Introduction to the NIH for Early Career Stage Investigators

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NIH Peer Review

• Guide to identifying NIH species
  – IC = institute or center
  – CSR = Center for Scientific Review
  – PO = program (not parole) officer
  – SRO = scientific review officer
  – RPG = research project grant
  – SRG = scientific review group (study section)

• Each species stays in its habitat & displays characteristic behaviors

You’ll hear some of these abbreviations tossed around a lot … and now you don’t need to worry about the blank look on your face. PO can be confused with parole officer …
NIH Peer Review

- POs live in ICs & maintain portfolios of funded RPGs
- POs help plan IC research priorities & funding opportunities
- Ideal specimens help PIs develop competitive grant proposals & network at scientific meetings
- Cautionary note - POs want as many applications as possible to justify budget requests, so take encouragement to apply with a grain of salt

POs send recommendations for funding up the chain of command, too … but, POs always WANT you to apply (helps them make the case for a bigger budget), so be sure to seek specific advice on what will get funded
NIH Peer Review

- Most SROs live at CSR & manage small herds of reviewers in SRGs
- SROs are not involved in actual scoring but know the habits of their herd
- SROs can add a special reviewer to the herd as needed
- POs can watch herding trials (study section mtgs) & report observations to PIs

Most Ks are actually reviewed at the ICs, so these SROs inhabit that niche.
NIH Peer Review

- PIs can & should request specific SRG in cover letter – should also request IC assignment & identify PO by name
- PIs can & should research SRG rosters to select best review panel for application
- PIs can & should ask PO for advice on SRG selection

Now, most ICs run their own special emphasis panels (SEPs) for K & F awards rather than have them dumped into the general SRG pool
NIH Peer Review

- Find SRG descriptions & rosters (& SROs) online at:
  www.csr.nih.gov/Committees/rosterindex.asp

- IC SRG/SEP rosters also available online
  era.nih.gov/roster/index.cfm

- Find POs through mentors, colleagues, & the extramural program staff at your favorite IC(s)
  - Look for “scientific areas”, “program contacts”, etc.
  - Links to each IC contacts at
    writedit.wordpress.com/nih-paylines-resources/

Ask for IC assignment (dual assignment as appropriate) & SRG in cover letter – list expertise needed to review the grant application as well
NIH Peer Review

- R01s by percentile, most of the rest by impact score
- Applications with the same overall impact score may have different percentiles depending on SRG meeting
- Percentile = percentage of applications receiving better impact score from SRG during past year 
  \[ \frac{100}{\text{# apps}} \times (\text{relative rank} - 0.5) \]
- Percentiles in flux now

NIH uses percentiling to counter a phenomenon called overall impact/priority score creep, in which study sections were increasingly giving applications better overall impact/priority scores to the point where the scores had little meaning. Percentiles are determined by matching an application's overall impact/priority score against a table of relative rankings containing all overall impact/priority scores of applications assigned to a study section during the three last review cycles.
NIH Peer Review

- Payline (funding threshold) set by IC extramural office - not all publish these
- Payline based on available $, average award size, & anticipated # of applications reviewed
- Ask PO about rank order if no percentile and/or payline data available

The IC’s office of extramural management (or equivalent) calculates the paylines using a standard formula (taking into account the budgeted $ for that mechanism, # applications reviewed, average award size for mechanism) and historical data for each funding mechanism. However, whether they stick with a strict threshold or not, and whether they release their target payline, varies widely from IC to IC. NIMH keeps the flexibility to consider anything from 10-20th percentile for funding (but no guarantees, so a 19th percentile could get funded while an 11th does not). NIAID and a handful of others lay out their paylines in detail.

