

Australian and New Zealand College of Anaesthetists

Faculty of Pain Medicine



Novice Investigator Grant Application Guide

2013

ADVICE AND INSTRUCTIONS TO APPLICANTS

To be used in conjunction with Novice Investigator Grant
Application Form

CLOSING DATE: 5 PM EDST 1 April 2012

Research and Administration Coordinator
Australian and New Zealand College of Anaesthetists
630 St Kilda Road
MELBOURNE VIC 3004

*Revised by the ANZCA Research Committee
November 2011*

IMPORTANT POINTS FOR COMPLETING ANZCA GRANT APPLICATIONS

- It is a major goal of the College to encourage and foster novice researchers. The Research Committee invites early application by novice investigators. Applications must be received by **January 14th** each year. A mentor from the Research Committee, or an experienced investigator appointed by the committee, will be assigned who will assess the application and provide feedback before final submission by the deadline. This committee member will not participate as a reviewer or spokesperson for the application.
- Read the ANZCA Research Grant Policy before completing the application form (<http://www.anzca.edu.au/fellows/Research/anzca-research-information.html>)
- An ANZCA REGKEY must be obtained and included in the header of the application form. Double-click on the header to add your REGKEY. Contact Ms Susan Collins (email: scollins@anzca.edu.au) to obtain your REGKEY.
- Do not include or copy the cover sheet. Start your application with the page headed "In Confidence".
- A font size no smaller than 10 point must be used. The minimum margin is 2 cm.
- You may add rows to tables where this is allowed in these guidelines (e.g. list of chief investigators, list of current research grants). Do not exceed prescribed word/page counts. Text that exceeds prescribed word counts will not be considered
- Ensure that each page is numbered consecutively in the application.
- A written quotation for equipment costing AUD10,000 or more, as requested in the budget section, must be attached to each copy of the application.
- The application must be submitted **electronically via email** to scollins@anzca.edu.au. Only files of 6MB or less will be accepted.
 - The electronic copy of the complete application including the signature page with scanned or electronic signatures (via email)
 - The electronic copy of the complete application excluding the signature page (via email), and a hard copy of the signature page (via post or fax)
- Electronic copies must be in PDF format (converted word files only, not scanned documents) or Microsoft word format. Note for older versions on Microsoft Word please install the official update from <http://www.microsoft.com/download/en/details.aspx?id=9943>. This update will allow Microsoft office 2007 save documents to .PDF format.
- **The complete** application must be received by the Research and Administration Coordinator by 5 PM EDST on the closing date for applications.
- Late applications WILL NOT BE ACCEPTED.
- Incomplete applications or those that do not follow these guidelines WILL NOT BE ACCEPTED.
- ANZCA cannot amend an application once it has been submitted.

A. CONDITIONS OF ANZCA NOVICE INVESTIGATOR GRANTS

1 General

ANZCA Novice Investigator Grants support research projects conducted by novice investigators. A novice investigator is an investigator who has not been awarded a peer-reviewed research grant in the past and does not have an experienced investigator as a co-investigator or associate investigator on the proposed grant. The salary and position of the novice investigator (Chief Investigator A [CIA]) should be reasonably assured for the duration of the grant.

2 Payment

Sums awarded will be paid upon request after **1 January** each year for the duration of the grant. All payments will be made in Australian Dollars, upon receipt of a fully correct tax invoice from the administering institution.

3 Conditions of professional research personnel

The conditions for professional research personnel shall be those of the institution in which the work is carried out or as the College may determine in particular circumstances. This includes annual leave and sick leave. However, the College does not provide for long service leave.

4 Alterations in research program budget

The CIA is expected to adhere to the approved research program or budget, and to notify any absences other than for short periods (e.g. three to four weeks). Full details of any proposed major alterations to either program or budget, or of any absences during the course of the grant, should be submitted in advance by the CIA to the Research and Administration Coordinator for approval by the Chair of the Research Committee (or his or her delegate).

5 Reporting requirements

Eligibility to apply for future funding will be contingent on complying with the reporting requirements below. The CIA may request in writing a time-only extension of up to 12 months in the event of any unforeseen delays in the commencement or conduct of the research project.

5.1 Progress report

The CIA is required to forward a progress report on the approved form to the College, by **September 1** in each year of the award. This form can be found on the ANZCA website. If a progress report is not received by the due date, any funding for multi-year projects may be withheld and/or any future funding requested in subsequent years by the CIA may not be considered.

5.2 Final report

The CIA is required to forward a final report on the approved form to the College, by **September 1** in the year after the grant has concluded. This form can be found on the ANZCA website. The final report must include a statement of expenditure charged to the grant. Any unexpended balance of the grant should be returned to the College and must not be used on other projects.

6 Publications and presentations

The College requires that its contribution be acknowledged in all publications and presentations of the research project, for example *"This study was supported by a Grant from the Australian and New Zealand College of Anaesthetists"* and that a presentation relating to the project be made at a major College meeting. A hard copy or pdf of the reprint should be sent to the Research and Administration Coordinator. If the protocol is registered with a journal or other relevant organisation, the College must receive a copy of the registration certificate

7 Patents

Any discovery arising out of work supported by the College must not be the subject of application for patent except with the written approval of the College and the agreement of the institution in which the work is carried out.

8 Major equipment

Items of equipment, either single items or integrated assemblies, will remain the property of the College which may arrange removal or transfer of such equipment between laboratories at any time after completion of the original research projects or at such time as in the opinion of the College the equipment is no longer required for the purposes of the project.

9 Termination of grant

A grant may be terminated if the conditions of the grant are not observed. A grant will terminate, unless other arrangements satisfactory to the College are made, if the CIA leaves the institution before the expiry of the grant. In such an eventuality, the recipient and the Head of the Department are expected to notify the College CEO. When a grant terminates any unexpended balance must be returned to the College.

