

**North American  
Spine Society**

# 2025 Research Funding

## **Grants\*:**

- Research
- Young Investigator
- Nontraditional, Nonsurgical Treatment
- **NEW** Graduate Research Seed Grant

## **Traveling Fellowships:**

- Clinical
- Research

\*Principal Investigator required to be a NASS member for Letters of Proposal/Grant Invitations

**NASS**  
ADVANCING GLOBAL SPINE CARE



The North American Spine Society (NASS) is a premier multidisciplinary medical organization with nearly 8,000 physician, researcher and affiliated healthcare members worldwide dedicated to fostering the highest quality ethical, value-based and evidence-based spine care through education, research and advocacy. NASS membership includes the following spine-related specialties: orthopedics, neurosurgery, physiatry, pain management, research and other disciplines, including allied health professionals.

NASS strives to be a leading force in promoting and supporting spine research. Since 1989, NASS has funded more than \$5.1 million in multidisciplinary spine-related research. NASS relies on the generosity of its membership, nonmember donors and the spine industry\* to provide funding for its research funds in support of the highest quality, peer-reviewed research.

NASS supports basic, clinical and translational science performed with integrity. The goal is to improve quality spine care for patients and understanding of underlying disorders. One way NASS achieves these goals is by funding grants and fellowships.

*\*Note: NASS retains full control of research award selection. Specific individuals or corporations do not have influence over the selection of recipients.*

## **Deadlines**

### **Letter of Proposal:**

February 10, 2025  
11:59 p.m. CST

### **Grant Applications (By Invitation Only):**

May 12, 2025  
11:59 p.m. CDT

### **Traveling Fellowships:**

May 12, 2025  
11:59 p.m. CDT

# Types of Funding Available

## Grants

*Principal Investigator required to be a NASS member in good standing for all grant offerings. Membership in good standing is defined as having no outstanding dues, nor restrictions to participation within NASS.*

NASS has identified the following general research priorities as key areas consistent with NASS' mission to support high quality research in advancing the field of spine care. Excluding the Nontraditional, Nonsurgical Treatment Grant, all other Grants must fall under one of these priorities.

### Basic Research

- May focus on projects that answer fundamental questions on the physical, chemical and functional mechanisms of processes and diseases that develop novel models for prevention and/or treatment.
- Projects use lab (basic medicine) sciences and animal models or cell/tissue culture of animal or human origin to answer these questions.

### Clinical Research

- May focus on projects with human subjects (patients or other individuals) or on material of human origin in which the research unit is a person.
- Projects focus on evaluation, diagnosis, treatment and outcomes of diseases or clinical conditions.
- Typically involves descriptive or more advanced statistics, as well as other related methodologies.
- Includes: Epidemiological and behavioral studies, outcomes research and health services research.

### Translational Research

- May focus on two types of translation:
  - » Process of applying discoveries generated during research in the laboratory, and in preclinical studies, to the development of trials and studies in humans.
  - » Aimed at enhancing the adoption of best practices in the community.
- Includes: Cost-effective studies.

## Research Grants

NASS research grants provide funding for promising research projects by qualified investigators in the field of spine. Funding amount and number of grants awarded are at the discretion of the NASS Research Funding Committee based upon merit of applications and amount of funding available each year. It is recommended that approved grant budgets range between \$20,000-\$40,000 per year. In rare cases and at the discretion of the committee, each year may be up to \$50,000 per year.

## Young Investigator Grants

NASS greatly values the development of Young Investigators (YI) and Early Career Professionals and thus, may award funding to promising YIs to encourage and promote quality spine-related research in one of the research priorities identified above. YIs must have completed their doctoral program and be either enrolled in post-doctoral training or within five years of completion of doctoral program training at the time of application. Acceptable doctoral programs include: MD, DO, PhD, DPT, etc. Applicants may not have received previous grant funding from the NASS Research Funding Committee. It is recommended that approved grant budgets range between \$20,000-\$40,000 per year. In rare cases and at the discretion of the committee, each year may be up to \$50,000 per year.

