

# NATIONAL STUDENT RESEARCH GROUP HANDBOOK

## American Association for Dental Research

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### *Dear Students,*

Welcome to the new academic year. During your four years of dental school, you will encounter many challenges and opportunities that present themselves throughout your dental education. I hope that during these four years, you realize the importance of evidence-based dentistry. Among the various opportunities that will be available in dental school, you might choose to participate in a research project. As part of our dental education, it is imperative for us to expose ourselves to the scientific method and designing a research project. Otherwise, we will not be able to discriminate between products that have been proven themselves through clinical trials versus advertising claims of the numerous companies that are geared towards the dental products. Being able to differentiate between these two will ensure that we deliver optimal care to our patients. Research is also an integral part of dental academics and offers a wide variety of opportunities.

If you have made the decision to become active in research during your dental school curriculum, you will find out that being active in research will provide you with wonderful travel opportunities, and allows one to develop friendships with like-minded students across the entire nation. These friendships often become very valuable and can last forever.

President, NSRG

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## **A PERSPECTIVE**

### **INTRODUCTION**

Student, School, Research. Three terms. Three ideas. One goal. The dental student, the dental school, and dental research—each strives to improve the dental care provided to the public. Yet they are often treated separately. To the dental student, improving health care involves an education in treatment modalities and methods. The continuing progress in dental research has enhanced education. We understand more, are more accurate in our diagnoses, and are managing patients better than ever because of research. Yet many dental students view science in general, and research in particular, as difficult partners in their education. This reflects, in part, a lack of understanding of the process of research and its useful applications. Within this context, the American Association for Dental Research (AADR) has recognized that the future of dental research and dental care requires the recruitment of students to research, for the purposes of both training investigators attuned to clinical objectives and educating clinicians in the methods of research.

### **HISTORY OF THE SRG**

The Student Research Group (SRG), a Group of the AADR, had its origins in 1980. The President of the AADR at that time, Dr. Irwin D. Mandel, is generally considered the “father” of the SRG. Recognizing the potential of dental students as future research investigators, the AADR Membership Committee, under the chairmanship of Dr. Ralph Kaslick, targeted students for membership in the AADR. In addition, the Committee identified faculty advisors at each US dental school and set up programs for students, including the AADR Student Research Fellowship Program.

Starting in 1980, with only a handful of students meeting at the AADR General Session, the SRG has continued to grow throughout the decade to about 1200 members at present.

From 1980 through 1984, the Student Research Group was a rather small, loosely run organization involving a small core of students who organized yearly meetings and a slightly larger group who attended the meetings. However, beginning with the 1985 annual meeting, several changes in the SRG were initiated. In 1986, a Constitution and Bylaws were approved, and in the following year a mail ballot voting procedure was developed, both for amendment of the constitution and for election of officers.

Karl Zimmerman of Louisiana State University (SRG President for 1985-86) instituted the annual Caulk/Dentsply Student Research Awards. This competition has continued to grow through the years and now includes six awards worth a total of \$2500.

Since 1985, membership in the SRG has grown markedly. The number of SRG Chapters and the activity of existing Chapters have continued to increase. In 1988, geographic SRG regions were established to promote student research activity through regional interaction.

## **PURPOSE OF SRG**

The AADR SRG is a student-run organization whose main purpose is to foster an environment in every dental school whereby students interested in enriching their dental education are encouraged to do so. The SRG is one of 20 Scientific Groups that comprise the International Association for Dental Research. It is composed of a network of self-governing chapters at each dental school and is led nationally by officers elected through a majority of votes from all members. The SRG serves to:

- (1) provide student researchers with a national voice,
- (2) provide a means for student researchers to protect their interests on a local as well as a national level,
- (3) act as a support network linking all dental schools and their research programs,
- (4) help students generate funds and ideas necessary to better the field of dentistry through new and inventive research,
- (5) promote student participation in dental research and its related disciplines,
- (6) promote the advancement of dental research and related aspects,
- (7) further the aims and objectives of the AADR and IADR as they relate to student research, and
- (8) Foster awareness of research and training opportunities in academic dentistry.

A major goal of the SRG at present is to help dental students across the nation initiate changes in their respective schools, to ensure that research is seen as a vital aspect of dentistry. Our hope is that all schools will recognize the benefits of incorporating research into their curricula and will choose to do so.

## **STARTING OR ACTIVATING A STUDENT RESEARCH GROUP**

Those dental schools without active SRG Chapters certainly have the potential to form one. SRG Chapters benefit both students and institutions. Forming a SRG Chapter requires a nucleus of students interested in research, faculty willing to nurture that interest, and an administration supportive of the endeavor. The success of a SRG Chapter ultimately depends on the desire of students to be interested and/or involved with dental research. So what's the first step in starting a SRG Chapter at your school?