B. GENERAL INFORMATION FOR APPLICANTS

1 Introduction

The future of research in our specialties depends on the transformation of novices into established researchers. The main source of support for the development of novice investigators is through the ANZCA Scholarship Scheme which supports salaries of Fellows and Trainees undertaking higher degrees. **Novice investigators are strongly encouraged to consider undertaking a higher degree and applying for a scholarship.**

The College also wishes to support novice investigators undertaking their initial research projects. Novice investigators sometimes have difficulty obtaining grants in open competition with experienced investigators. For this reason, the College has established the ANZCA Novice Investigator Grants. The novice investigator(s) will be the chief investigator(s) of the grant application and will undertake most of the research personally, under the supervision of experienced colleagues.

2 Novice investigator grants

Novice investigator grants are awarded to support of scientific investigations proposed by Fellows and registered trainees of ANZCA or FPM and their research collaborators (scientists, students etc). The policy in relation to chief investigators is:

- The “chief investigator A” (i.e. the first-named investigator [CIA]) must be a Fellow or registered trainee of ANZCA or FPM, be financial and in good standing with ANZCA.
- All chief investigators must be novice investigators. A novice investigator is defined as an investigator who has not been awarded a peer-reviewed research grant in the past.
- For novice investigator grants, other chief investigators may include Fellows or registered trainees of ANZCA or FPM, other medical practitioners, health care professionals, scientists, research students, professional research personnel etc.

An experienced investigator must be named as the supervisor of the novice applicant(s). This investigator is capable of supervising the research, and is a Fellow of ANZCA or FPM or another suitable supervisor with qualifications acceptable to the Research Committee. Novice investigators without access to appropriate supervisors may seek the advice of the Chair of the ANZCA Research Committee.

An individual may only be named as a chief investigator, associate investigator or professional research person on a **maximum of two applications** in any one year. This includes Project Grants, Novice Investigator Grants, the Simulation/Education Grant and the Academic Enhancement Grant. It does NOT include the Douglas Joseph and Lennard Travers Professorships. Fellows and registered trainees must be financial and in good standing with ANZCA or FPM.

Funding is available for research either wholly or partly conducted overseas by Fellows and registered trainees under the following conditions:

1. A Fellow must have a certified ongoing appointment in Australia, New Zealand, Hong Kong, Malaysia or Singapore.
2. A trainee must return to Australia, New Zealand, Hong Kong, Malaysia or Singapore to complete their training program or return to a guaranteed specialist appointment.
3. The researcher who is conducting research overseas must be a chief investigator.
4. The research proposed would normally be completed during the tenure of the grant.
5. The applicant must demonstrate in the application how the project will benefit research in Australia, New Zealand, Hong Kong, Malaysia and/or Singapore.

The investigation will have objectives of mutual interest to ANZCA, the recipient institution, and the investigator. Whilst the grants may specify financial support for individual professional research personnel, the institutions are responsible for administration of the grant.

The maximum amount available for a novice investigator grant is **AUD\$20,000** for one year only. For administrative purposes, single year grants are treated as running over two years from the start of the year in which the grant is awarded. The aim of the grant is to support research that is personally conducted by the novice investigator(s). That is, novice investigators are expected to be the main people who make preparations to commence the research, recruit the patients (if applicable), collect the data, establish a database, analyse the data, prepare the manuscript for publication and any other necessary activities, with the assistance of supervisors and other co-investigators. Applicants are strongly encouraged to budget for research equipment, consumables, statistical advice and the like, and are strongly discouraged from budgeting for research nurse assistance. Full justification of the budget is required in the application.

Awards of grants will normally be announced in October of each year. No payment of the grant will be made until written communication accepting the offer and agreeing to the conditions, and a fully correct tax invoice, are received by the College, and all necessary clearances have been obtained. Funding is made available after 1 January in the following year.

Liaison between ANZCA and other major funding bodies, both government and private, has been established to preclude duplication of support for identical proposals, as far as possible.

3 Procedure for evaluation of grant applications

The procedure for the evaluation of ANZCA grant applications is modelled on the NHMRC review process. Each application is assessed by three reviewers, who have been carefully chosen for their expertise in relation to the particular grant application.

To assess the scientific merit of the project and to determine the ability of the investigators to carry out the research, reviewers are requested to (i) rate the grant application and (ii) provide a written report. A spokesperson for each application is also appointed.

Applications are rated on a seven-point scale (ranging from “outstanding” through to “poor”) along a set of six research criteria (track record, scientific merit, originality, design/methods, feasibility and international competitiveness).

The written report addresses the scientific merit of the application (originality of hypothesis, substantiation of objective, soundness of research plan and methodology, and feasibility of the project), the track record of the applicant and the budget, and raises questions on areas of the research which require clarification, including problems and limitations likely to be encountered. The written report is forwarded to the applicant for comment. If the applicant responses are not received by the due date, they will not be considered in the ranking of the application.

The Research Committee then considers all the materials, as presented by the spokesperson. Each member allocates a score out of seven (7) to the grant, these scores are averaged and the final ranking of each grant application is determined. The Research Committee determines a rating score as a cut-off point, below which funding is not available. Those applications that are close to the cut-off score are considered in more detail. An application identified to receive the grant is then exhaustively reviewed to determine the level of funding to be awarded.

The Research Committee recommends to Council the award of the project grant and the applicant(s) are notified of the outcome following the ANZCA October Council Meeting.

Successful Grant Applicants will be expected to participate in reviewing ANZCA grant applications in future years as a condition of accepting the grant.

4 Confidentiality

Applications for grants are received by ANZCA on an 'IN CONFIDENCE' basis. This means that the application document will not be released other than in compliance with any waiver or consent given by the applicant.

C. INSTRUCTIONS TO APPLICANTS FOR COMPLETING FORM

1 Scientific project title

The scientific title will be used to identify the application at all times and should accurately describe the nature of the project. Use no more than 120 characters, including spaces. Additional characters will not be recorded.