## Graduate Research Seed Grant - NEW

In an effort to further promote the development of aspiring spine researchers/investigators, NASS has created the new Graduate Research Seed Grant to award funding up to \$5,000 each to promising student(s) enrolled in a credentialed graduate program, pursuing spine-related research. Applicants must be enrolled in a credentialed graduate study program at the time of application, with confirmed mentor/faculty supervision from a NASS member in good-standing. Acceptable graduate and doctoral programs include: MD, DO, PhD, DPT, DC, Master's (healthcare, spine-related).

## Nontraditional, Nonsurgical Treatment Grants

The Nontraditional, Nonsurgical Treatment Grant is the result of a donation to research as part of a settlement of a class action lawsuit unrelated to NASS. This grant supports research of disc-related and/or neuropathic back pain by nonsurgical techniques. These funds must be used for new, nontraditional methods of nonsurgical treatment of such back and neck pain and radiculopathy. If TNF-inhibitors other than etanercept are used in research and/or treatment funded, comparison studies using perispinal etanercept in at least as many research subjects or patients should be done. Funding amount and number of grants are at the discretion of the NASS Research Funding Committee based upon merit of applications and amount of funding available each year. It is recommended that approved grant budgets range between \$20,000-\$40,000 per year. In rare cases and at the discretion of the committee, each year may be up to \$50,000 per year.

## Types of Funding Available

### Traveling Fellowships

#### Clinical Traveling Fellowship

The Clinical Traveling Fellowship spans at least one month to be spent in three to five different medical centers studying spine techniques. The centers selected by the applicant should agree in writing to accept the applicant if they receive the Fellowship. The Fellowship primarily covers the costs of travel and housing and typically ranges from \$3,000-\$7,000.

#### Research Traveling Fellowship

The Research Traveling Fellowship spans at least five months at one medical center (other than the facility at which the applicant currently practices) to participate in a research project. The center selected by the applicant should have appropriate research facilities and agree in writing to accept the applicant if they receive the Fellowship. The Fellowship primarily covers the costs of travel and housing and typically ranges from \$3,000-\$7,000. If funding for the actual research project is needed, please apply for one of the research grants.

### Funding Opportunities at a Glance

Type of Funding	NASS membership required for applicant?	International applicants eligible?	Previous NASS Research Funding Recipients Eligible?	Award Amount Available
Research Grant	Yes	Yes	Cannot have received NASS research grant funding within past three years**	Recommend annual budget of \$20,000-\$40,000, but no more than \$50,000
Young Investigator Grant	Yes	Yes	No – applicant must not have received any previous grant funding from NASS	Recommend annual budget of \$20,000-\$40,000, but no more than \$50,000
NEW Graduate Research Seed Grant	Yes, as well as mentor	Yes	No – applicant must not have received any previous grant funding from NASS	Up to \$5,000
Nontraditional, Nonsurgical Treatment Grant	Yes	Yes	Cannot have received NASS research grant funding within past three years**	Recommend annual budget of \$20,000-\$40,000, but no more than \$50,000
Clinical Traveling Fellowship	No	Yes	Cannot have previously received a NASS fellowship	Typically ranges from \$3,000-\$7,000
Research Traveling Fellowship	No	Yes	Cannot have previously received a NASS fellowship	Typically ranges from \$3,000-\$7,000

### General Guidelines

#### General Research Funding Guidelines

- Conflict of Interest Disclosure: At the time of fellowship or invited grant applications, all applicants (including grant collaborators / secondary investigators) are required to submit a conflict of interest (COI) disclosure through the NASS website in accordance with the NASS disclosure policy. More information may be found under Policies and Agreements (pg. 7).
- NASS does not support research for independent manufacturers, industry development or personal business financial gain. NASS will be sensitive to this issue.
- Funding will not be considered for applicants who:
  - » Are excluded from federally-funded healthcare programs. (See the HHS Office of the Inspector General's List of Excluded Individuals and Entities at [https://oig.hhs.gov/exclusions/exclusions\\_list.asp](https://oig.hhs.gov/exclusions/exclusions_list.asp))
  - » Are debarred by the FDA. (See FDA Debarment List at <http://www.fda.gov/ICECI/EnforcementActions/FDADebarmentList/>)
  - » Are subject to any federal sanctions either individually or by institution.
- See Policies and Agreements for additional requirements regarding disclosures, mandatory reporting, final presentation (grants only), citations, delinquent reports, and return of funds.

