources necessary to carry out subproject aims, and general acceptance of responsibilities described in the support letters.

- **Abstract.** A summary of the subproject including significance, specific aims, and anticipated results and impact. Include interactions with other parts of the program. Limit length to less than 500 words and use clear language free of jargon.

- **Budget and Budget Justification.** Complete a detailed budget form for each partner and for each year of the subproject, indicating costs envisioned to complete it. All costs should be justified in the Budget Justification statement by describing each line item. For example, describe the role of the Project Leaders, their expertise, and time committed. List details of supplies and quantities needed.

- **Project Leaders, key personnel, and possible reviewers.** Include all participants and identify their institution and title regardless of salary support. Include mentors and research staff. Provide names of two expert reviewers not in conflict and their contact information.

- **Support Letters.** UA Faculty must provide a chair’s letter. BUMC-PHX, PCH, MIHS, and SJHMC/BNI faculty must provide a letter from a senior responsible institutional official. These required letters confirm eligibility, availability of
resources necessary to complete subproject aims, and support for faculty academic career development. Some applications will also require letters from mentors and/or other collaborators confirming support for the project.

- **Biosketches.** Project Leaders and key personnel provide NIH style biosketches. We will ONLY accept the new format for this second grant cycle. [NIH notice NOT-OD-15-032 http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-032.html].

- **Resources** – this section describes available resources, space, equipment and supplies necessary to implement the subproject.

- **Current and Pending Support.** Project Leaders and key personnel provide information regarding all active and pending research support, including title, funding agency, identification code, major goals, start and end dates, roles, and annual direct costs.

- **Research Plan.** Please number the following items in the Research Plan section.
  1. **Specific Aims** (0.5 pg.) indicate feasible, well-defined goal(s) for the subproject. The aim(s) should address knowledge gaps. Interactions with other parts of the program should be highlighted.
  2. **Research Strategy**
     A. **Background, Significance, Impact** (2 pg.). This section provides enough information to let a clinical or basic scientist easily understand and review the subproject. It is based on the applicants’ thorough, comprehensive review of literature, but requires a sharp focus on knowledge gaps targeted by the aim(s). This section clarifies each aim’s impact, significance, and rationale. Highlight interactions with the rest of the program.
     B. **Previous Related Work** (1 pg.). This section provides evidence that applicants can perform the project. Applicants should tie each piece of information/data to an activity in the project, and provide an interpretation of the work/data they present. Applicants can incorporate this section into Research Design and Methods. Preliminary data are not required for the P3. However, explanation for absence of preliminary data will help reviewers score the project.
     C. **Research Design and Methods** (3 pg.)–This section describes the aims. The approach must be feasible. Statistical consultation is highly recommended. Statistical flaws are seen as moderate weaknesses. Each aim requires these segments:
        a. Rationale
        b. Design
           i. Where appropriate, design includes a formal power calculation.
           ii. Consider appropriate positive and negative controls.
        c. Analytic methods
i. Where appropriate, provide statistically justified methods for data manipulation.

d. Expected outcomes

e. Interpretation of possible results.

f. Potential problems and alternative strategies.

D. **Timeline and deliverables** (0.25 pg.). Applicants construct a timeline for subproject activities and sequence that includes outcomes and results dissemination.

E. **Future Plans** (0.25 pg.). Applicants indicate possible future studies building on this subproject and its interactions with other parts of the program.

3. **Mentoring Plan** (Junior Investigator) (0.5 pg.). This section lays out interactions between a Junior Investigator and a mentor, and how any mentoring deficiencies will be ameliorated. Areas important to address:

a) Match of mentor experience to Junior Investigator’s research career objectives.
b) Mentor’s experience in general mentoring activities.
c) Responsibilities of Junior Investigator and mentor.
d) Substantive plan for interactions – i.e., agenda items, regularly scheduled investigator/mentor meetings.
e) Plan to ameliorate mentoring deficiencies – for example: bolstering mentoring experience for the project if the mentor has relatively little mentoring experience, or plans for help in areas that mentor has little strength (for example, statistics expertise).

4. **Collaborative Arrangements** (0.5 pg.). Investigators provide a concrete plan for collaborative activities between/among subproject Project Leaders and among program components.