2 (a) Chief investigators

Chief investigator A (CIA) **MUST** be a Fellow or registered trainee of ANZCA or FPM. The CIA will be regarded as the contact person for the application and will, in all instances, be assumed to be acting on behalf of, and with the concurrence of, all chief investigators named in this section. An individual may only be named as a chief investigator, associate investigator or professional research person on a **maximum of TWO applications** in any one year. This includes Project Grants, the Simulation/Education Grant and the Academic Enhancement Grant. It does NOT include the Douglas Joseph and Lennard Travers Professorships. Fellows and registered trainees must be financial and in good standing with ANZCA or FPM. (Add more rows if necessary).

2 (b) Supervisor

An experienced investigator must be named as the supervisor of the novice applicant(s).

2 (c) Associate investigators

Associate investigators may be Fellows, trainees, students or professional research personnel, who assist with the research or bring a particular skill (e.g. statistics, assays) to the team. They may or may not be fully conversant with all aspects of the work. Associate investigators do not receive salary support from ANZCA. Add rows to any of the items if necessary.

3 Administering institution

The full name and full address of the institution responsible for administering the grant must appear here (e.g. Royal Prince Alfred Hospital, Missenden Road, Camperdown NSW 2030). While there may be instances where a research project is carried out in more than one location, there can be only one administering institution for each grant.

4 Institution(s) where research will be carried out

The name(s) of the department and name(s) and address(es) of the institution(s) where the proposed research will actually be undertaken is (are) required (e.g. Department of Anaesthesia, Royal Melbourne Hospital VIC 3050). (Add more rows if necessary).

5 Area of research

Specify anaesthesia (01), intensive care medicine (02), pain medicine (03), perioperative medicine (04) or other (05).

6 Keywords

Select up to five (5) keywords or phrases from the list at the end of this guide. If appropriate words are not found in the list, applicants may add their own keywords in this section. The keywords will be used to identify suitable reviewers.

7 Lay description of research

Provide a brief description of the department and/or chief investigator(s), the achievements of the department and/or chief investigator(s), and the proposed research and its significance [suitable for a media release]. No more than one page is allowed. Please provide a lay title.

8 **Grant synopsis**

This information is used primarily to assign the application for review. This one page synopsis should describe the project and include a description of the aims, significance, context, objectives, methods and likely benefits of the research plan to the research group and the specialty.

Requested non-reviewers: Applicants preferring particular reviewers NOT to be approached to assess their application should attach a letter containing details of up to two non-requested non-reviewers. This letter should be attached to the original application only. These requests will be considered by the ANZCA Research Committee.

9 **Research plan**

Describe your research project in this section. Do not use more than seven (7) pages in total, including references. Note that the minimum page margin is 2 cm and the minimum font size is 10 pt. Any additional pages will be removed prior to review.

You **must** use the headings listed below to describe your research.

- 9.1 Aims and significance:** Use this space exclusively to describe the broad aims and potential significance of the research. Hypotheses to be tested **must** be clearly stated.
- 9.2 Background:** Describe the significance of the broad area of research, the objectives of the research and the background including scientific aspects.
- 9.3 Methods:** Include details of the experimental design of the project and statistical methods to be used. Include sample size estimations.
- 9.4 Feasibility:** You must provide evidence that the proposed study can proceed in a timely fashion (i.e. recruitment of subjects is assured, instruments have been developed and piloted).
- 9.5 References:** References should be provided within the seven-page count. Do not attach copies of any references. When citing references to other work, include the title of the paper.

Explanatory Appendices are not permissible, nor is it appropriate to use such phrases as 'refer to last year's application'.

10 **Professional research personnel**

Professional research personnel may include nurses, scientists, research assistants and the like. Full-time students, Fellows and trainees may not be included as professional research personnel.

Where appropriate, request for professional salaries should be in accordance with the official salary scales (such as NHMRC or nursing scales). Personnel should be named where known. Where the personnel are unknown the required salary should be determined on the basis of the appropriate scale. Requests for new senior research officer positions only must provide a curriculum vitae with the application. Include provision for payroll tax, workers' compensation insurance, superannuation or other institutional legal liabilities. Nursing awards may also be appropriate for calculating salaries.

Add more rows to any of the tables in this section if necessary and repeat for each named professional research person.

11 **Budget items**

Please note that applications for more than the maximum amount will be returned.

The budget must be constructed in Australian dollars. The maximum amount available for the Novice Investigator Grant is **AUD \$20,000** for one year only. All items, listed in the space provided, are to be classified under these headings:

- 11.1 Personnel:** Chief investigators and associate investigators may not receive salary from novice investigator grants. Requests for professional research personnel salaries including initial, promotion and renewal requests, should be in accordance with the official NHMRC or MRC designations and salary scales, or appropriate nursing awards. Include provision for payroll tax, workers' compensation insurance, superannuation or other institutional legal liabilities and on-costs. **NOTE** that novice investigators are encouraged to undertake the research personally and so requests for salary support should be not be made or be very limited. See also item 5.

- 11.2 Equipment:** Equipment requests should not include the type of apparatus normally provided from institutional funds (such as equipment used in the normal course of patient care); requests should cover only those items individually costing over \$800, which are essential to the project. Where the cost of a specific item of equipment, plus related accessories, is in excess of \$10,000, a firm written quotation based on current prices, not incorporating any component for customs duty, must be submitted. Applicants should ensure that the institution is prepared to meet all service costs in relation to equipment awarded.
- 11.3 Maintenance:** Enter those items not included within other categories, i.e. such items as equipment costing less than \$800, consumables (under major headings), printed materials, microfilms, survey or field expenses and computing charges.
- 11.4 Other items:** Include all other budget items here. ANZCA will consider requests for funding for computer programming and preparation, and storage of data, but will not normally provide funds for the hire of computer time on a computer within the applicant's institution. Requests for funds for programming, preparation and data storage or the hire of external computer time must be fully justified. Funds for purchase of computer equipment and hire of computer personnel should be itemised under 'Equipment' and 'Personnel' respectively.
- 11.5 Justification of budget:** It is important to note that realistic budgetary details for the whole period are provided, as no supplementary requests will be granted. A genuine assessment is therefore required for funding of the grant. Amounts requested should reflect the real needs of the project

12 Chief investigators

The Chief investigator(s) is (are) pivotal to the concept, design and conduct of the research, analysis of the data and/or preparation of the manuscripts. The Chief investigator(s) is (are) fully conversant with all aspects of the research. Chief investigators **DO NOT** receive salary support from Novice Investigator Grants.