Applications submitted to cycle 1 will likely face the highest odds of getting funded due to uncertainty regarding budget and number of applications anticipated … but it’s a minimal impact so should not be the cause of delayed submission if a proposal is ready in Feb (always submit when the application is ready –not before or after). ICs must set paylines that can be sustained … with ARRA funding, ICs anticipate spike in applications so will be especially conservative. NIAID set its interim payline for FY10 at 6th percentile.
NIH Peer Review

• Percentile ≠ Payline ≠ Success Rate
• Percentile linked to SRG scoring trends
• Payline linked to IC’s budget & # submissions
• Success rate = applications funded ÷ applications reviewed

Success rate has nothing to do with the payline. It’s just the total number of applications funded divided by submissions received (if an A0 [initial] and A1 [amended resubmission] for the same application come in the same year, the application is only counted once). The payline is roughly set by estimating the total number of submissions anticipated for the year, the budget available after accounting for all non-competing renewals, and the distribution of these remaining dollars to various mechanisms. Percentiles are linked to the study section in which an application was reviewed (not specific to any IC, except those study sections run within an IC, such as for training/career development applications, PARs specific to an IC, etc.). Percentiles reflect the percentage of applications receiving a better impact score from a study section during the past year (though right now, we only have 2 cycles of data for the new scoring system).
Applications submitted to cycle 1 will likely face the highest odds of getting funded due to uncertainty regarding budget and number of applications anticipated … but it’s a minimal impact so should not be the cause of delayed submission if a proposal is ready in Feb (always submit when the application is ready — not before or after). ICs must set paylines that can be sustained … with ARRA funding, ICs anticipate spike in applications so will be especially conservative. NIAID set its interim payline for FY10 at 6th percentile.
NIH Early Career Development
(FY08 success rate)

- F30: MD-PhD Fellowships (33% for all Fs)
- F32: Postdoctoral Fellowship (30%)
- K22: Postdoctoral->Faculty (23%)
- K99: Postdoctoral->Faculty (23%)
- K01: Research Scientist (39%)
- K08: Clinical Scientist (44%)
- K23: Patient-Oriented (38%)
- K25: Quantitative (48%)
- Apply for K12 slot at institution
  KL2RR024154, MCRSP;
  K12NS052163, Pediatric Neuroscience;
  K12HD001097, Rehabilitation Medicine;
  K12HD052892, Molecular Basis of Pediatric Disease
- Diversity supplement (to parent R01 et al.)

Also apply to a K12 at your institution … Ks are for US citizens only – be sure to read and understand all of the eligibility criteria … diversity supplements go to a wide range of mechanisms but are for underrepresented investigators, racial, ethnic, socioeconomic
NIGMS by far funds the most predoctoral fellowships, with NHLBI, NCI, and NIDDK covering the most postdoctoral awards.
No chart for F30s, unfortunately.
Success rate = percentage of reviewed grants that receive funding (if application is amended & reviewed in the same year, it is only counted once)
K success rates vary by IC, though, so be sure to check the award data for “your” IC.
Success Rate of Mentored Clinical Scientist (K08) Applications
Success Rate of Mentored Patient-Oriented Research (K23) Applications

![Graph showing the success rate of mentored patient-oriented research (K23) applications from 1998 to 2007. The graph includes bars for reviewed, awarded, and success rate. The success rate is generally increasing over the years.]
K22s are the other option for postdocs, usually to train intramurally at the NIH but also at extramural institutions, depending on the IC
Fellowships

- Application should include:
  - 3 outstanding reference letters submitted on time
  - Not a 2-sentence letter with no specifics
- Exceptional academic record
  - Address any academic problems directly or in the letters of recommendation
- Description of training environment
- RCR training
- For F31 applicants, include transcript and GRE or other relevant test score
Fellowships

• Target application to key review criteria

• Program
  – commitment to research training & career development
  – quality & availability of facilities & resources
  – research support
Fellowships

• Sponsor (mentor/advisor)
  - sponsor's caliber as a researcher
  - research training record
  - commitment to mentoring responsibilities
  - expertise matches your research interests
  - explain why chose sponsor
  - highlight his/her research & teaching accomplishments (don't go overboard)
Fellowships

• Relevant knowledge (yours!)
  – coursework & professional work directly related to your research topic
  – reviewers will consider your academic record, which can be bolstered or undermined by your other credentials
  – best-qualified candidates have performed research for at least 1-2 years
Fellowships

• Proposed Research Plan
  – thorough grounding in design, methodology, & analysis
  – problem solving
  – opportunities to interact with other members of the scientific community
Fellowships

• Research Plan must communicate:
  – clarity, completeness, & coherence
  – originality, significance, & practicality of goals
  – research skills & knowledge you want to acquire
  – potential for meeting these objectives
  – potential for training to serve as a foundation for career (F31) or to advance career as an independent researcher (F32)
Fellowships