## Grant Project Guidelines

- **Principal Investigator (PI) requirements:** Must be a NASS member in good standing\* and cannot have received NASS grant funding within the past three years.\*\*
  - » \*Membership in good standing is defined as having no outstanding dues, nor restrictions to participation within NASS.
  - » \*\*Applicants awarded NASS grant funding for only year one of projects may apply in the next cycle for year-two funding of their project, so long as their Letter of Proposal notes as such and progress made thus far is demonstrated.
  - » Multiple grants will not be funded simultaneously\*\* to any PI, co-investigator, or collaborator/secondary investigator (\*\*see above exception).
- **Young Investigator (YI) requirements:** In addition to above PI requirements, principal YI(s) must have completed their doctoral program and either be enrolled in post-doctoral training or no more than 5 years out from completion of post-doctoral program training (e.g., residency, clinical fellowship, or other post-doctoral training) and cannot have received any previous grant funding from NASS.
- NASS members welcome to apply include: new investigators, active and qualified members within any specialty, International, and Medical residents, with the condition that residents have mentor/faculty support to work with them.
- **Graduate Investigator (GI) & Mentor requirements:** GI and mentor are both required to be NASS members. GI cannot have previously received any NASS research funding, while the mentor cannot have received NASS grant funding within the last three years.
- Any spine-related proposal will be considered; however, proposals may be submitted in only one category, not multiple. Categories may not be changed between the proposal and invited application stages.
  - » Applicants are strongly encouraged to have mentors or other senior researchers review Letters of Proposal and any Invited Grant Application before submission to NASS.
- **Project Correspondence:** The Principal (or Young/Graduate) Investigator will receive all project correspondence, serving as the primary contact and is responsible for sharing information to co-investigator(s) and collaborators.
- **Project Duration:** Projects must be for work to be performed or works in progress, not works already completed. Grants are awarded for one to two years of project funding at the discretion of the NASS Research Funding Committee. All projects are required to be completed within three years of award funding.
- **Budget:** There is no limit to the amount that may be requested for funding; however, most grants approved have annual budgets below \$50,000. Grant funding may be awarded for one to two years at the discretion of NASS' Research Funding Committee.
  - » **Format:** Budget must be provided as an itemized table, broken down by year (if requesting for multiple years) and totaled overall.
    - ▶ Changes to the budget are not permitted between the proposal and invited application stages.
  - » **Overhead/Institutional Costs:** Not to exceed 10-15% of the total budget (Note: this amount is included in the total amount)
  - » **Permanent Equipment:** Not to exceed \$5,000 annually
  - » **Salaries:** Only acceptable to include for supporting staff (lab technicians, research assistants, etc.) and statisticians. Do NOT include for any investigators.
  - » **Statistical Analyses:** May include salaries for statisticians
  - » **IRB:** As a 501(c)3 organization, NASS funding is typically not subject to IRB fees. NASS will pay reasonable IRB fees (up to \$2,000), if provided IRB documentation detailing the applicability of these fees to research funded by non-profit organizations.
  - » **Other acceptable costs to include:** consumable equipment, any other direct expenses
  - » **Cost-sharing** of projects is encouraged. Within the proposal and application, please list all other potential or confirmed funding institutions/organizations and amount requested and/or awarded as relevant to the project.
  - » **Ineligible budgetary items:** The following items may NOT be included the budget—
    - ▶ Costs for publication, travel, or meeting attendance, including for the NASS Annual Meeting
    - ▶ Salaries for any investigators

## Fellowship Guidelines

- Open to both NASS members and nonmembers within any spine-related specialty, as well as International members, provided that they have not previously received a NASS fellowship.
- **Project Guidelines:** The center(s) selected by the applicant must agree in writing at the time of application to accept the applicant if they receive the Fellowship. All letter(s) must be for current year.
- **Budget:** Primarily covers the cost of travel and housing, ranging from \$3,000-\$7,000.
  - » Format: Budget must be provided as an itemized table, broken down by year (if requesting for expenditure over two years) and totaled overall.
  - » Ineligible budgetary items: costs for publication, meeting attendance/registration fees, travel to meetings
- **Final Report:** Recipients will be required to write an article for *SpineLine*, the NASS magazine, following the conclusion of their fellowship to report their experiences to NASS Membership.