5. **Compliance Plan.** Investigators must report on plans to comply with federal, state, and local regulations including those regarding human subjects, vertebrate animals, and biohazards. Institutional officers will help applicants plan for appropriate compliance measures. Institutional Human Subject, Vertebrate Animal, and Biosafety approval and other regulatory obligations are not required at time of submission, but must be initiated immediately following award notification. All approvals must be obtained within 3 months of award start date set by Valley Research Partnership Administration after communication with the program PI. If approvals are not obtained within the required time frame, the award may be revoked or deferred unless VRP program administration receives an acceptable justification for the delay. For submission planning, investigators may view these resources:


6. **Responsible Conduct of Research Plan.** The Valley Research Partnership expects faculty, medical students, graduate students, residents, and fellows to practice responsible and ethical conduct of research. This application must include a RCR training description for medical students, graduate students, residents, and fellows that conforms to University of Arizona (http://rgw.arizona.edu/research-compliance/rcr) and NIH policy (http://grants.nih.gov/grants/policy/nihguide_pubs_2012/nihguide_pubs_2012.htm#toc271265113).

7. **References**

8. **Appendix.** This includes unavailable published/accepted abstracts/manuscripts; patents; surveys/data collection instruments.

**Administrative and Research Cores.** The administrative core component is a required component of the P3 that manages day-to-day activities across the program project, communications among investigators, contractual activities (if any), and other overall program activities, such as leadership meetings. Research cores are not a required component of the program. The description of this component requires the following sections in order. Suggested page lengths noted in parentheses.

- **Cover Page(s).** Title, Project Leader, Performance Site(s), Grant Administrator Name and Contact Information, New Application or Resubmission, Applicant Signature, Department Head Signature (UA Faculty), Signature from Responsible Institutional Officer (BUMC-PHX, PCH, MIHS, and SJHMC/BNI Faculty. Signatures from responsible institutional/departmental officials confirm applicant eligibility, availability of resources necessary to carry out project aims, and general acceptance of responsibilities described in the support letters.
- **Abstract.** A summary of the core including significance, specific aims, and anticipated results and impact. Limit length to less than 500 words and use clear language free of jargon.
- **Budget and Budget Justification.** Complete a detailed budget form for each year of the program, indicating costs envisioned to complete the project. All costs should be justified in the Budget Justification statement by describing each line item. For example, describe the role of the Project Leader, expertise, and time committed to the project. List details of supplies and quantities needed.
- **Investigators and key personnel.** Include all core participants and identify their institution and title regardless of salary support.
- **Support Letters.** UA Faculty must provide a chair’s letter. BUMC-PHX, PCH, MIHS, and SJHMC/BNI faculty must provide a letter from a senior responsible institutional official. These required letters confirm eligibility, availability of
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Year One
Round Two

resources necessary to complete core aims, and support for faculty academic career development.

- **Biosketches.** Investigators and key personnel provide NIH style biosketches. We will ONLY accept the new format for this second grant cycle. ([NIH notice NOT-OD-15-032](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-032.html)).

- **Resources** – this section describes available resources, space, equipment and supplies necessary to implement the core.

- **Current and Pending Support.** The Project Leader and key personnel provide information regarding all active and pending research support, including title, funding agency, identification code, major goals of the project, start and end dates, role, and annual direct costs.

- **Administrative Core Plan.** Please number the following items as noted in a Plan section of the core description. Page limit for Administrative Core is 3 pages.
  1. **Specific Aims** (0.5 pg.) indicate feasible, well-defined goal(s) for the core in order of priority. State its relationship to the program goals and how it is related to individual research projects and cores.
  2. **Operations Plan** (2.5 pg.) Describe the utility of the core to the program, indicate the facilities and/or services provided, and appropriateness of the core in relation to the scope of proposed administrative support. Plans for internal quality control of research, management of day-to-day activities, management of contractual agreements, and resolution of disputes.

- **Research Core Plan.** Please number the following items as noted in a Research Plan section of core description. Page limit for Research Core Specific Aims and Research Strategy is 5 pages.
  1. **Specific Aims** (0.5 pg.) indicate feasible, well-defined goal(s) for the core. State relationships to the program goals and how the core relates to individual research projects and other cores.
  2. **Research Strategy** (4.5 pg.). The description should list the projects the core will serve and the services it will provide. It should indicate a prioritization plan for providing services. Describe the facilities, techniques, and skills the core will provide and the roles of the core leader and key participants.
  3. **Compliance Plan.** The core must report on plans to comply with federal, state, and local regulations including those regarding human subjects, vertebrate animals, and biohazards. Institutional officers will help the investigator plan for appropriate compliance measures. Institutional Human Subject, Vertebrate Animal, and Biosafety approval and other regulatory obligations are not required at time of submission, but must be initiated immediately following award notification. All approvals must be obtained within 3 months of award start date set by Valley Research
Partnership Administration after communication with investigators. If approvals are not obtained within the required time frame, the award may be revoked or deferred unless program administration receives an acceptable justification for the delay. For submission planning, applicants may view these resources:


4. References
5. Appendix. This includes unavailable published/accepted abstracts/manuscripts; patents; surveys/data collection instruments.