• Ask mentor to review Research Plan for consistency & effective presentation of valid & original goals

• Worst peer review comment:

"I can’t believe that the investigator’s mentor read this."
Fellowships

- Check for required elements (e.g., training in ethical research conduct)
- Reviewers forgive minor omissions but not major ones
- Too many minor omissions add up to raise priority score
Diversity Supplements

• Program Announcement
  grants.nih.gov/grants/guide/pa-files/PA-08-190.html

• IC-specific contacts & guidelines
  grants.nih.gov/grants/guide/contacts/pa-08-190_contacts.htm

• NIGMS permits >1 graduate student or postdoc per grant
  grants1.nih.gov/grants/guide/notice-files/NOT-GM-08-127.html
  www.nigms.nih.gov/Research/Mechanisms/PromoteDiversity.htm

NIGMS allows more than one grad student or postdoc per parent award. “The support of more than one graduate student or postdoctoral fellow on a supplement may be especially important when interim support is needed to give these candidates a chance to apply for a National Research Service Award (either an NIH Pre-doctoral Fellowship or an NIH Postdoctoral Fellowship).” An individual can only receive a supplement from one grant at a time, but he or she can change grants to continue support over multiple years (ie, no limit on how long you can use supplements for $).
Diversity Supplement

- Must be consistent with the goal of strengthening the existing research program
- Citizen, non-citizen nationals, or permanent residents
- Students, postdoctorates, & eligible investigators:
  - from underrepresented racial & ethnic groups (African Americans, Hispanic Americans, Native Americans, Alaskan Natives, Hawaiian Natives, & natives of US Pacific Islands);
  - with disabilities; and
  - from socially, culturally, economically, or educationally disadvantaged backgrounds that inhibited their ability to pursue a career in health-related research (e.g., rural, inner city, income threshold)
Diversity Supplement

• Graduate Students who wish to develop their research capabilities
• Postdoctoral Trainees who wish to participate in ongoing research projects & career development experiences
• Faculty who wish to participate in ongoing research projects & develop their own independent research potential
• Not eligible if currently supported by research or T/F/K awards

Faculty who previously had an F or R03 are eligible – those with prior support from K01, K02, K07, K08, and K12 or any R01 or P01 project are not eligible.
Diversity Supplement

- Talk with program officer for parent award first about likelihood of funding & content of application
- $5K - 75+K per award
- Parent grant must have 2+ y remaining
- Submitted directly to sponsor IC for parent grant – open submission unless otherwise stated
- Very short, straightforward application – easily prepared

These are easy and negotiated, essentially, with the PO of the parent award … supplement should be allowable while pending F or K application, though check to confirm this is allowable with individual POs-ICs
As you can see, these enjoy an excellent success rate
## CAREER LEVELS OF INDIVIDUALS APPOINTED

**SUPPLEMENTS TO INDIVIDUALS FROM UNDERREPRESENTED GROUPS OR DISADVANTAGED BACKGROUND**

**FISCAL YEAR 2007**

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*includes an additional award to support 8 students.
K99/R00

- Pathways to Independence aka Kangaroo (K99/R00) mechanism
  grants.nih.gov/grants/guide/pa-files/PA-09-036.html
- IC-specific contacts & special instructions
  grants.nih.gov/grants/guide/contacts/PA-09-036_contacts.html
- FAQ
  grants.nih.gov/grants/new_investigators/QsandAs.htm
- Non-US citizens can apply
- Only postdocs can apply
- Not eligible if PI on prior K, R01, R03, R21, subprojects of P01 or P50, or any peer-reviewed (NIH or other sponsor) research award of >$100K in direct costs
K99/R00

- **K99** – mentored phase
  - 1-2 y salary & research support (usually does not exceed $90-100K total)
  - Intramural (NIH) or extramural

- **R00** – independent investigator phase
  - Activated upon receipt of tenure-track faculty position & satisfactory accomplishments
  - Up to $249K total costs per year (2-3 y)
  - 75% effort devoted to research