### **Organizational Meeting**

The first step in forming or activating a SRG Chapter is to conduct an organizational meeting. A minimum of four students is necessary to be considered a Chapter. At the organizational meeting, students should:

(1) outline the purpose of the SRG and its potential benefits.

\*This could be as simple as increasing students' awareness of the research going on around them.

(2) Discuss specific objectives for the forming Chapter.

\*Objectives can range from research faculty giving presentations to getting research included as part of a dental school's curriculum.

(3) Adopt a constitution.

\*The constitution should include a list of the officer positions, the roles of the different positions, and a procedure for the election of the officers.

Students are also advised to contact the administration of their school and seek its support as soon as possible. Student organizers of the newly formed chapter should meet with the Director of Research or equivalent for faculty support. Because the SRG Chapter can play an important part in a dental school education, a synergistic relationship between the SRG Chapter and dental school should be nurtured.

For a SRG Chapter to get off the ground, student involvement is a must. One way of facilitating student involvement is to create a number of officer positions. Positions need not be restricted to a President, Vice-president, Treasurer, and Secretary. This allows many students to feel that they have a role in the organization.

A good idea for meetings is for faculty and students to give presentations on their research. Student presentations seem to make a greater impression than faculty presentations because it demonstrates that students can have an active role in dental research.

After a local SRG Chapter is formed, the AADR Central Office in Alexandria, VA, should be informed of its existence and be provided with a list of the current officers. The contact at the AADR is Ms. Jennifer Johnson ([jennifer@dentalresearch.org](mailto:jennifer@dentalresearch.org)).

## **RECRUITMENT OF STUDENT MEMBERSHIP**

Active SRG membership is the most important aspect of a local chapter to accomplish our goals, as well as one of the most difficult to maintain. Membership tends to be transient for many students, so recruitment is a must throughout the year. This should be an active process by all members. A very easy way to increase the membership of your SRG is to introduce more students to the benefits of research, then expand on the different opportunities for research that exist at your school. One method of determining what research opportunities exist at your school is to contact each member of the faculty. Form a list of those who are currently involved in projects, or are interested in beginning projects. This can be used as a valuable resource for students trying to determine their area of interest.

Getting students to do research is the easy part; many of them will do it on their own. The difficulty comes in convincing the students to make time in their already-busy schedules to take an active role in their local SRG. Benefits are the key: If there are no benefits, it will be extremely difficult to get students motivated. There is a list of SRG activities in this manual, all of which serve to generate benefits that will increase membership. Following are some suggestions that will directly help with recruitment:

- (1) Advertisement of the SRG Chapter and its activities is essential. Posters announcing SRG Chapter activities or AADR/SRG news should be posted throughout the school. You want students to see that the SRG is doing something wherever they go.
- (2) First-year-student Orientation is an excellent time for advertising the SRG Chapter and can be very productive. Similarly, pre-recruitment can be done at the time of admission.
- (3) A reception for First-year students, sponsored by the SRG Chapter, can introduce students to the benefits of the SRG at the beginning of their dental education.
- (4) A seminar on "How to Get Started in Research" is essential to attract student and get them involved.
- (5) Student research competitions are an excellent way to generate interest in the SRG.
- (6) A Student Research "Day" or "Week" will bring student research to the school as a whole and generate student interest in research.

(7) A Newsletter distributed by the local SRG Chapter is a great way to disseminate information and recognize students who are excelling in their field of research.

(8) Faculty membership is a great idea. Faculty are excellent recruiters and resources.

If you have trouble staying on top of membership, make sure that you use the SRG list-serv. It will link you with all of the local presidents as well as with your national leaders. You can use it as a resource to ask questions regarding membership or any other challenges you may be facing.

## **STUDENT RESEARCH GROUP ACTIVITIES**

Every SRG Chapter is different. Regardless of how informal, every chapter should have an activity agenda. The following are suggested activities that have been done by some chapters:

- (1) Meetings. The SRG officers should be encouraged to run regularly scheduled business meetings to provide continuity to the SRG.
- (2) Lunch-time Lectures. Invite faculty members to present their research to the local SRG. Pick one date a month and have a different specialty represented each month. Offer 1 hour of CE credit for each lecture if your school requires CE to graduate. The chapter may wish to encourage graduate students in the specialty programs to attend and/or present their research.
- (3) Student Presentations. Have student members present their research for practice before they do a poster or oral presentation at a state-wide or national meeting.
- (4) Newsletter. Publish a quarterly newsletter for your membership. It could include important events, deadlines, contact people for research interests, etc. This could also be produced via e-mail on amore frequent basis.
- (5) Publish Annual Abstracts. Publish and distribute a program of the abstracts of students presenting their research at the annual AADR meeting or other meetings.
- (6) Table Clinic. Sponsor an annual table clinic event with faculty members as the judges. Try to solicit prize money from your local or state dental societies.
- (7) Fund-raising Activities. Raise funds for various activities. Sell T-shirts, do a bake sale, offer engraving service to students for instrument identification, sponsor an auction(have faculty members make donations; i.e., denture wax-up, gold crown wax-up, dinner for two at his/her house, etc...throw an auction party that will provide fun, casual interaction between faculty and students), etc.

