National Institute on Aging
Turning Discovery Into Health

A Run Through the NIH Funding Maze and How to Help Your Program Officer Help You

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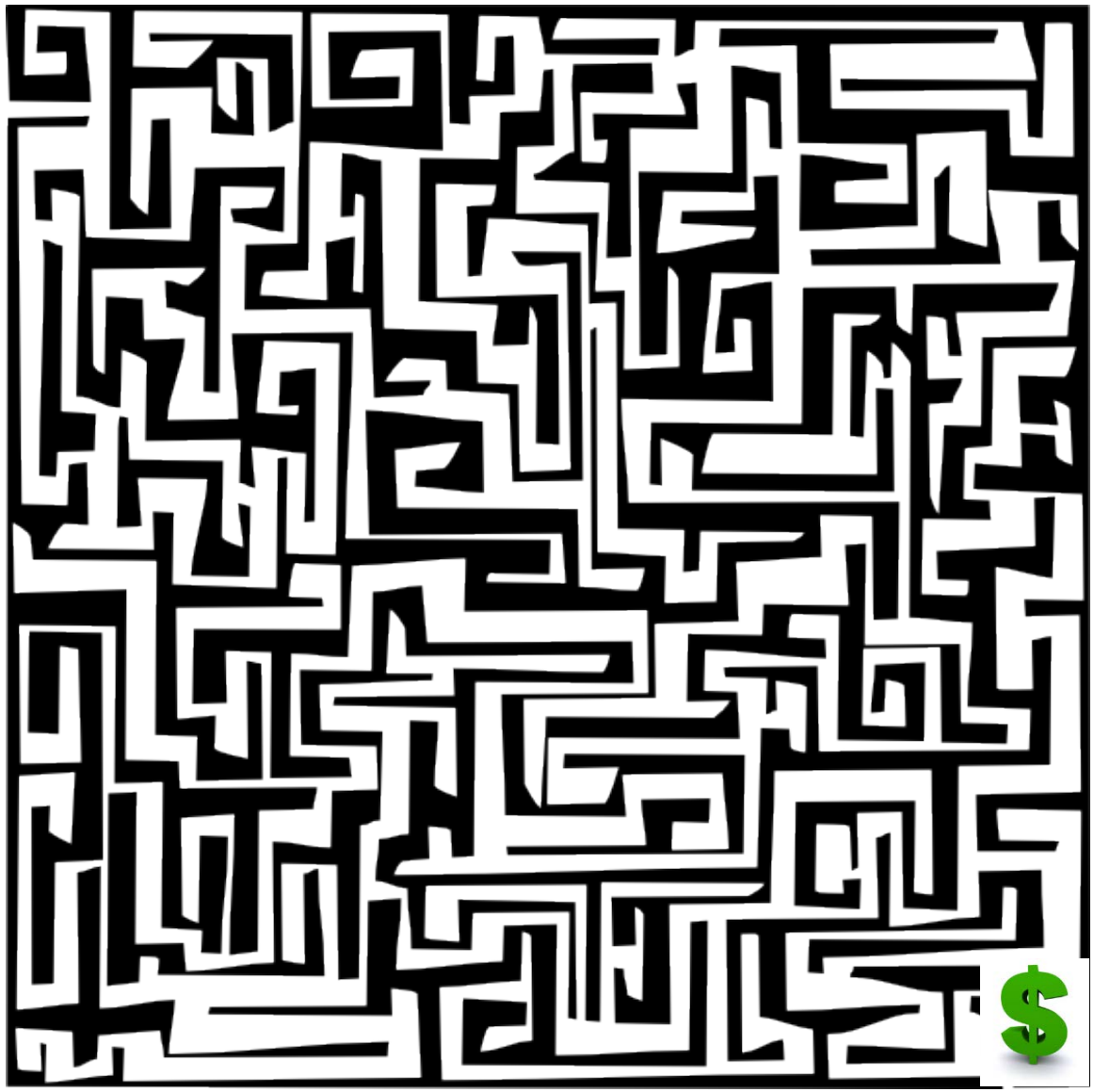
Funding mechanisms 101

Getting help - resources

Some Do’s and Don’ts of grants writing

You are here



Rule #1

Apply.

Rule #2

Know what to apply for.

Rule #3

Know when to apply.

Rule #4

Know what resources are available to help you.

RESOURCES

-they are helpful if you know about them and use them-

RESOURCES:

- Your grants office!
- NIH REPORTER
- NIH KIOSKs
- BLOGS – NIH Blog Rock talk + blog from your IC of interest
- Sign up for the NIH Guide and get weekly updates for new funding opportunities
- NIH and its 27 ICs plus the Common Fund
- Your program officer!

LINKS & DATA

QUICK LINKS

http://report.nih.gov/research.aspx

Home > Quick Links

RePORTER

The Report Expenditures and Results tool allows users to search a repository of NIH-funded research projects and access publications and patents resulting from NIH funding.

More Details

NIH Data Book

The NIH Data Book (NDB) provides basic summary statistics on extramural grants and contract awards, grant applications, the organizations that NIH supports, the trainees and fellows supported through NIH programs, and the national biomedical workforce.

More Details

Report Catalog

The Report Catalog is a menu driven interface geared for the NIH familiar user to provide customized reporting. A graphic depiction of some major funding mechanisms, and activity codes gives a hierarchical view of project organization.