The R00 component is not automatic, and some ICs have strict rules about how many years must be spent on the K99 component before an R00 will be activated – other ICs allow applicants who obtain job offers during review period to jump right to R00 … *must* check with target IC(s) for their specific quirks
<table>
<thead>
<tr>
<th>IC</th>
<th>K99 Applications Received</th>
<th>K99 Applications Awarded</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIC</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>NCCAM</td>
<td>5</td>
<td>3</td>
<td>60.0%</td>
</tr>
<tr>
<td>NG</td>
<td>103</td>
<td>34</td>
<td>33.0%</td>
</tr>
<tr>
<td>NCCRR</td>
<td>4</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>NEI</td>
<td>25</td>
<td>4</td>
<td>16.0%</td>
</tr>
<tr>
<td>NHGRI</td>
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<td>2</td>
<td>50.0%</td>
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<tr>
<td>NHLBI</td>
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<td>25</td>
<td>29.4%</td>
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<tr>
<td>NIA</td>
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<td>5</td>
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<tr>
<td>NIAAA</td>
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</tr>
<tr>
<td>NIAD</td>
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<td>6</td>
<td>7.5%</td>
</tr>
<tr>
<td>NWB</td>
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<td>3</td>
<td>14.3%</td>
</tr>
<tr>
<td>NIBIB</td>
<td>24</td>
<td>5</td>
<td>20.8%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>42</td>
<td>13</td>
<td>30.2%</td>
</tr>
<tr>
<td>NIDA</td>
<td>25</td>
<td>6</td>
<td>24.0%</td>
</tr>
<tr>
<td>NIDCD</td>
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<td>5</td>
<td>26.3%</td>
</tr>
<tr>
<td>NIDCR</td>
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<td>3</td>
<td>25.0%</td>
</tr>
<tr>
<td>NIDDK</td>
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<td>11</td>
<td>37.0%</td>
</tr>
<tr>
<td>NEIH</td>
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<td>7</td>
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</tr>
<tr>
<td>NGMS</td>
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<td>16</td>
<td>14.0%</td>
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<tr>
<td>NIMH</td>
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<td>10</td>
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<tr>
<td>NINDS</td>
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<td>17.9%</td>
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<tr>
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</tr>
<tr>
<td>NLM</td>
<td>8</td>
<td>3</td>
<td>37.5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>795</td>
<td>180</td>
<td>22.6%</td>
</tr>
</tbody>
</table>

K99s are very competitive – be sure to work closely with someone at your target IC on these applications.
New/Early Stage Investigators

- IC-specific contacts & policies
  grants.nih.gov/grants/new_investigators/index.htm#policies

- New Investigator
  - Any age-career stage (oldest “new” investigator: 82)
  - Never been PI on major NIH grant, e.g., R01, P01/P50 subproject
    (NSF et al. okay)
  - Check individual IC restrictions

- Early Stage Investigator (ESI)
  - Any New Investigator who is ALSO within 10 y of completing terminal research degree or medical residency
    (or equivalent)
New Investigators

- Make it clear that you have your own resources - tout in enhanced Environment
- Show that you understand the literature
- Provide as much data & as many publications as possible
- "Less is more"
  - Less $, fewer years, fewer aims (but be careful since renewal budget based on initial budget)
  - Leave out non-essential information

Have someone unfamiliar with your science read it - if he/she can understand the project aims, rationale for doing the study, and approach to achieving the aims, you’re in good shape. If not, try again. The advice to go with fewer years/$ must be based on your science – don’t ask for less in the hope that you’ll be more likely to be funded … just don’t propose more than you can accomplish in 4-5 y, especially since you won’t have an army of students & postdocs cranking away on experiments.
New Investigators

• Ask mentor to review Research Plan for consistency & effective presentation of valid & original goals

• If mentor has few comments & says it was great, probably did not read it closely

• Worst peer review comment:
  "I can't believe that the investigator's mentor read this."