Complete item 12 for each named chief investigator on this application. Start each chief investigator on a new page. Add rows to any of the items if necessary.

- 12.1 Contact details:** Please ensure that the details provided are complete and accurate, as this information will be used to communicate with the applicants.
- 12.2 Academic qualifications/awards:** Provide details of academic qualifications including university degrees, specialist college diplomas, research or other awards or honours, the institution or body awarding the qualification and the year it was awarded.
- 12.3 Current appointments:** List all current positions with the location (institution). Any changes during the lifetime of the grant relating require notification to ANZCA.
- 12.4 Previous appointments:** Please list relevant previous positions held.
- 12.5 Anticipated absences during grant period:** Should an investigator be absent during the project grant for a period in excess of two months, specify period of absence and give reason.

13 Supervisor

The supervisor assists, mentors and supervises the chief investigator(s). The supervisor may also participate more fully in the conduct of the research. Supervisors **DO NOT** receive salary support from novice investigator grants.

- 13.1 Contact details:** Please ensure that the details provided are complete and accurate, as this information will be used to communicate with the applicants.
- 13.2 Academic qualifications/awards:** Provide details of academic qualifications including university degrees, specialist college diplomas, research or other awards or honours, the institution or body awarding the qualification and the year it was awarded.
- 13.3 Current appointments:** List all current positions with the location (institution). Any changes during the lifetime of the grant relating require notification to ANZCA.
- 13.4 Previous appointments:** Please list relevant previous positions held.

13.5 Anticipated absences during grant period: Should an investigator be absent during the Project Grant for a period in excess of two months, specify period of absence and give reason.

13.6 Details of supervision: Include the contribution to the protocol and grant application, and the anticipated supervision and contribution to the conduct of the research.

14 Research support

The information sought on past, present and future support will assist ANZCA in determining the relationship between various projects and the personnel involved in them, including their time commitment. For this reason, applicants should list ALL projects for which their name is recorded as a chief investigator in each category.

In each category, indicate the year of application, ANZCA RegKey, NHMRC Application ID etc, title of grant, chief investigators, time commitment of each named investigator to each grant, period of support and funds for each year. In the column headed Publications, please identify separately, by number, each publication listed by a chief investigator which has resulted directly from each project (i.e. CIA-4: the 4th publication in the list of chief investigator A publications). Do not include the same publication more than once; include only original papers published or accepted for publication in refereed journals. Add more rows to each table if necessary.

14.1 Completed grants: Details of past research grant support should encompass all projects or part projects funded over the previous five year period by all sources of grants (not including the year of application), itemising the level of support for each year. Include project grants, program grants, scholarships etc. Exclude any projects which hold a current commitment (e.g. a three year project currently in its second year), to be itemised under 12.2.

14.2 Current grants: Include details of all currently held grants, including those that have been awarded but have not yet commenced.

14.3 Requested grants: Include this application and all other grant requests relating to this program of research, as well as requests related to other research. Please provide full details of ALL funding from any source. Failure to disclose full information will result in the application being removed from any further consideration by ANZCA. If you apply to another funding agency after submitting this application, you must immediately notify ANZCA in writing.

15 (a) Publications of chief investigators for track record consideration

List, and number consecutively, papers published, in press or finally accepted for publication in refereed journals, by any of the chief investigators (CIA, CIB, CIC, CID etc) in the five (5) years prior to the year of application and in the year of application. The listing must indicate titles of papers, sequence of authors as shown in the paper, first and last pages, name, volume and date of journal; for recent papers not yet published, the date of final acceptance by the journal's editor is required. Quality as well as quantity of publications will be considered in the assessment of grant applications. Papers in refereed journals in which the chief investigator was not co-author, but which resulted from previous grants, should be listed at the end of that chief investigator's publications under the title 'Non-chief investigator papers' (e.g. papers with scientists or PhDs supported by the grant but in which the chief investigator was not an author). Documentary evidence of final acceptance by editors must be made available to ANZCA. **Do not include abstracts or papers in preparation or submitted for publication but not yet finally accepted.**

Publications resulting directly from a specific project must be identified in the list of completed or current grants and, where applicable, in progress reports or in summary reports, and should be identified as "CIA -5" or "CIB -2"). Asterisk (*) a maximum of five publications per chief investigator, which are considered to best reflect research contributions to date. Please include the citation index for these 5 papers and the impact factor of the journal in which they were published.

15 (b) Other items for track record consideration

The chief investigators may list other items for track record consideration. For participation in multi-centre trials, the chief investigator must be the named principal site investigator. The name of the trial, the chief investigator(s) of the trial and the number of patients enrolled at the time of application must be included. For ongoing study in statistics/epidemiology/research methods, please state the

institution, name and duration of the course. Other items may include membership of research ethics committees or grant committees, supervision of research students and the like. A maximum of one page for all investigators combined is permitted.

16 Clearance requirements

The Research Committee strongly encourages investigators to apply for ethics committee approval and submit the approvals to the College by **September 1st**. If a grant is awarded, funding will not be released until all relevant clearances for the initial project have been received by ANZCA. ANZCA reserves the right to request full ethics committee submissions and correspondence as part of the granting process. In addition, ANZCA requires that clinical trials are pre-registered with the appropriate agency (e.g. NHMRC).