- (8) Workshops. Hold workshops on “How to Make a Poster”, “How to Present Your Research”, “How to Write a Good, Concise Abstract”, and/or “How to Get Funding”. You may want to try to do these in the evenings with a pizza dinner.
- (9) Annual Awards. Honor active fellow student-researchers for their research efforts. Honor a faculty member who goes above and beyond to help students get involved with research.
- (10) SRG Bulletin Board. Maintain an announcement space on a bulletin board to disseminate SRG info. This may also be done more easily at your school via e-mail or an SRG Web site.
- (11) Social Activities. The SRG should be encouraged to sponsor social events. These could be for just SRG members or for all dental students.

## **SOURCES OFFUNDING FOR STUDENT RESEARCH**

A primary objective of the SRG is to “connect” interested students with available funding sources. Because dental schools offer intramural research programs for students, these institutions must provide the primary funding for student projects. These can include individual student research fellowships, work-study programs, training grants, and faculty-sponsored research. Your own local SRG may be able to provide assistance as well. Several local chapters hold annual fund-raisers whose proceeds are generated toward supporting student research. In fact, one local chapter generates thousands of dollars through an auction, where students and faculty auction off their personal time and services (i.e., “setting teeth on complete dentures” or “a day of water-skiing on a faculty member’s boat”).

Extramural funding of research is also available. Sources for outside research support include:

- (1) AADR Student Research Fellowships
- (2) State Dental Associations
- (3) Alumni Groups
- (4) Local Research Foundations
- (5) Dental-related Industry (Colgate, Procter & Gamble, etc.)
- (6) Local AADR Sections
- (7) National Institutes of Health (NIH)

*\*Note: NIH has numerous programs to support student research. For further information, refer to the [NIDCR](#) publication, “National Institute of Dental and Craniofacial Research Training and Career Opportunities in the Dental Sciences”. The faculty advisor should be a source of information on research funding for SRG members.*

## **TRAVEL SUPPORT**

Travel support for presenting research at meetings is essential for student researchers, since an important component of research is sharing results with the research community. Unfortunately, a major barrier to students’ attending research conferences stems from travel expenses.

Thus, an attractive benefit of the SRG is the potential for travel to present research findings at a research meeting. One focus of SRG fund-raising may be to obtain travel support. Supporting groups such as school administrations, local AADR Sections, local alumni, or dental groups are also potential sources for travel assistance.

## **FACULTY ADVISOR’S ROLE**

The faculty advisor of a Student Research Group chapter at a dental college has the following roles:

- (1) The faculty advisor provides continuity of the SRG chapter during the steady turnover of student leadership and membership through the years. Therefore, the faculty advisor plays a key role in maintaining the group’s steady momentum.
- (2) The faculty advisor is a liaison to the college administration and other faculty. While students typically interact well with administration and faculty, occasionally the faculty advisor can play an important role in communicating concerns, objectives, or needs to both sides.
- (3) The faculty advisor develops student leadership.
- (4) The faculty advisor encourages active faculty support. Faculty support and assistance are an integral part of the ultimate success of the SRG and its objectives.\*
- (5) The faculty advisor serves as a link between both students interested in research and those involved in research. As well, the faculty advisor serves as a link between students interested in research and faculty supportive of student research.
- (6) Faculty advisors may encourage local and regional interaction among students through regional meetings and research competitions.

## **\*FACULTY SUPPORT**

Faculty support of the SRG has been excellent. The strength of faculty support lies in their willingness to foster student interest in research. In this capacity, the faculty member may:

- (1) act as a mentor in developing the research potential of a student,
- (2) provide research opportunities to the student,
- (3) assist students in securing funding for research,
- (4) provide facilities for research,
- (5) speak on research at SRG Chapter meetings, and
- (6) generally increase student enthusiasm in research.

Faculty should understand the benefits of student research to dental education and the training of a future dentist. It is particularly important to keep the entire dental faculty informed of the SRG activities. When faculty are invited to SRG activities, there is a reciprocal increase in student interest in the SRG. All of the dental college faculty should be encouraged to support and be involved with the SRG chapter.

## **ADMINISTRATIVE SUPPORT**

Support by the dental school's administration can greatly enhance the success and longevity of an SRG Chapter. Since student involvement is usually limited to 3 or 4 years, it is necessary for the faculty and administration to provide continuity and ease the transition as new students assume official positions. This support may range from general approval of the SRG Chapter to active personal involvement of the Research Director/Dean.

- Financial support may assist in covering SRG Chapter activities or individual student research. This could include:

- (1) assistance in annual membership dues to AADR;
- (2) support for meeting registration fees and travel to research meetings;
- (3) student research fellowships; and
- (4) assistance in financing SRG activities, e.g., sponsoring a guest lecturer.