If the mentor has very few comments and says it is great then he/she didn't actually read it. You are probably not that good. No one is - everyone needs to have a fresh reader read.
New Investigators

- Quota for new R01 investigator awards – higher payline (usually 5-percentile break, sometimes 10-percentile break for ESI)
- Reviewers look more at potential than achievement – expect fewer preliminary data, resources, & publications
- New & ESI applications not interspersed with those of established PIs at study section (when feasible)

Many, many reasons to apply for an R01 vs an R03, R21, etc.
New Investigators

- New Investigator R01 applications can be resubmitted on accelerated cycle (same cycle in which it is reviewed) if feasible
- R01 application might still be funded through one of two programs: select pay & bridge awards (short-term funding to collect preliminary data – most successfully funded as R01s thereafter)
New/Early Stage Investigators

- Perks only apply to R01s
- NIH does not recommend using R03, R21, etc. as “starter” grants
- R01 applications flagged as New Investigator & ESI receive special consideration during the review & funding process
- Do NOT submit multiple PI R01 application with established PI – lose New Investigator status if funded!
Grantsmanship Tips

• Use short, concise sentences
• Organize application for logical flow of ideas & actions
• Use diagrams to illustrate models
• Use tables to summarize data
• Everything fits together
• Nothing is superfluous
• Nothing is omitted

General grantsmanship tips, any sponsor
Grantsmanship Tips

• Never assume reviewers “know what you mean”
• Never create additional work for the reviewer
• Enough white space to allow narrative to “breathe”
• Give reviewer talking points on impact/value of proposed work
• Picture reviewers reading this at 2 a.m. with a screaming sick child, an overdue manuscript, etc. etc.

You MUST generate excitement among reviewers to secure an advocate on the study section
Grantsmanship Tips

• You need to inspire an advocate for your proposal at study section
• Write an organized, clear, & exciting narrative
• Find as many readers as possible
• Have someone unfamiliar with your science read the application
  – Aims & hypotheses should make sense
  – Rationale for conducting study should be clear
  – Approach taken to achieve aims should seem logical

You want to hear the problems from your colleagues - not the reviewers
Grantsmanship Tips

• Sponsor looks for studies that mesh with their priorities & gaps (e.g., RePORTER, check portfolios at IC Websites, talk with PO, talk with foundation contacts)
• Not about you - about sponsor achieving sponsor’s goals
• NIH works for Congress & taxpayers, foundations for their donors & patient constituencies
• Monitor cleared concepts, IC strategic plans, RFIs, etc.

Keep in mind the sponsor’s needs no matter where you apply for funding – look at IC strategic plans, priorities, etc.
NIH Abbreviations Explained

- Application type
  - 1 = New
  - 2 = Competing renewal
  - 3 = Supplement
  - 4 = Extension (MERIT)
  - 5 = Noncompeting continuation
  - 6/7 = Change of grantee institution
  - 8/9 = Change of IC

- Sponsor code
  - Some from IC abbreviation (AI, DK, HL)
  - Some from word in IC title (AG, CA, AT)
  - AHRQ = HS (health services)
  - CDC - varies with Center
nih..gov/grants/funding/funding_program.htm
RePORTER

- Use RePORTER to check for funding of current/recent studies in the same area
  projectreporter.nih.gov/reporter.cfm
- Use cleared concepts to anticipate upcoming RFAs & IC priorities
- Talk with POs to ensure your planned study fills a needed niche in portfolio
- NCI Portfolio:
  fundedresearch.cancer.gov

Cleared concepts are discussed at Advisory Council meetings and posted online in advance of RFAs, PARs, PAs, etc. being issued - you are asking for money to do research that benefits the sponsor and the sponsor’s constituency … not just your personal interests & PT aspirations
RePORTER

http://projectreporter.nih.gov/reporter.cfm
An example near & dear to your hearts right now … notice the project start-end dates when deciding whether you can compete for funding in the same area
Abstract - project terms - public health significance (not shown)
Published articles citing the award - clearly Pitt needs to catch up here - plus patents issued etc.
Cleared Concepts

• Concepts are cleared at Advisory Council meetings – check meeting minutes

IX. Concept Clearance: P30, High Throughput Structure Biology

In response to a January 2018 P30 Management Plan, NIGMS has made several changes to the program, including increasing its focus on biological problems, providing more transparency on target selection, enabling the community to nominate protein targets and enhancing outreach to the biomedical community through the P30 Genomics Knowledgebase and the P30 Materials Repository. Drs. Peter Frey and John Norvell provided details of proposed new initiatives, including (i) new centers to enhance efforts in high-throughput structure methods and membrane protein structure determination; (ii) proposed partnerships for high-throughput enabled structural biology research; and (iii) continued support of the P30 Genomics Knowledgebase and Materials Repository. Drs. Frey and Norvell requested, and received, Council approval to pursue the P30 programs through appropriate funding solicitations.