16.1 Research involving humans

- (i) Approval of the institutional ethics committee should be sought for ALL projects in humans. In the case of audit or routine testing, the ethics committee may not require a formal application, but will provide a covering letter that must be submitted to the College. Human research, in this context, includes research involving any human tissue, no matter what the source, and also includes research in which there is any intervention (physical or psychological) in the normal lives of humans. Projects supported by ANZCA are expected to conform with the general principles outlined in the NHMRC document 'Statement on Human Experimentation'. (see NHMRC website)
- (ii) Under the various privacy laws, any form of experimentation involving humans (including epidemiological research) which uses personal information that is obtained from a national or state department or agency must be considered by an institutional ethics committee (IEC).
- (iii) All projects involving the administration to humans of drugs, chemical agents or vaccines need to be considered by the relevant institutional ethics committee (IEC) to assess the appropriateness of their use. Clearance by the IEC is not only required for projects involving the use of imported substances, but also for projects involving the experimental use of locally produced therapeutic substances. ANZCA funds will not be provided unless appropriate clearance for the use of such substances is given. In the case of multi-centred trials, approval must be obtained from the IEC of each institution involved. In the case of drugs that are not approved for use in Australia, New Zealand, Hong Kong, Malaysia and/or Singapore, approval of the appropriate authority must be obtained before funds can be released.
- (iv) The official letter or statement of approval from the ethics committee must be forwarded to ANZCA no later than **September 1** each year, or before a tax invoice for funds is sent to the College.
- (v) ANZCA should have access, if required, to all information relating to ethical decisions arising from an application and the institutional response to the application. Provisional clearances will not be accepted.
- (vi) Under item 15.4, please summarise all the ethical implications of your research program. Do not use more than one page. Include the issues of privacy, and male-female ratios, and the cultural implications of your research (i.e. as they relate to aboriginal populations). Please refer to the NHMRC "Statement on Human Experimentation". Note that it is not sufficient to state that "the NHMRC Statement on Human Experimentation will be observed". The Research Plan must include sufficient detail to enable the project to be fully assessed with respect to ethical issues by an independent ethics committee.

16.2 Research involving animals

- (i) Projects supported by ANZCA are expected to conform with the provisions of the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes, and with its general principles outlined in the Council's document 'Statement on Animal Experimentation' or the New Zealand equivalent.
- (ii) ANZCA requires a statement from the relevant institutional animal experimentation ethics committee that any project involving animal experimentation has been reviewed and is approved by the Committee as complying with the code of practice. It is the applicant's responsibility to ensure that a copy of his or her project application is referred to the relevant

institutional animal experimentation ethics committee; it also has his or her responsibility to ensure that the completed approval form is forwarded to ANZCA, no later than **September 1** each year, or before the tax invoice for funds is sent to ANZCA.

- (iii) ANZCA should have access, if required, to all information relating to ethical decisions arising from an application and the institutional response to that application. Please identify the institutional animal experimentation ethics committee to which the application has been or will be referred. Provisional clearances will not be accepted.
- (iv) Applicants whose projects involve inbred strains of animals must take action to confirm that the genetic authenticity of the colony has been checked at appropriate intervals.
- (v) Ideally the health status of animals should be known and the colony regularly monitored for pathogens which may influence results in the investigator's particular area of research.
- (vi) Under item 15.5, please summarise all the ethical implications of your research program. Do not use more than one page. Include the issues related to the care and welfare of animals. Please refer to the "Statement on Animal Experimentation". Note that it is not sufficient to state that "the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes will be observed". The Research Plan must include sufficient detail to enable the project to be fully assessed with respect to ethical issues by an independent animal ethics committee. Applications involving animals must contain adequate information to allow assessment of the ethical implications of experiments, particularly where significant pain and/or distress may be caused, where death is likely to occur, or where experiments in Category 4 are to be carried out.

16.3 Other clearances

16.3.1 Genetic manipulation of organisms: Applicants whose projects involve organisms being genetically manipulated such that they fall under current Genetic Manipulation Advisory Committee (GMAC) guidelines, must seek clearance from their institutional biosafety committee (or equivalent) and arrange for one copy of the clearance to be forwarded to ANZCA preferably prior to release of grant monies. It should be noted that GMAC continues to require its prior approval for applications which fall under Category A of the Small Scale Guidelines.

16.3.2 Use of carcinogenic or highly toxic chemicals: Applicants whose projects involve the use and disposal of potent carcinogenic or other highly toxic chemicals are referred to the "NHMRC Guidelines for Laboratory Personnel working with Carcinogenic or Highly Toxic Chemicals", copies of which can be obtained from the publications officer of the NHMRC. Such applicants must seek clearance to be forwarded to ANZCA prior to release of grant monies.

16.4 Conflict of Interest: Applicants are NOT required to complete the questionnaire but rather are requested to read and understand the ANZCA Conflict of Interest Policy (available at: <http://www.anzca.edu.au/resources/guidelines/conflict%20of%20interest%20policy.pdf>) declare any conflicts, and state how such conflicts will be managed.

17 Progress report on ANZCA grant(s)

A progress report must be provided for each grant being supported by ANZCA at the time of preparing this application and which has listed, as one of the chief investigators, any of the chief investigators of this application. A separate report form should be used for each progress report. It is understood that current projects may not relate to the project proposed in this application. Failure to submit all progress reports may jeopardise its outcome. Note: progress reports are NOT required for grants commencing in the year of submission of the current proposal.

At the conclusion of support for each grant, an individual summary report must be submitted to ANZCA. The deadline for this report is **September 1** of the year after the grant support has concluded. Each chief investigator on this application who was listed as a chief investigator on any project that terminated in the December prior to submission of this application, MUST obtain copies of the terminating project's summary report and append it to this application. Failure to comply with this request may jeopardise the outcome of this application.

The final report must include a statement of the expenditure charged to the grant. Unused funds may not be expended on other activities and must be returned to the College.