- Administrative support facilitates the smooth and continuous operation of a local SRG Chapter. This may include:

- (1) secretarial assistance for SRG Chapter business,
- (2) assistance in advertising SRG Chapter activities,
- (3) bulletin board space,
- (4) space for SRG Chapter meetings and events, and
- (5) office space for the SRG Chapter.

• Educational support can greatly encourage student interest in research. In addition to financial and administrative support, an institution can demonstrate its recognition of the educational benefits of student research through several methods.

Examples are:

- (1) elective academic credit for student research,
- (2) compensatory release time from clinic for time spent in student research,
- (3) specific research development educational programs for undergraduate dental students,
- (4) graduation with honors, and
- (5) graduation with a BS in Dentistry (in addition to a DMD/DDS) after the student completes a specified research project.

### **POTENTIAL RESEARCH DIRECTIONS AFTER GRADUATION**

The foundation supporting the dental profession lies within the dental educational system. It is responsible for the scientific and technological advances that make possible the advanced level of dental care that we enjoy today. There are numerous viable options in research available after graduation. Both education and the private sector provide generous financial incentives, including awards and travel accommodations for those in dental research. A few of the many research opportunities available are:

- Institutional Dentist-Scientist Award
- Individual Independent Scientist Award
- Individual Mentored Clinical Scientist Development Award
- Individual Mentored Patient-oriented Research Career Development Award
- Institutional NRSA Training Award

- Individual NRSA Post-doctoral Fellowship
- Institutional Clinical Research Curriculum Award

## **OTHER RESEARCH SUPPLEMENTS**

(1) Under-represented Minority Individuals in Post-doctoral Training

(2) Recruitment of Individuals with Disabilities into Biomedical Research Careers

As stated earlier, there are significant opportunities in the private sector for dental research. The dentally related industries play a key role in applied dental research involving both scientific and technological developments.

There is a great need for dental scientists in public health research. Public health is the science of preventing disease, prolonging life, and promoting health in the community. Therefore, the impact of research by dental scientists in the area of public health can be great.

There are many rewarding options that exist in the field of dental research. Students wishing to develop a career in research, education, and academics should be encouraged and guided toward further research training after graduation.

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## **CONSTITUTION**

### **Article I. Name**

The name of this organization shall be “The American Association for Dental Research Student Research Group”, hereafter referred to in this document as “SRG”. It is affiliated with the American Association for Dental Research, hereafter known as “AADR”. The AADR is affiliated with the International Association for Dental Research, hereafter referred to as “IADR”.

### **Article II. Objectives**

1. To promote student research in dentistry and its related disciplines.
2. To promote the advancement of dental research and related aspects.
3. To further the stated aims and objectives of the AADR and the IADR as they relate to student research.

### **Article III. Organization**

One, and only one, SRG Chapter shall exist at a dental school. This group shall include students of that institution and any closely related institution which does not have a local SRG Group. Members of the local SRG Group must be members of the AADR.

#### **Article IV. Membership**

Section 1. Eligibility: Any student who is interested in dental and related research shall be eligible for membership in the SRG.

Section 2. Application: Individuals may join the SRG by completion of a current AADR membership application form and payment of the appropriate dues.

#### **Article V. Officials**

Section 1. Officers: The Officers of the group shall be President, Vice-president, Secretary, Councilor, President-elect, Vice-president-elect, Secretary-elect, and Councilor-elect.

Section 2. Term of Office: The term of office shall be for one year. Officers may serve more than one term.

Section 3 Qualifications: All Officers must be members of the AADR and the SRG.

#### **Article VI. Nominations and Election**

Section 1. Nominations: Nominations for any office shall be made by any member of the group. The nominee should be in good standing as a member of the SRG of the AADR.

Section 2. Officer Elections: Officers shall be elected a minimum of six months before their term actually begins. Each Officer will be termed "Officer-elect" until the Officer's term begins.

Section 3. Elections: Elections shall be by secret ballot from the entire SRG membership. The candidate who receives a simple majority will be elected to office.

Section 4. Eligibility: An Officer-elect must have no less than two years remaining as pre-doctoral dental student in order to be considered for election—one year to serve as officer-elect and a second year to serve as officer.

#### **Article VII. Section 1**

Board of Directors: There shall be a governing body known as the SRG Board of Directors which shall consist of the President, Vice-president, Councilor, Secretary, and President-elect of the SRG, and two Members-at-Large(see Article VII. Section 2).

## **Article VII. Section2**

Members-at-Large: Two student members shall be selected to serve on the Board of Directors as Members-at-Large. These members will be selected by the current officers to serve a one-year term beginning when the new Board of Directors commences office. These members will most likely be chosen from: (i) schools under-represented in national SRG activities and (ii) the school where the next SRG business meeting is to be held.

## **Article VIII.Meetings**

The SRG shall hold at least one meeting annually in conjunction with the Annual Meeting of the AADR.