**Review**

**Primary Review – Scientific Review Committee (SRC).**

Valley Research Partnership modeled primary review on procedures and criteria developed by the National Institutes of Health ([https://grants.nih.gov/grants/peer/guidelines_general/scoring_system_and_proce dure.pdf](https://grants.nih.gov/grants/peer/guidelines_general/scoring_system_and_procedure.pdf)). All mechanisms are reviewed on applicable criteria described below. P3 components are reviewed separately, but the P3 is also reviewed as a whole. Partnership Administration recruits and appoints SRC members who are academic health professionals and scientists with broad medical and basic science knowledge, review experience, and generally based in metropolitan Phoenix. Applications and review activities are confidential. Before the SRC meets, Partnership Administration assigns each application to several primary reviewers for preliminary review and scoring. The primary reviewers compose a written review before the SRC review meeting using the criteria and scoring system discussed below. All SRC members may formulate their own opinions of any application prior to the meeting.

Partnership Administration may solicit written opinions from outside reviewers if they perceive appropriate expertise is not available or if primary reviewers members notify partnership administration to solicit written opinions from outside reviewers; the opinions are available to SRC members prior to the SRC review meeting. During the meeting, each application's primary reviewers announce their overall scores and present their perceptions of strengths and weaknesses, and general discussion ensues. Applications with overall scores in the lower half of preliminary rankings may not be discussed. As a result of discussion, the primary reviewers may modify their preliminary scores. All reviewers then vote and record their overall impact scores privately, although members voting outside the primary reviewers’ range announce it before voting. Members with a conflict of interest determined by recent mentor/mentee relationship, research collaboration, or close departmental ties must leave during a conflicted project's discussion and vote.

Partnership Administration collects the score sheets after the meeting, and averages and rounds each application’s scores to the nearest tenth of a point. These scores
determine an application’s priority ranking. After the meeting, primary reviewers can edit critiques and alter individual criterion scores. However, they cannot change final overall impact scores. The final written reviews are available for applicants. If the application is discussed, a description of the discussion will also be available.

**Primary Review – Criteria and scoring.**

- **Significance/Impact** – Does the project address an important problem or barrier to progress in the field? If the project achieves the aims, how will scientific knowledge, technical capability, and/or clinical practice be improved? If this project is successful, what is the likelihood that the PIs will be able to follow up with peer reviewed funding and publications?

- **Investigators** – Are the investigators’ experiences appropriate for the project? Do early stage investigators have appropriate experience and training? Do established investigators show ongoing accomplishments that advance their fields?

- **Innovation** – Does the project challenge or seek to shift current research or practice paradigms through new concepts, approaches, methods, or interventions or an extension of previous information to a new field? Is the impact potentially broad or narrow?

- **Approach** – Are the overall strategy, design, methods, analysis, and interpretations well-reasoned and appropriate to accomplish the aims? Have investigators identified potential problems and alternative approaches? Is the project feasible? Will a pilot project establish feasibility and does it manage risk? Are there plans to address human subjects and vertebrate animals?

- **Environment** – Will the environment for the work contribute to the probability of success? Is there adequate institutional support, equipment and other resources available to the project? Will the project benefit from unique features of the environment such as subject populations, or collaborative arrangements? Does the environment supply relevant opportunities for academic activities (seminars, rounds, lectures, etc.), training, and learning?

- **Mentoring Plan/New Direction (as relevant)**
  - **Junior Investigator, student, resident, or fellow**: Is there adequate mentoring and monitoring of the individual’s career path? Are mentor’s qualifications appropriate and adequate for guiding the mentee's career?
  - **Senior Investigator**: Is there evidence that the project represents a serious effort and innovative departure from previous work?

- **Collaborative arrangements** – Does the proposal describe means to monitor and assure collaborative implementation and performance? The expectation is continuing, significant, meaningful interactions among project partners,
and commitment to developing research interactions in our geographic region.