18 Certification by chief investigators, head of department and of institution

The application is invalid without the signature(s) of all the chief investigator(s). Grants will only be considered for support if the head of department/head of research committee certifies that the facilities available are appropriate to meet the needs of the application (e.g. adequately staffed and equipped laboratories/workshops, secretarial assistance, library resources, research/maintenance support including equipment maintenance, animal housing facilities etc).

When applicants are not formally attached to institutions, they should indicate whether they have access to appropriate facilities to undertake the research proposed.

ANZCA accepts as the head of institutions: the registrars of universities, the directors of independent institutes, and the managers/secretaries or medical superintendents of hospitals.

The head of the institution should note that Statements of Compliance with the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes and the NHMRC Statement on Human Experimentation - Supplementary Note 1, are required to be completed and submitted to ANZCA on request. The head of the institution is also required to certify that the institution has established administrative processes for assuring sound scientific practice in accordance with the 'NHMRC Statement on Scientific Practice'.

Attachments

The attachment should be sent by the applicant to two referees if an investigator is applying for a Scholarship.

Checklist

Complete checklist and add to original application.

APPENDIX: KEY WORDS AND PHRASES FOR USE IN ANZCA GRANT APPLICATIONS

These key words and phrases are modified from those used by the journal Anesthesiology. If the key word or phrase that describes your work is not listed here, please list in the key word section of your application.

STEMS

ACID-BASE CHEMISTRY

ADDICTION AND DRUG ABUSE

AIRWAY and AIRWAY MANAGEMENT

AMBULATORY CARE

ANAESTHESIA MACHINES and CIRCUITS

ANAESTHETICS, GASES

ANAESTHETICS, INHALATION

ANAESTHETICS, INTRAVENOUS

ANAESTHETICS, LOCAL

AUTONOMIC NERVOUS SYSTEM

Key words/phrases

Alcohol and Alcoholism

Airway and ETT Assessment

Cervical Spine Movement

Endotracheal Tubes

LMA, ILMA and Other Supraglottic Airways

Laryngeal and Pharyngeal Function and Anatomy

Aspiration

Laryngoscopy, Direct

Laryngoscopy, Flexible and Rigid Fiberoptic

Lightwands and Other Indirect Methods

Lung Isolation Devices

Tracheostomy and Cricothyroidotomy

Anaesthesia Ventilators

Circuits and Vaporizers

CO₂ Absorbents and Humidification

Waste Gases and Scavenging

Nitrous Oxide

Xenon

Halothane, Enflurane and Isoflurane

Desflurane

Sevoflurane

Non-Immobilizers

Other Inhalation Anaesthetics

Anaesthetic Metabolism and Degradation

Carbon Monoxide

Compound A and Fluoride

MAC

Uptake and Distribution

Barbiturates

Benzodiazepines (and antagonists)

Etomidate

Ketamine (and related drugs)

Butyrophenones

Alpha₂ Agonists (as sedatives)

Propofol

Computer Controlled Infusions

Opioids (as anaesthetic supplements)

Bupivacaine, Lignocaine or Mepivacaine

Levobupivacaine

Ropivacaine

Encapsulated Agents

Other Local Anaesthetics

Cardiotoxicity

Seizures

Baroreflexes

Catecholamines

Heart Rate Variability

Microneurography

Parasympathetic Nervous System

AWARENESS and RECALL
BLOOD COAGULATION

BLOOD TRANSFUSION, CONSERVATION and
SUBSTITUTES

CANCER and MALIGNANCY

CARDIOVASCULAR FUNCTION, DISEASE AND
MANAGEMENT

CARDIOVASCULAR DRUGS

CELL BIOLOGY AND PHYSIOLOGY

Sympathetic Nervous System

Enoxaparin and LMWH
Heparin and Protamine
Hirudin
Fibrinolytics
Coagulation Testing
DIC and other Coagulopathies
Platelets and Platelet Function
Aminocaproic and Tranexamic Acid
Aprotinin
Recombinant Factor VIIa

Acute Normovolemic Hemodilution
Cell Saver and Other Salvage Methods
Controlled Hypotension
Haemoglobin-Based Oxygen Carriers
Perfluorocarbons

Mutation and Mutagenesis

Cardiac Electrophysiology and Conduction
Cardiac Rhythm and Dysrhythmias
Cardiac Smooth Muscle and Myocyte Function (in vitro)
Cardiopulmonary Bypass
Circulatory Arrest
Circulatory Physiology and Hemodynamics
Congenital Heart Disease and Surgery
Coronary Circulation, Myocardial Ischemia and Infarction
Cardiac Revascularization Surgery (CABG etc)
Myocardial Preconditioning and Protection
Reperfusion Injury
Valvular Heart Disease and Surgery
Ventricular Function
Hypertension
Pacing, Pacemakers and Defibrillators

ACE Inhibitors
Alpha2 Agonists (CV Actions)
Angiotensin Receptor Blockers
Beta-Adrenergic Blockers
Beta-Agonists
Calcium Channel Blockers
Other Antiarrhythmics
Norepinephrine and Epinephrine (Vasopressors)
Dopamine
Dobutamine
Fenoldopam
Phosphodiesterase Inhibitors
Amrinone and Milrinone
Nitroprusside and Nitroglycerin
Other Vasopressors
Vasopressin
Statins

Apoptosis
ATP and Electron Transport
Calcium and Calcium Signaling
Calcium Binding Proteins
Gene Expression