## **Article IX. Amendments to the Constitution**

Any proposed amendments to the Constitution must be presented in writing at an Annual Meeting. Proposed amendments may be presented by the Executive Committee or in the form of a petition signed by 25 SRG members and submitted to the IADR/AADR Executive Director at least 60 days prior to the Annual Meeting. A proposed amendment to the Constitution shall be mailed to all members at least 30 days prior to the Annual Meeting, and shall be adopted by at least a two-thirds' majority vote of all members present at the Annual Meeting.

Any proposed amendments to the Bylaws must be presented in writing at an Annual Meeting. A proposed amendment to the Bylaws shall be adopted by at least a two-thirds' majority vote of members present at the Annual Meeting.

## **BYLAWS**

### **Section A. Membership**

- 1.Application: Application for individual membership shall be endorsed by two active members of the SRG or by the faculty advisor of an AADR local SRG who shall attest to the eligibility of the applicant.
- 2.Eligibility: Eligibility of student members as listed in Section A.2.(C) of the IADR Bylaws shall be the basis for membership in the SRG. Each eligible student shall have one vote in the SRG.

### **Section B. Officials**

- 1.Installation: At the annual meeting of the SRG, an appropriate ceremony of installation shall inaugurate the term of service of each officer.
- 2.Duties

A. President: It is the duty of the President

- a. To provide effective leadership in achieving the SRG's purposes.
- b. To preside over the annual SRG business meeting
- c. To serve as the SRG's official representative to the other organizations.

B. Vice-president: It is the duty of the Vice-president

- a. To serve in place of the President at the request or absence of the President.
- b. To assist the President in providing effective leadership for the SRG organization.
- c. To perform any duties requested by the President.

C. Councilor: It is the duty of the Councilor

- a. To represent the SRG at the Council of the AADR.
  - b. To determine, with the SRG Officers, issues to take to the AADR Council and to report to the SRG on the actions of the AADR Council.

D. Secretary: It is the duty of the Secretary

- a. To keep accurate and up-to-date notes of all proceedings at the annual SRG business meeting.
- b. To provide clerical assistance to the President.

E. President-elect: It is the duty of the President-elect

- a. To perform any duties requested by the President.
- b. The President-elect will succeed the President.

F. Vice-president-elect: It is the duty of the Vice-president-elect

- a. To assist the Vice-president in leadership duties for the SRG.
- b. To serve in place of the Vice-president at the request or absence of the Vice-president.
- c. The Vice-president-elect will succeed the Vice-president.

G. Councilor-elect: It is the duty of the Councilor-elect

- a. To assist the Councilor in duties for the SRG.
- b. To serve in place of the Councilor at the request or absence of the Councilor.
- c. The Councilor-elect will succeed the Councilor.

H. Secretary-elect: It is the duty of the Secretary-elect

- a. To assist the Secretary in the clerical duties of the SRG.
- b. To serve in place of the Secretary at the request or absence of the Secretary.
- c. The Secretary-elect will succeed the Secretary.

### **Section C. Committees**

- 1. Appointments to standing and *ad hoc* committees shall be made by the President.
- 2. Standing Committees: The following standing committees shall be appointed:

A. The Constitution Committee shall consist of the Executive Committee to review the Constitution and Bylaws, advise the SRG regarding revisions, monitor compliance of the activities of the SRG regarding revisions, and monitor compliance of the activities of the SRG in regard to the Constitution.

B. A Nominating Committee to advise the SRG on the selection of nominees for various offices and to recommend committee members to the President. Officers will be elected by simple majority.

C. The Science Award Committee shall be responsible for the operation of the Student Research Competition at the Annual Meeting. The number of members will be determined by the President.

### **Section D. Meeting**

- 1. The SRG's annual business meeting shall be held in conjunction with the AADR Annual Meeting.
- 2. RULES OF ORDER: The SRG's annual meeting shall be conducted according to Robert's Rules of Order.

## **AADR NSRGMENTOR AWARD**

### **HISTORY OF THE MENTOR AWARD**

In 1997, the AADR National Student Research Group (NSRG) initiated the NSRG Mentor Award. This award was established in order to provide national recognition for outstanding faculty mentors. Each year, one faculty mentor is chosen from student nominations nationwide to receive this prestigious award. The recipient of the NSRG Mentor Award will receive a plaque and will be the guest of honor speaker at the annual Faculty Advisors' Luncheon.

### **CRITERIA FOR NOMINEES**

In order to recognize as many mentors as possible, a nominee must not be a past recipient of the Mentor Award. Each nominee needs to have experience in research and must show support for student research. The nominee also needs to be a faculty member at the nominating student's dental school.

### **MAKING THE NOMINATION**

Please include the name of the mentor and a typed essay (approximately one-half to one page, not exceeding one page) describing the nominee and addressing the following points:

1. What impact has the nominee had on Student Research and the local SRG? How does he/she motivate/teach students?
2. A brief background about the nominee's teaching career (length of time).