- **Project/Career Development Plan** – Will the plan contribute to long term academic success of the investigators and to collaborative projects in the greater Phoenix region?

- **Institutional support for applicants and project** – Is there clear commitment of sponsoring institutions to the career development of the investigators, the success of the project, and development of research collaboration in the greater Phoenix region?

- **Overall Impact and Merit** – Is it likely that this project will exert a sustained and powerful impact on the field, provide significant career development opportunities to investigators and students, and enhance collaborative research in the greater Phoenix region?

- **Scoring** - Scoring system is indicated in the Table below. Both impact and weaknesses contribute to final scores. [Link to scoring system](http://public.csr.nih.gov/ReviewerResources/GeneralReviewGuidelines/Documents/chart_overall_impact_scores.pdf)

### Impact: Additional Guidance on Strengths/Weaknesses

<table>
<thead>
<tr>
<th>Impact</th>
<th>Impact/Priority Score</th>
<th>Descriptor</th>
<th>Additional Guidance on Strengths/Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1</td>
<td>Exceptional</td>
<td>Exceptionally strong with essentially no weaknesses</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Outstanding</td>
<td>Extremely strong with negligible weaknesses</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Excellent</td>
<td>Very strong with only some minor weaknesses</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Very Good</td>
<td>Strong but with numerous minor weaknesses</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Good</td>
<td>Strong but with at least one moderate weakness</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Satisfactory</td>
<td>Some strengths but also some moderate weaknesses</td>
</tr>
<tr>
<td>Moderate</td>
<td>7</td>
<td>Fair</td>
<td>Some strengths but with at least one major weakness</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Marginal</td>
<td>A few strengths and a few major weaknesses</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Poor</td>
<td>Very few strengths and numerous major weaknesses</td>
</tr>
</tbody>
</table>

**Definitions**

- Minor: easily addressable weakness that does not substantially lessen the impact of the project.
- Moderate: weakness that lessens the impact of the project.
- Major: weakness that severely limits the impact of the project.

### Executive Review

Joint Funding Committees (JFC) are comprised of representatives from each funding partner. Separate committees will control each pool of funds. Currently,
there are four pools - BUMC-PHX and COM-P; PCH and COM-P; MIHS and COM-P; and SJHMC/BNI and COM-P. Collaborative projects between BUMC-PHX and SJHMC/BNI; BUMC-PHX and PCH; BUMC-PHX and MIHS; SJHMC/BNI and PCH; SJHMC/BNI and MIHS; and PCH and MIHS will be discussed and rated by the two JFCs involved. As additional pools of funds are created, Valley Research Partnership Administration will create additional JFCs.

VRP administration provides JFCs a package of all materials relating to each proposal, and a funding plan dependent on SRC review, discussion, and scoring. JFC members evaluate each package against the VRP funding plan and recommend funding according to VRP program goals to ensure a fair review process. If there are no JFC objections, or if objections can be administratively resolved, no face-to-face meeting is required. If necessary, the JFC will meet to resolve any issues. Consensus vote by institution is required for funding.

**Applicant and Awardee Responsibilities**

**Regulatory Requirements.** Local approval for human and vertebrate animal studies and other regulatory obligations are not required at time of submission, but must be initiated immediately following award notification. All approvals must be obtained within 3 months of award start date set by Partnership Administration after communication with investigators. If approvals are not obtained within the required time frame, the award may be revoked or deferred unless program administration receives an acceptable justification for the delay.

**Application.** The applicants must secure and complete all application components prior to submission.

**Required Support Letters.** Applicants must obtain all required letters of support before timely application submission.

**Publication.** Awardees must cite funding from the Valley Research Partnership in all relevant publications and presentations.

**Annual Progress Report.** All awardees must provide an annual progress report to Valley Research Partnership. The report includes progress on reaching aims and applicable submitted publications, grant applications, and intellectual property. If funds are not completely expended within the active award period, Valley Research Partnership Administration may extend the award’s active period for 6 months. If funds are not expended within this time, they must be returned.

**Financial Report.** Awardees provide annual financial reports to Valley Research Partnership.

**Closeout.** Awardees provide final financial and progress reports to Valley Research Partnership, and close out human and vertebrate animal studies with appropriate authorities.

**Symposium.** Valley Research Partnership will sponsor a symposium for awardees, and expects each awardee to present their work.

**Peer Review Mentorship Opportunity.** Junior investigators may partner with senior reviewers at review committee meetings to experience the process.