CHEMISTRY, BIOPHYSICS AND PHYSICS COMPLICATIONS	Mitochondria
	Drug Related Equipment Related Procedure Related Compartment Syndromes Other
CRITICAL CARE	Burns Trauma Care
DERMATOLOGY ECONOMICS, OR MANAGEMENT and MANPOWER EDUCATION	
EMBOLI and EMBOLIC DISORDERS	Trainee Evaluation Simulators
	Amniotic Fluid Emboli Fat and Particulate Emboli Pulmonary Thromboembolism Venous and Arterial Gas Emboli
ENDOCRINOLOGY	Diabetes Mellitus and Insulin Oestrogen Pheochromocytoma Renin and Angiotensin Atrial and Brain Natriuretic Peptides
EPIDURAL and SPINAL	Dural-Puncture Headache and Blood Patch Neurologic Symptoms and Injury Balance, Posture and Position Sense
EQUIPMENT, TECHNOLOGY AND BIOENGINEERING ETHICS	Animal Care Brain Death and Organ Harvest Do Not Resuscitate Orders Human Studies and Consent
EYE	Eye Injuries and Blindness Eye Surgery Intraocular Pressure
FLUIDS, ELECTROLYTES and PLASMA SUBSTITUTES	Hetastarch and Pentastarch Hypertonic Saline Osmolality and Oncotic Pressure Serum Sodium, Potassium and other Electrolytes Lipid and Intralipid
GASTROINTESTINAL PHYSIOLOGY and PATHOPHYSIOLOGY	Gastric Reflux and Emptying Intestinal Motility Intestinal Permeability Splanchnic Circulation
GENDER GENETICS and GENETIC DISORDERS	Sickle Cell Disease Genetic Testing Gene Therapy
GERIATRICS HISTORY and HUMOR IMAGING	CT Scanning Magnetic Resonance Imaging and fMRI PET Scanning

IMMUNOLOGY, INFLAMMATION and INFECTION	<ul style="list-style-type: none"> Ultrasound Xray Allergy and Anaphylaxis Latex Allergy Histamine and Antihistamines Steroid Therapy (Systemic) Antibiotics Systemic Inflammatory Response/Disease Cytokines and Interleukins Tumour Necrosis Factor Endotoxin and Lipopolysaccharides Free Radicals and Scavengers Leukocytes, Lymphocytes and Macrophages Phagocytosis Wound Infection Infection Control (Hand washing, antiseptics etc)
IONS AND ION CHANNELS	<ul style="list-style-type: none"> Calcium and Calcium Channels Potassium and Potassium Channels Sodium and Sodium Channels Ion Transport
PUBLISHING	
KIDNEY and BLADDER PATHOPHYSIOLOGY	<ul style="list-style-type: none"> Bladder Function and Urinary Retention Renal Function Testing Renal Failure and Dialysis
LIVER PHYSIOLOGY and PATHOPHYSIOLOGY	<ul style="list-style-type: none"> Liver Blood Flow Liver Function Tests
MALIGNANT HYPERTHERMIA	<ul style="list-style-type: none"> Diagnostic Testing Genetics and Genotyping
METABOLISM and NUTRITION	<ul style="list-style-type: none"> Glucose and Carbohydrate Metabolism Whole Body Metabolic Rate Obesity Protein Metabolism
MONITORING (CARDIORESPIRATORY)	<ul style="list-style-type: none"> Arterial Catheters and Pressure Measurement Blood Volume, Systemic Systolic Pressure Variation Cardiac Output Measurement Central Venous Catheterization Doppler, Other Doppler, Precordial Echocardiography, Transoesophageal Echocardiography, Other Electrocardiography Expired Gas Analysis Gastric Tonometry Oximetry, Pulse Oximetry, Mixed Venous Oximetry, Other Pulmonary Artery Catheterization
MONITORING (CNS)	<ul style="list-style-type: none"> BIS and Similar Techniques Electroencephalography (EEG) Evoked Potentials, Auditory Evoked Potentials, Motor Evoked Potentials, Other Evoked Potentials, Somatosensory Oximetry, Jugular Venous Oximetry, Transcranial Transcranial Doppler

NAUSEA and VOMITING	Depth of Anaesthesia Assessment
NERVE BLOCKS	Antiemetics
	Brachial and Cervical Plexus Blocks
	Celiac Plexus Block
	Lower Extremity Blocks
	Intravenous Regional Anaesthesia
	Other Regional Techniques
	Nerve Localization Methods
	Nerve Injury and Other Complications
	Neostigmine and Anticholinesterases
	Neuromuscular Junction
	Neuromuscular Monitoring
	Nondepolarizing Agents
	Succinylcholine
	Myaesthesia Gravis
NEUROPHYSIOLOGY, BRAIN	Blood Brain Barrier
	Cerebral Blood Flow and Volume
	Cerebral Oedema and Intracranial Hypertension
	Cerebral Ischemia and Anoxia
	Cerebral Metabolism
	Cerebral Protection and Preconditioning
	Clinical Neuroanaesthesia
	Clinical Neurology and Neurologic Examination
	Head Injury
	Hippocampus and Hippocampal Electrophysiology
	Intracranial Pressure and Intracranial Hypertension
	Neuronal Electrophysiology, Other
NEUROPHYSIOLOGY, SPINAL CORD	Dorsal Root Ganglia
	Spinal Cord Electrophysiology
	Spinal Cord Injury
	Spinal Cord Ischemia
	Spinal Cord Anatomy
	Spinal Cord Protection and Preconditioning
NEUROPHYSIOLOGY, PERIPHERAL NERVE	Peripheral Nerve Injuries
	Growth Factors
	Nerve Conduction and EMG
	Peripheral Nerve Electrophysiology
NEUROTRANSMISSION, TRANSMITTERS AND RECEPTORS	Acetylcholine and Receptors
	Adenosine and Receptors
	Adrenergic Agents and Receptors
	Cannabis and Cannabinoid Receptors
	Capsaicin and Thermal Receptors
	Dopamine and Receptors
	GABA and Receptors
	Glutamate and Receptors
	Glycine and Receptors
	Neurokinins and Receptors
	Nitric Oxide and Nitric Oxide Synthase
	Opioids and Opioid Receptors
	Serotonin and Serotonergic Receptors
	Neurotransmitter Release and Reuptake
NEUROTRANSMISSION and SIGNAL TRANSDUCTION	G-proteins
	cAMP and cGMP
	Protein Kinases
OBSTETRICAL ANESTHESIA	Caesarean Section