Please mention the nominee's current on-going projects.

NOTE: Three students must sign and date the nomination. (These students must be pre-doctoral students.)

- A picture of the nominee may be included for publication (not required).
- All nominations should be mailed to the NSRG President.

### **PAST MENTOR AWARD RECIPIENTS**

1997-1998 Dr. Linda LeResche, University of Washington

1998-1999 Dr. Anthony M. Iacopino, Baylor College of Dentistry

1999-2000 Dr. Barbara Boyan, University of Texas HSC at San Antonio

2000-2001 Dr. Craig Miller, University of Kentucky

## **NSRG ELECTION PROCEDURES**

1. Dental Schools will be notified of the officer nomination deadlines and procedures at the AADR SRG Business Meeting held at the AADR Annual Meeting, and through the AADR Student Research Group list serve. Election deadlines and information will be available through the AADR Home Page.
2. The nomination forms and guidelines will be available via the AADR Home Page ([www.dentalresearch.org](http://www.dentalresearch.org)). Students (members of AADR) who are interested in running for national officer positions will complete and submit the nomination form on the Web by the deadline. The deadline will be set for three weeks after the AADR Annual Meeting. Students unable to obtain access to the Web may also request a paper nomination form from Pat Reynolds.
3. The completed nomination forms (Candidate Bio-sketches) will then be available for view on the Web and the ballots will be sent electronically to all AADR Student Members.
4. The election deadline will be set for three weeks after the ballots are sent to the students.
5. A reminder will be sent out on the SRG list serve at the beginning of the election and again prior to the election deadline.
6. Computer ballots will also ask for member name and number (both required). The Central Office will verify membership status on the ballots.

Nominees will be informed of the election results, and the names of the new officers will be published in the AADR newsletter.

Please address any questions to Pat Reynolds or the National Student Research Group President.

## **ABSTRACT PREPARATION**

### **Instructions for Preparing AADR / IADR Formatted Abstracts**

**Before printing the abstract form, read all instructions below.**

1. Practice first - Format a practice box on your word processor and make sure that your abstract conforms to the space limitations as you prepare it. After everything is finished and proofread, print it out on the abstract form.

2. Authors and Institutions - Starting at the right of the dotted line, list each author, in capital letters. Put an asterisk (\*) after the name of the person presenting the paper. Institutions should follow the last author's name and should be enclosed in parentheses, followed by a colon. Addresses may be abbreviated, omitting state or country if obvious. Only one name should be asterisked.
3. Title - The title should be limited to ten words. It should indicate the content of the abstract in a concise manner. Start the title immediately after the colon following the listing of institutions. Stay within the dotted line area. Capitalize only the first letter of each important word of the title and end with a period.
4. Abstract Material - Start the text of the abstract on a new line, without indentation, and use the entire width of the box. Paragraphs may be separated by indentation or a one-line space. Authors may also opt to have no paragraphs (all material would "run in" as a single unit).
5. Content of Abstract - The abstract should contain a brief statement of: a) the objectives of the investigation; b) the experimental methods used; c) the essential results, including data and statistics; and d) conclusions. The supporting grant number, if any, should also be included. No illustrations should be included. However, tables may be used.
6. Make sure the font is clear and easy to read. Good fonts to use are: Times Roman or Helvetica.
7. Use a 12-point font. Do not reduce the abstract before submitting it.
8. Use black ink to add any symbols not on the word processor.
9. Print a perfect original on the form. Use additional forms if necessary.
10. Proofread the abstract carefully before submitting it. Abstracts not suitable for reproduction will be rejected. Only the original abstract form is acceptable for reproduction. Additional forms are available upon request.

The following are the evaluation criteria used in reviewing abstracts. This is provided to you to call attention to points which will be considered. In the final analysis, it will be the reviewer's judgment of the value of any abstract which will determine whether that abstract should appear on the program. Each abstract is reviewed from the standpoint of subject matter and scientific merit as to its suitability for inclusion in the program. The reasons for rejection are:

1. Abstract poorly organized.
2. Required information not given in abstract:

- A. Objective
- B. Methods
- C. Results - data and statistical analysis
- D. Conclusions

3. Nature of problem not explicit from either title or abstract.

4. Material too closely related to another submitted abstract; should have been combined into a single paper.

5. Abstract is not original research.

6. Abstract has been presented at other meeting(s) or previously published.

7. Problem fairly well-defined, but its importance doubtful.

8. No well-defined criteria given for evaluation of variables.

9. Choice of controls questionable.

10. No control groups reported.

11. Methods to obtain data inappropriate with regard to the stated problem for these reasons:

- A. Methods not sufficiently precise to permit accuracy for the measurements (variations are within the limits of error)
- B. Sampling method contains inherent discriminatory factors not recognized.
- C. Size of sample insufficient to show significant conformity or differences

12. Confusion between the initial premises (assumptions) and measurements (facts or data) leads to faulty reasoning; conclusions not clear.