## Selection Process

Grant letters of proposal will be reviewed by the NASS Research Funding Committee and scored in the same manner as that of invited grants (see below), after ensuring that applicants are not excluded from federally-funded health care programs, nor debarred by the FDA. Those proposal holders with a strong merit in significance, approach and feasibility will be invited to submit a full grant application within eight weeks of notification. Applications for the new Graduate Research Seed Grant will not be compared or ranked against more experienced researchers.

All invited grant applications and traveling fellowships are reviewed by the NASS Research Funding Committee. Applications are rated on the basis of their scientific merit. The criteria considered include:

### Significance

The extent to which the project, if successfully carried out, will make an original and important contribution to biomedical and/or behavioral science in the spine community.

- Does this study address an important problem or scientific question?
- Does it address the significance of the topic, from either a health burden or biological importance standpoint?

### Approach

The extent to which the conceptual framework, design, methods and analyses are properly developed, well-integrated and appropriate to the aims of the project.

- Are the theories underlying the approach supported by valid science?
- Are the aims of the project clear and reasonable in the context of the project?

### Feasibility

The likelihood that the proposed work can be accomplished by the investigators, given their documented experience, expertise, etc. These criteria would consider the curriculum vitae of the investigators.

- Are the investigators appropriately trained and well-suited to carry out this work?
- Can the investigators deliver a result?

Scientific merit is the primary criterion for selection, but potential conflicts of interest will also be considered. The NASS Research Funding Committee will provide a brief, written critique of each invited application not approved for funding to the principal investigator. Applicants will not receive any feedback beyond the written critique; all scoring is confidential.

All applicants submitting a letter of proposal and/or invited application do so with the understanding that they will abide by the conditions, deadline policies and decisions of NASS. NASS reserves the right to change the format and/or amount of any awards at its sole discretion at any time, with or without notice. The number and amount of awards each year are at the discretion of the NASS Research Funding Committee, Evidence Analysis & Research Council and the Board of Directors. NASS makes no guarantee that applicants will be awarded the grant requested or that applicants will receive the total amount of funds requested if approved.

## Application Cycle Timeline

<b>February 10, 2025</b> <b>11:59 p.m. CST</b>	<b>Week of</b> <b>March 24, 2025</b>	<b>May 12, 2025</b> <b>11:59 p.m. CDT</b>	<b>Week of</b> <b>May 19, 2025</b>
Grant Letter of Proposal Due	Grant Applicants Notified if Invited for Full Application	All applications due (Fellowships & Invited Grant)	Application Receipt Sent
<b>Week of</b> <b>August 18, 2025</b>	<b>September 15, 2025</b>	<b>November 14-17, 2025</b>	<b>After</b> <b>Annual Meeting</b>
Application Decisions Sent	Award Payee Information Due	Award Ceremony at Annual Meeting	Funds Disbursed to Awardees; Initial Abstracts Due

### Awards Presentation

All awards will be officially presented at the NASS 40th Annual Meeting, November 14-17, 2025, in Denver, CO. Each award recipient or a designated representative is expected to attend the Annual Meeting to accept the award (date TBD).