Contacts: Dr. Peter Frey, freyp@nigms.nih.gov, 301-594-0823; Dr. John Norvell, norvell@nigms.nih.gov, 301-594-3533

Go read Advisory Council minutes to find NIGMS cleared concepts
Cleared Concepts

Concepts: Potential Opportunities

Concepts represent early planning stages for initiatives: program announcements, requests for applications, and requests for proposals.

Approval of a concept by NIAID's advisory Council, part of the planning process, does not guarantee it will become an initiative. That decision is based on scientific and programmatic priorities and the availability of funds.

Concepts can reveal possible initiatives or give you ideas for an investigator-initiated application. Read more in Application Approach: What Are Your Choices? and Concepts May Turn into Initiatives. Find published initiatives at NIH Funding Opportunities Relevant to NIAID.

Follow the links below to concepts cleared by NIAID’s Council at its last six meetings:

<table>
<thead>
<tr>
<th>DAIDS</th>
<th>DAIT</th>
<th>DMBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2008</td>
<td>May 2008</td>
<td>May 2008</td>
</tr>
<tr>
<td>September 2007</td>
<td>September 2007</td>
<td>September 2007</td>
</tr>
</tbody>
</table>

NIAID & other ICs list them on the main Website, usually in a section called research priorities or under funding opportunities (sep section for cleared concepts)
Cleared Concepts

Understanding HIV Persistence

Request for Applications

Contact: Sandra Bridges
Phone: 301-496-8100
Email: sbredges@niaid.nih.gov

Objective: The ultimate goal is the eradication of HIV-1 in infected subjects, i.e., a cure for HIV infection. This initiative addresses the final obstacle to that goal—purging reservoirs of HIV infection that remain despite optimal antiretroviral therapy (ART).

Scientific objectives are:

1. Better understanding of the basic biology of HIV reservoirs, both latent and persistently replicating, in order to understand why these reservoirs cannot be eradicated with current ART.
2. Design and development of safe strategies for reducing or reversing latency.

Description: This initiative will support basic and clinical research in three areas:

1. Basic research to identify and characterize the cellular reservoirs of HIV in HAART-treated individuals.
2. Development of assays that are physiologically relevant and represent the spectrum of cell types that may harbor latent HIV or permit viral replication in the presence of potent antiretroviral treatment.
3. High throughput screening of drug candidates: preclinical and (possibly) initial clinical testing of new agents/strategies.
Funding Announcement Opportunities (FOAs)

- Funding announcements vary by specificity of scientific objectives, funding available, deadline for submission.
- Parent Announcements capture unsolicited or investigator-initiated submissions to specific mechanisms (currently R, K & F series):
  grants1.nih.gov/grants/guide/parent_announcements.htm
Funding Announcement Opportunities (FOAs)

- Requests for Applications (RFAs) issued by one or more ICs announce funding for research in a well-defined scientific area.
- Applications typically due on a single receipt date – often a Letter of Intent (LOI) is requested.
- Specific $ amount set aside to fund grants – usually RFA estimates number of awards to be made.
- Contact the PO listed in the RFA for advice.

Often RFAs are a good bet to apply for if your work fits within the described research objectives … but for broader RFAs that could attract a large number of applications, the odds of funding will go down … your PO and RFA PO should have good advice on whether to go with an RFA, a PA, or an investigator-initiated funding opportunity announcement.
Funding Announcement Opportunities (FOAs)

- Program Announcements (PAs) issued by one or more ICs solicit research in a broad area of science. See [grants1.nih.gov/grants/guide/search_results.htm?year=active&scope=pa](grants1.nih.gov/grants/guide/search_results.htm?year=active&scope=pa)

- Applications typically due on standard receipt dates (Feb, June, Oct)

- PAR & PAS opportunities have special guidelines

- Contact the PO listed in the PA for advice
Funding Announcement Opportunities (FOAs)

• PAR
  - Program Announcement Reviewed in an Institute (not CSR)
  - PA with special receipt, referral and/or review considerations

• PAS
  - Program Announcement with Set-Aside Funds
  - Specific pool of money to encourage applications in targeted area
  - Can use set-aside $ to fund applications above payline
Funding Announcement Opportunities (FOAs)