13. Conclusions do not necessarily follow as a consequence of the method of analysis applied to the data.

14. Conclusions not adequately qualified (conclusions have greater limitations than implied by the author).

15. Correlations suggested may be fortuitous insofar as no plausible cause-and-effect relation has been suggested, and none is obvious.

# NIDCR STUDENT AND POST DOCTORAL RESEARCH TRAINING OPPORTUNITIES

## Introduction

Students in high school, college, graduate school, or the professional schools (dental, medical, veterinary) can spend a summer or work part-time through the academic year at the National Institute of Dental and Craniofacial Research (NIDCR) in Bethesda, Maryland. NIDCR is one of 24 separate Institutes and Centers located at the National Institutes of Health (NIH) on a suburban campus-like environment approximately 10 miles from the center of Washington, D.C. NIH has the largest number of biomedical researchers in one location in the United States. NIDCR has seven intramural research Branches focusing on bone, developmental biology, gene therapy, cancer, epidemiology, immunology, and pain. There is also an active clinical research program with patient care. The NIDCR Training Programs are designed, to expose talented individuals at an early stage in their career to the latest advances in basic, clinical, and epidemiological research. Cellular, biochemical, and molecular approaches are employed using the latest techniques and equipment. Projects are designed to encompass basic, translational, and clinical aspects where appropriate. NIDCR researchers use state-of-the-art technologies to study the fundamental mechanisms of development and disease in order to improve prevention, diagnosis, and therapy of acquired and genetic diseases and disorders.

## Research Areas

You are able to select from active study areas such as:

- \* Adherence and Virulence factors of oral bacteria
- \* AIDS
- \* Autoimmune diseases
- \* Biomimetics
- \* Bone/mineralized tissue formation and pathology
- \* Cartilage structure and development
- \* Cell adhesion molecules
- \* Cell signaling
- \* Cytokines and inflammation
- \* Epidemiology of oral diseases
- \* Genetic regulation of nerve and blood vessel regeneration
- \* Pain mechanisms and imaging
- \* Population genetics and gene mapping
- \* Protease biochemistry
- \* Salivary gland development, function, and dysfunction

- \* Taste and smell
- \* Vaccine development
- \* 3D structure modeling

## **Program Financial Support**

Salaries or stipends are based on the student's educational level and the mechanism of support, and are subject to yearly adjustments. Students with their own funding and students who are willing to volunteer or participate in a co-op program with their school are welcome to apply.

## **Eligibility**

Students who are U.S. citizens or permanent residents, and at least half-time and in good standing at their institutions are eligible. Eligibility varies according to program requirements. For the summer program, students must work a minimum of 8 weeks. For the part-time positions during the academic year, students must be available to work a minimum of 12 hours per week. College graduates must be within 1 year of their graduation and willing to work full-time for a minimum of 1 year and no more than 2 years. Postdoctoral fellowships range from 1 to 3 years.

Contact person: Sharon M. Gordon, DDS, MPH, Director, NIDCR Office of Education / 30 Convent Drive, Building 30 Room 106, Bethesda, MD 20892-4310. Phone: (301) 402-0799/ Fax: (301) 480-0240. Email: [officeeduc@dir.nidcr.nih.gov](mailto:officeeduc@dir.nidcr.nih.gov). For more information visit our website at <http://www.nidcr.nih.gov/research>

## **How to Produce Effective Table Clinics**

Table clinics are visual presentations of research studies and projects, mounted on a portable, free-standing, 3-panel, folding table display. Table clinics present the information in a summarized format and provide an opportunity for viewers to talk with the author.

### **Producing a Good Table Clinic 3 Important Steps**

- (1) Start early. Difficulties in time, expense and quality come from waiting until the last minute. Allow two months to produce an effective session.
- (2) Present major points and few details. Readers don't expect a lot of detail, documentation and discussion in a poster session. The content should be a visual guideline for a 5 to 10 minute presentation.

(3) Use graphics instead of words where possible. One picture is worth a thousand words.

### Think in Pictures, Write in Pictures

Use the following instead of words/sentences to present a lot of information in very little space:

- \* summary tables
- \* flow charts
- \* drawings
- \* graphs
- \* lists
- \* diagrams
- \* photographs
- \* symbols

### Design and Readability

- \* In preparing your table clinic, you will need to plan how to arrange your visuals so they are effective and esthetic. You need to make a detailed plan on graph paper to use as a pattern during the assembly and construction of your exhibit.
- \* Design your material to read from left to right and from top to bottom. Try to balance the visual weight on both halves of the table clinic.
- \* Where possible, use words or phrases set off by bullets instead of full sentences.
- \* Use headings and subheadings. Boldface and underlined headings do two things: (1) guide the reader and (2) condense information.
- \* Choose readable lettering for the text. The lettering should be large enough to be read from 4' away. Use the same letter style on the entire exhibit.
- \* For three-dimensional emphasis, glue objects to the boards or add a layer of foam core or cardboard to the back of photographs or graphics.
- \* Use color. It can emphasize major points, show differences and indicate changes.
- \* Your table clinic should stand alone. Viewers should understand your topic even if they do not listen to your talk.