# Grant Letter of Proposal: Instructions

**Deadline: February 10, 2025, 11:59 p.m. CST**

**STEP 1: Submit Proposal Body**—Complete Microsoft form with below details in compliance with the **Guidelines**.

- **Principal / Young / Graduate Investigator(s):** Contact information and professional designations (i.e., MD, PhD, DVM, etc.). If multiple PIs (i.e., co-PIs) are involved, select (1) as main PI.
  - » **NASS membership:** Prior to LOP submission, confirm PI/YI/GIs and GI Mentor hold NASS membership or a pending application to join. Learn more and apply at [www.spine.org/join](http://www.spine.org/join).
- **Title, Grant Category, Research Priority, Hypothesis**
- **Summary:** (1-2 sentence) overview of proposal, summarizing the entire project.
- **Description of Problem/Historical Background:** (300 words max.) describe problem, its historical context and significance as it relates to the spine. Include preliminary data and any other relevant work investigators have previously done on the project here.
  - » Note: If including in-text citations here or elsewhere in the LOP body, references are requested in **Step 2: Appendix**.
- **Purpose & Method of Research:** (500 words max.) detail specific aims and methodologies in relation to the project's purpose.
  - » **Sample size, power & recruitment potential statement:** required if the project involves human or animal subjects.
  - » **2nd-Year Funding Applicants:** provide summary here of all work completed in the first year of the project, including any preliminary work.
- **Total Funding Requested:** Overall and by year (if applicable). Itemized budget is requested in **Step 2**.
- **Collaborator(s):** List all co-investigators and collaborators, their role and contact information.
- **Capabilities:** Brief overview of role/expertise of collaborators, as well as all participating institution(s) and associated facilities to be utilized.
- **Involvement of any Foreign (i.e., non-US) Parties:** Note countries and organizations to be involved in the project.
- **Restrictions/Sanctions on any Investigators/Collaborators:** Disclose if any person(s) involved in the project are subject to federal or agency debarment, declared ineligible or voluntarily excluded from participating in research-related activities.
- **Closing Statement:** Detail any long-term research plans related to the study (e.g., plans to apply for NIH grants, etc.).

- **Optional: Consent for NASS to share application details to external funding sources** (e.g., fund matching opportunities). NASS requests permission to share the details within your letter of proposal (LOP) and, if invited, within your full grant application, with external organization(s) for cost-sharing application purposes. Granting permission does not guarantee your LOP/application will be shared with external funding sources, nor does it guarantee that additional funding opportunities will be available.

**Note:** Progress on form will not be saved until "Submit" is selected, upon which an email receipt is sent.

**STEP 2: Appendix Submission** - Email to [research@spine.org](mailto:research@spine.org) as a single file.

Compile below items (as applicable) in this order into a single word or PDF file. Number and label each page with PI's name & grant category.

- **Budget:** Format in a table with itemized detailing of costs in USD, broken down by year (if applicable) and totaled overall. See **Guidelines** for budgetary criteria and constraints. Need a budget template? Email [research@spine.org](mailto:research@spine.org)
- **Cost-Sharing:** Detail any pending funding application or award amount(s) in USD, funding party and allocation towards the project.
- **Young Investigator (YI) / Graduate Investigator (GI) Status:** Proof of eligibility in the form of a certificate, diploma copy or official letter from the academic program verifying enrollment and/or program completion date (anticipated or past).
- **Graduate Investigator (GI) Mentor Letter of Support:** Signed letter of support by the mentor, confirming their role and supervision in the project.
- **Figures, Tables, or Graphs:** Label as referenced in **Proposal Body**.
- **References:** As cited in **Proposal Body**.

## Questions?

Email [research@spine.org](mailto:research@spine.org) or call (630) 230-3694.

## Policies and Agreements

### **Fellowship and Invited Grant Applicants Only**

In accordance with the NASS Disclosure Policy, it is required that all fellowship and invited grant applicants (all investigators) complete the conflict of interest disclosure through the NASS website. The online disclosure is located at [www.spine.org/disclosure](http://www.spine.org/disclosure). If you have previously completed a disclosure, please use your username and password to access and update the form. If you have not utilized the database in the past, you will need to sign up as a new contact. For more information about the NASS Disclosure Policy, please visit [www.spine.org](http://www.spine.org).

### **Annual Report Requirement**

All applicants selected to receive a grant or fellowship are required to submit an annual status report to the NASS Evidence Analysis & Research Council on the progress of their project. All research projects are required to be completed within three years, regardless of whether the project is outlined as a one or two year project. All status reports are due July 31 of each year, to be submitted to NASS via email to [research@spine.org](mailto:research@spine.org).

### **Final Report & Presentation Requirements**

Upon completion of research, the applicant agrees to submit a final report as mandated by NASS format, which includes an abstract in hard and electronic copy to the NASS Research Department with a permissions authorization to publish in any NASS Research publications, website, etc. Formatting instructions can be obtained from the NASS Research Department.