	Eclampsia and Preeclampsia Foetal Monitoring and Pathophysiology Labour and Delivery Uterine and Placental Function Uterine Smooth Muscle
OXYGEN and OXYGEN TRANSPORT	Hypoxia Hemodilution (physiology) Tissue Oxygen Tension (PtO ₂) Hyperbaric Oxygen
PAIN MANAGEMENT, CLINICAL	Acupuncture and Accupressure Chronic Pain Epidural and Other Steroid Injections Neuropathic Pain and CRP Stellate Ganglion Blocks Lumbar Sympathectomy Pain Assessment Techniques Patient Controlled Analgesia Postoperative Pain Headache (NOT PLPH) Herpes Zoster Intraarticular Analgesia Intrapleural and Intraperitoneal Local Anaesthetics Phantom Limb Pain Preemptive Analgesia (clinical) TENS and Related Methods Spinal Cord Stimulation Epiduroscopy Radiofrequency Lesions and Neurolysis
PAIN-RELATED PHARMACOLOGY	Alpha 2 Agonists (Analgesics) Aspirin and Acetaminophen Baclofen COX2 Antagonists Gabapentin Neostigmine NMDA Antagonists NSAIDs Opioids Opioid Antagonists Opioid Tolerance Tramadol Nitric Oxide
PAIN PHYSIOLOGY, EXPERIMENTAL	Incisional Pain Neuropathic Pain Inflammatory Pain Pain Assessment Techniques Pain Mechanisms, Central Pain Mechanisms, Peripheral Pain Mechanisms, Spinal Pain Models Preemptive Analgesia (experimental) Visceral Pain
PATIENT SAFETY and MEDICOLEGAL ISSUES	Closed Claims Studies Electrical and Fire Safety Medicolegal Matters
PAEDIATRIC ANESTHESIA and PAEDIATRICS	Neonatology
PHARMACOKINETICS and PHARMACODYNAMICS	Pharmacogenetics
PHARMACOLOGY (GENERAL)	Chronopharmacology/Chronobiology

	Drug Interactions
	Drug Metabolism
	Cytochromes P450
	Drug Toxicity
	Liposomes and Microcapsule Delivery Systems
	Osmotic Pumps
	Stereoisomers
	Transcutaneous Delivery Systems
	Transmucosal Delivery Systems
PHYSICIAN SAFETY	
POSITIONING	
POSTOPERATIVE CARE	
PREOPERATIVE ASSESSMENT and CARE	
PROSTAGLANDINS and RELATED COMPOUNDS	
PSYCHOLOGY, PSYCHIATRY and BEHAVIOR	
	Antidepressants
	Anxiety and Anxiolysis
	Psychologic, Psychometric and Behavioural Testing
	Electroconvulsive Therapy (ECT)
RESPIRATORY DISORDERS and MANAGEMENT	
	ARDS and Lung Injury
	Aspiration Pneumonia
	Asthma and Bronchospasm
	Barotrauma
	COPD
	Extracorporeal Membrane Oxygenation
	High Frequency Ventilation
	Mechanical Ventilation
	Nitric Oxide Inhalation
	Pneumonia and Lung Infections
	PEEP and CPAP
	Pulmonary Oedema
	Pulmonary Function Testing
	Smoking
RESPIRATORY PHYSIOLOGY	
	Alveolar Macrophage Function
	Control of Respiration
	Gas Exchange
	Pulmonary Blood Flow
	Respiratory Mechanics
	Surfactant
	Tracheal and Bronchial Smooth Muscle
	Ventilation-Perfusion Matching
RISK, OUTCOME and QUALITY MANAGEMENT	
	Patient Safety and Satisfaction
	Quality Assurance and Management
	Morbidity and Mortality
	Perioperative Risk Factors
	Automated Record Keeping
SEIZURES and ANTICONVULSANTS	
SHOCK AND RESUSCITATION	
	Cardiac Arrest and CPR
	Sepsis and Septic Shock
	Haemorrhagic and Hypovolemic Shock
SKELETAL MUSCLE	
SLEEP and SLEEP DISORDERS	
	Circadian Rhythm
	Sleep Apnoea
	Sleep Deprivation
STUDY DESIGN AND TECHNIQUES, LABORATORY	
	Autoradiography
	Brain Slices
	Histopathology and Histochemistry
	Cultured Cells and Tissues
	Laser Doppler Flowmetry

	<ul style="list-style-type: none"> Microdialysis Patch Clamping PCR Receptor Binding Recombinant Methods Transgenic and Knockout Animals Isobolographic Analysis Analytic Chemistry (Chromatography etc) Molecular Modeling
STUDY DESIGN AND TECHNIQUES, CLINICAL	<ul style="list-style-type: none"> Clinical Trial Epidemiology Mathematical Modeling Metaanalysis Statistics Survey
SURGERY, MISCELLANEOUS	<ul style="list-style-type: none"> Laparoscopy Neurosurgery Oral Surgery Orthopaedic Surgery Joint Replacement Surgery Otolaryngology Plastic Surgery Aortic Aneurysm (Abdominal and Thoracic) Carotid Endarterectomy Thoracic Anaesthesia and Surgery Vascular Surgery Other Surgical Procedures
TEMPERATURE REGULATION and MANAGEMENT	<ul style="list-style-type: none"> Hypothermia Hyperthermia and Fever Shivering
TRANSPLANTATION	<ul style="list-style-type: none"> Heart Transplantation Liver Transplantation Lung Transplantation Immunosuppressants
VASCULAR PHYSIOLOGY	<ul style="list-style-type: none"> Rheology and Viscosity Endothelium Endothelin Leukocyte Adhesion Nitric Oxide, Nitric Oxide Synthase and EDRF Selectins Vascular Smooth Muscle Vascular Growth Factors Vascular Electrophysiology Microcirculation