### Production Checklist

\_\_\_\_ Review table clinic guidelines.

\_\_\_\_ Write and edit all text.

\_\_\_ Plan illustrations.

\_\_\_ Plan your poster table clinic layout, design and colors.

\_\_\_ Take slides to Media Resources to have prints made.

\_\_\_ Use letter on to make titles and subtitles.

\_\_\_ Assemble mat boards, foam core, lettering, prints and artwork.

\_\_\_ Practice before the meeting. Set up the table clinic to check space allotment and arrangement.

### **How to Produce Effective Poster Sessions**

A poster session is a visual presentation of a research study or project, highlighted and mounted on a poster board that is displayed on a 4' x 6' flat wall area and presents the information in a summarized format. A poster session provides an opportunity for viewers to talk with the author.

The format is usually determined by the professional organization hosting the conference. These guidelines may also affect the design of your poster session. This can include the allotted space and type of display space. Check with the organization or the conference sponsors for specific size requirements.

If no guidelines are available, a standard format is listed below.

#### Title Board

- \*Program number
- \*Title
- \*Authors' names
- \*Presenter's photo

Abstract

Introduction

Materials and Methods

Discussion

Results

Conclusions

## **Producing a Good Poster Presentation: The Three Most Important Steps**

(1) Start early. Most difficulties in time, expense and quality come from waiting until the last minute. Allow two months to produce an effective poster.

(2) Present major points and few details. Readers don't expect a lot of detail, documentation, and discussion in a poster session. The content should be a visual guideline for a 5 to 10-minute presentation.

(3) Use graphics instead of words where possible. One picture is worth a thousand words.

For sections of the poster session, such as Materials and Methods or Results, use the following instead of words and sentences to present a lot of information clearly in very little space:

- \* summary tables
- \* flow charts
- \* drawings
- \* graphs
- \* lists
- \* diagrams
- \* photographs
- \* symbols

### **Design and Readability**

- \* Design your material to read from left to right and from top to bottom.
- \* Where possible, use words or phrases set off by bullets instead of full sentences.
- \* Use indented paragraphs. Our vision has been conditioned to pick up an indented paragraph as the beginning of a new area.
- \* Use headings and subheadings. Boldface and underlined headings do two things: (1) guide the reader and  
(2) condense information.
- \* Choose readable lettering for the text. The lettering should be large enough to be read from 4 feet away.
- \* Use color. It can emphasize major points, show differences and indicate changes.

### **Poster Session Production Media Resources**

Please provide the Media Resources Director all the information necessary to prepare with your Poster Presentation. Included should be the abstract, purpose, materials and methods, results, and conclusions, plus all graphs, tables, and

illustrations to be finalized in Media Resources. If possible, submit all text on a computer disk. This will ensure accuracy and speed up the process for you.

We will make color or B / W prints from your slides, if needed. Upon receipt of all pertinent information, assignment for the preparation of the poster will be made to an artist. There should be an open line of communication between you and the artist to discuss any changes or problems with the research project.

Media Resources requires about 5 working weeks prior to the date you request for completion.

### **Questions to be Considered**

- \* What are the size requirements of the poster and the case it is to be carried in?
- \* Do you need the program number and the presenter's photo on the title board?
- \* Do you need assistance in preparing illustrations?
- \* Do you need location photography, studio shots, or prints made from slides?
- \* What colors do you want for the poster boards, letter on, and decorative tape? Do the colors need to coordinate with your photos?
- \* Do you need Media Resources to typeset your information? If so, you will need to proofread and return for corrections. If possible, have your information already set on a computer disk for printing on a laser printer, saving time and expense.

The cost of producing a poster may vary from \$60 to \$130, depending upon:

- \* Graphics and artwork needed
- \* Photo shots and enlargements
- \* Complexity of the design\* Whether you provide the information on a computer disk for laser printing or if you need Media Resources to typeset.

### **Production Checklist**

\_\_\_\_ Review poster presentation guidelines

\_\_\_\_ Write and edit all text.

\_\_\_\_ Plan illustrations.

\_\_\_ Work with Media Resources to plan your poster layout, design and colors. Determine costs and completion dates.

\_\_\_ Send text for typesetting or compose for computer and laser printing.

\_\_\_ Proofread typesetting, if needed.

\_\_\_ Collect items to take with you, i. e., handouts if needed, push pins to put up your display and black felt tip pens to correct errors or scratches.

\_\_\_ Practice before the meeting. Set up the poster to check space allotment and arrangement.

\_\_\_ Pack in shipping case, if needed.

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