**For grants, a podium presentation is also required at a future NASS Annual Meeting upon completion of the project.**

### **Citation**

NASS must be cited as the source of funding in any publication, presentation or in any publicity resulting from the project or its results. NASS should be sent reprints of all papers and publications resulting from research supported by the grant.

### **Delinquent Research Reports**

Investigators failing to submit an annual status report or final research findings will be noted as "nonresponsive" in any publication of NASS grants/funding, denied future funding, requested to return all funds distributed to them, and restricted from submitting any presentations to NASS for a two-year period. This policy goes into effect one year past the due date of any delinquent report. Eligibility for NASS funding and presenting at future meetings will be reinstated only once all delinquent items are resolved.

### **All Awards: Return of Funds**

If the funded project does not take place, all monies awarded will be refunded to NASS. If it is terminated early, a partial refund with an accounting of the funds expended up to the termination date will be provided. At the conclusion of the completed project, any unused funds over \$50 will be refunded to NASS.

**Questions?** Email [research@spine.org](mailto:research@spine.org) or call (630) 230-3694.

## Clinical Traveling Fellowship Instructions

The Clinical Traveling Fellowship spans at least one month to be spent in three to five different medical centers studying spine techniques. The centers selected by the applicant should agree in writing to accept the applicant if they receive the Fellowship. The Fellowship primarily covers the costs of travel and housing. Recipients will be required to write an article for *SpineLine*, the NASS magazine, following the conclusion of their fellowship to report their experiences to the NASS Membership.

To apply for the Clinical Traveling Fellowship, complete the following steps:

**STEP 1: Complete application form** with below information:

- Applicant's full name, academic degree(s), address, phone and email
- Address and contact information for each participating Medical Center
- Narrative description of goals for the fellowship, including your area(s) of spinal interest, and a weekly schedule of proposed activities/project milestones for **each participating Medical Center**.
- NASS Online Disclosure Form (See Policies and Agreements)

**STEP 2: Appendix Submission – Email to [research@spine.org](mailto:research@spine.org) as a single PDF file.** Compile below items; number and label each page with applicant's name.

1. Budget: formatted in a table with itemized breakdowns of amounts requested in USD and totaled overall. Total requested must match the amount you list in your online application submission.
2. Curriculum Vitae: Abbreviated to no more than 3 pages of relevant experience.
3. Letters of Acceptance from each Medical Center (must be dated for current year)
4. Three Letters of Recommendation (must be dated for current year)

**DUE: May 12, 2025, 11:59 p.m. CDT**

## Research Traveling Fellowship Instructions

The Research Traveling Fellowship spans at least five months at one medical center (other than the facility at which the applicant currently practices) to participate in a research project. The center selected by the applicant should have appropriate research facilities and agree in writing to accept the applicant if they receive the Fellowship. The Fellowship primarily covers the costs of travel and housing; if funding is needed for the actual research, please apply for a research grant. Recipients will be required to write an article for *SpineLine*, the NASS magazine, following the conclusion of their fellowship to report their experiences to the NASS Membership.

To apply for the Research Traveling Fellowship, complete the following steps:

**STEP 1: Complete application form** with below information:

- Applicant's full name, academic degree(s), address, phone and email
- Address and contact information for the participating Medical Center
- Area(s) of spinal interest
- Narrative description of the research project, including methodologies and/or techniques to be studied
- Applicant's roles and responsibilities within the project, including proposed activities and project milestones
- NASS Online Disclosure Form (See Policies and Agreements)

**STEP 2: Appendix – Email to [research@spine.org](mailto:research@spine.org) as a single PDF file.** Compile below items; number and label each page with applicant's name.

1. Budget: formatted in a table with itemized breakdowns of amounts requested in USD and totaled overall. Total requested must match the amount you list in your online application submission.
2. Curriculum Vitae: Abbreviated to no more than 3 pages of relevant experience.
3. Letter of Acceptance from participating Medical Center (must be dated for current year)
4. Three Letters of Recommendation (must be dated for current year)

**Questions?**

Email [research@spine.org](mailto:research@spine.org) or call (630) 230-3694.