• NIH Guide can be searched
• NIH Guide can be sorted by clicking on Column Headers
  – Announcement (to look for specific # or type, e.g., PAS)
  – Issuing organization (e.g., see what “your” IC is currently soliciting)
  – Activity codes (e.g., K22, R01, R34, U01, etc.)
Notices

- Notices announce policy & procedures, changes to RFAs or PAs, informational meetings for applicants to RFAs or PAs
- RFIs provide information & request input on future funding & programmatic initiatives
- RFPs (requests for proposals) & BAAs (broad agency announcements) solicit proposals for research contracts
- Findings of research or scientific misconduct announced

Lots of good information and notices show up here. Contracts are cost-reimbursement mechanisms that typically award one contract to the most efficient & qualified applicant/bidder.
Funding Cycles

• Standard due dates vary by mechanism-submission type but follow 3 cycles
  grants1.nih.gov/grants/funding/submissionschedule.htm
• Cycle 1: Feb (spans Jan-Apr) (first cycle for next FY)
  – reviewed June/July
  – Council in Sept/Oct
  – start Dec
• Cycle 2: June (spans May-Aug)
  – reviewed Oct/Nov
  – Council in Jan/Feb
  – start April
• Cycle 3: Oct (spans Sept-Dec) (last cycle for FY)
  – reviewed March/Apr
  – Council in May/June
  – start July

I suggest – but don’t insist – PI’s avoid the Feb/March cycle since the first funding decisions in the next FY (which starts Oct 1) are always the most conservative – so your funding may be delayed anyway unless you have an “exceptional” proposal. For mailed paper applications (very few of these remaining), applications must be postmarked on the “due date” or received (ie, sent the night before) on the “receipt date” to be on time. Electronic applications must be received by 5 pm ET on due or receipt dates.
Although this provides a bit of guidance, the bottom line is, submit whenever the application is ready.
Funding Resources

• NIH
  - grants1.nih.gov/grants/guide/index.html
  - grants1.nih.gov/grants/guide/listserv.htm (subscribe)
  - grants1.nih.gov/training/F_files_nrsa.htm
  - grants1.nih.gov/training/careerdevelopmentawards.htm
  - grants1.nih.gov/grants/guide/pa-files/PA-08-190.html

• NSF
  - www.nsf.gov/funding/
  - www.nsf.gov/funding/education.jsp?fund_type=3

• GrantsNet
  - sciencecareers.sciencemag.org/funding/

PA-08-190 is the current announcement for diversity supplements
Grantsmanship Resources

- NIH Grant Cycle Explained & Grant Tutorials
  www.niaid.nih.gov/ncn/grants/cycle/default.htm
  www.niaid.nih.gov/ncn/grants/default.htm

- Sample K Applications
  www.nhlbi.nih.gov/funding/training/redbook/newintro.htm

- Sample R01 Application (25 p)
  www.niaid.nih.gov/ncn/grants/app/default.htm

- Clinical Research Toolbox
  www.nia.nih.gov/ResearchInformation/CTtoolbox/

- New Investigator/ESI Portal
  grants.nih.gov/grants/new_investigators/index.htm

NIAID has, hands down, the best grantsmanship tutorials on the Web
Grantsmanship Resources

- NIH Peer Review  
  www.grants.nih.gov/grants/peer_review_process.htm
- Enhancing Peer Review (changes in NIH peer review & applications)  
  enhancing-peer-review.nih.gov/
- Peer-Review Video & Sample Applications  
  cms.csr.nih.gov/ResourcesforApplicants/InsidetheNIHGrantReviewProcessVideo.htm
- NIH Grant Basics  
  grants.nih.gov/grants/grant_basics.htm
Research proposals to the Biological Sciences Directorate (not proposals for conferences or workshops) cannot be duplicates of proposals to any other Federal agency for simultaneous consideration. The only exceptions to this rule are: (1) when the proposers and program officers at relevant Federal agencies have previously agreed to joint review and possible joint funding of the proposal; or (2) proposals for PIs who are beginning investigators (individuals who have not been a principal investigator (PI) or co-principal investigator (co-PI) on a Federally funded award with the exception of doctoral dissertation, postdoctoral fellowship or research planning grants). For proposers who qualify under this latter exception, the box for "Beginning Investigator" must be checked on the proposal Cover Sheet.