**DUE: May 12, 2025, 11:59 p.m. CDT**



# North American Spine Society Research Priorities

The North American Spine Society (NASS) is committed to funding high-quality research that provides rigorously collected evidence to provide preliminary data to support future grant applications and/or to definitively answer research questions that challenge the field of spine research. In this document, the NASS Research Funding Committee provides guidance on research definitions and priorities.

**Basic Research** may focus on projects that answer fundamental questions on the physical, chemical and functional mechanisms of processes and diseases that develop novel models for prevention and/or treatment. Basic research projects use lab (basic medicine) sciences and animal models or cell/tissue culture of animal or human origin to answer questions on the fundamental mechanisms of biological processes and diseases.

**Clinical Research** may focus on projects with human subjects (patients or other individuals) or on material of human origin in which the research unit is a person. Clinical research focuses on the evaluation, diagnosis, treatment and outcomes of diseases or clinical conditions. Clinical research typically involves descriptive or more advanced statistics, as well as other related methodologies. Epidemiological and behavioral studies, outcomes research and health services research are also considered clinical research.

**Translational Research** may focus on two types of translation. One is the process of applying discoveries generated during research in the laboratory, and in preclinical studies, to the development of trials and studies in humans. The second type of translation concerns research aimed at enhancing the adoption of best practices in the community. Cost-effectiveness studies are considered translational research.

## Basic Research

- Research on the etiology and mechanisms of spinal pain.
- Research related to the pathobiology and/or treatment of disorders involving the spine and soft tissue (including the intervertebral disc).
  - » Spinal deformity
  - » Spinal cord injury (both traumatic and non-traumatic, including degenerative cervical myelopathy)
  - » Oncologic conditions of the spine and spinal cord
  - » Congenital disorders of the spine

## Clinical Research

(Studies evaluating treatment outcomes should use validated outcome measures and include results specific to each of the treatment methods implemented in the study for all subgroups studied.)

- Research on the treatment and management of degenerative disc disease.
- Research on strategies to improve clinical outcomes in the treatment of the spine.
- Surgical
  - » Examination of the efficacy of lumbar fusion, including, but not limited to:
    - Studies evaluating efficacy of fusion for degenerative disc disease in specific patient populations.
    - Prospective research to identify subgroups of patients with lumbar disc herniation with radiculopathy who may benefit from the addition of fusion to decompression as a primary procedure.
    - Studies comparing different fusion techniques in similar patient populations.
  - » Antibiotic prophylaxis in spine surgery, including, studies evaluating specific antibiotic regimens, particularly for patients with significant co-morbidities.
  - » Explore the role and efficacy of minimally invasive techniques in spine surgery.

## Medical/Interventional Research

- Long-term outcomes studies of specific spinal conditions that include results specific to medical/interventional treatment methods (e.g., injections, physical therapy, bracing, exercise).
- The role and efficacy of physical therapy in the management of back pain as related to specific spinal conditions.
- Role of complementary and alternative treatments for the spine as related to specific spinal conditions.
- Study of the efficacy and safety of pain management strategies (pharmaceutical and non-pharmaceutical) in the treatment of spine pain.
- Identifying patients or conditions that would better respond to early non-surgical intervention instead of interventional treatments.

## Additional Funding Priorities

- Economy of spine care
  - » Examining the impact of payment models on clinical outcomes of spine care.
  - » Examining cost-effectiveness/value of various strategies for spine pain and disease.
- Comparative effectiveness
  - » Studies on various treatment strategies for spine pain and disease.
- Multidisciplinary care
  - » Development of models of multidisciplinary collaboration in the care of the spine.
  - » Examination of alternative delivery models that may be applied to spine and other specialty care.
- Research around imaging of the spine
  - » New technologies for diagnosis of spinal disorders.
- Nontraditional, Nonsurgical Treatment Research, supporting disc-related and/or neuropathic back pain by nonsurgical techniques. If TNF-inhibitors other than etanercept are used in research and/or treatment funded, comparison studies using perispinal etanercept in at least as many research subjects or patients should be done.