More Details

Success Rates

Computed on a FY basis, success rates are defined by the percentage of applications funded and the total number of applications reviewed in various budget and grant activity categories.

More Details

Funding Facts

Quick access to statistics from the NIH Data Book and annual reports produced by the NIH OER's Division of Information Services. Ability to search statistics by topic, NIH IC's, funding mechanism, activity code, type of award, or fiscal year.

More Details

The Research, Condition, and Disease Categorization

RCDC provides consistent and transparent information to the public about NIH-funded research.

More Details

NIH Categorical Spending

Provide estimates of Funding for Various Research, condition and Disease Categories (RCDC)

More Details

ExPORTER

ExPORTER creates downloadable versions of the raw data for all research projects found in the RePORTER database for individual use and analyses.

More Details

Awards by Location

Consolidates all information about NIH-supported extramural organizations in a single tool.

More Details

Funded Organizations

Information on the organizations that NIH supports through research and research training programs.

More Details

NIH ARRA Funding Maps

Geographical representation of ARRA grants, summer research experiences, reports and stories.

More Details

Recovery Act Investment Reports

Reports on over 175 topics in biomedical research & investment in new knowledge as a result of ARRA.

More Details

Biennial Report of the NIH Director

An integrated portrait of NIH Activities and Operations prepared every two years.

More Details

NIH Factsheets

Yesterday, Today and Tomorrow for the prevention and treatment of diseases and conditions affecting the nation's health.

Strategic Plans

Review Strategic Plans and Visions of the Institutes and Centers of the NIH.

Shop Around

http://report.nih.gov/success_rates/index.aspx

F32 Success rates - FY12

2012	F32	NCCAM	9	4	44.4%	$249,747
2012	F32	NCI	232	42	18.1%	$2,087,900
2012	F32	NEI	73	24	32.9%	$1,252,192
2012	F32	NHGRI	7	3	42.9%	$145,326
2012	F32	NHLBI	198	42	21.2%	$2,200,948
2012	**F32**	**NIA**	**69**	**14**	**20.3%**	**$723,041**
2012	F32	NIAAA	29	15	51.7%	$760,198
2012	F32	NIAID	240	47	19.6%	$2,432,503
2012	F32	NIAMS	86	19	22.1%	$1,001,308
2012	F32	NIBIB	34	10	29.4%	$459,001
2012	F32	NICHD	119	25	21.0%	$1,287,638
2012	F32	NIDA	59	16	27.1%	$806,036
2012	F32	NIDCD	52	13	25.0%	$673,683
2012	F32	NIDCR	20	7	35.0%	$397,702
2012	F32	NIDDK	165	60	36.4%	$3,190,158
2012	F32	NIEHS	34	9	26.5%	$496,146
2012	F32	NIGMS	504	153	30.4%	$7,642,911
2012	F32	NIMH	125	27	21.6%	$1,339,307
2012	**F32**	**NINDS**	**219**	**58**	**26.5%**	**$2,980,964**
2012	F32	NINR	10	2	20.0%	$102,928
2012	F32	Total	2,284	590	25.8%	$30,229,637

F32 Success rates - FY13

2013	F32	NCCAM	7	2	28.6%	$135,060
2013	F32	NCI	265	50	18.9%	$2,516,840
2013	F32	NEI	93	19	20.4%	$996,156
2013	F32	NHGRI	4	1	25.0%	$49,214
2013	F32	NHLBI	209	59	28.2%	$3,206,739
2013	**F32**	**NIA**	**58**	**10**	**17.2%**	**$517,996**
2013	F32	NIAAA	27	13	48.1%	$655,037
2013	F32	NIAID	246	50	20.3%	$2,587,224
2013	F32	NIAMS	71	19	26.8%	$1,043,875
2013	F32	NIBIB	45	4	8.9%	$210,552
2013	F32	NICHD	128	22	17.2%	$1,073,520
2013	F32	NIDA	57	21	36.8%	$1,100,494
2013	F32	NIDCD	46	22	47.8%	$1,130,474
2013	F32	NIDCR	18	8	44.4%	$440,292
2013	F32	NIDDK	176	49	27.8%	$2,627,518
2013	F32	NIEHS	28	6	21.4%	$354,330
2013	F32	NIGMS	473	117	24.7%	$5,875,926
2013	F32	NIMH	138	24	17.4%	$1,243,804
2013	**F32**	**NINDS**	**205**	**56**	**27.3%**	**$2,885,673**
2013	F32	NINR	3	3	100.0%	$153,342
2013	F32	‡OD Other	0	0	NA	$37,968
2013	F32	Total	2,297	555	24.2%	$28,842,034

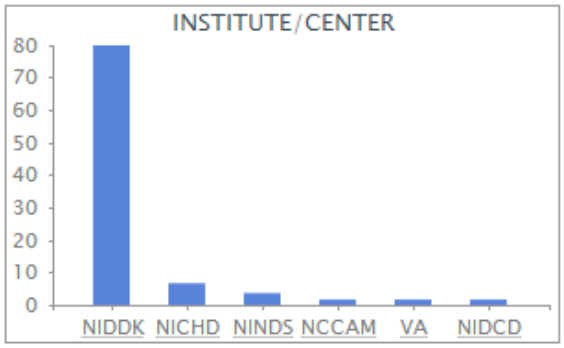
Matchmaker Results

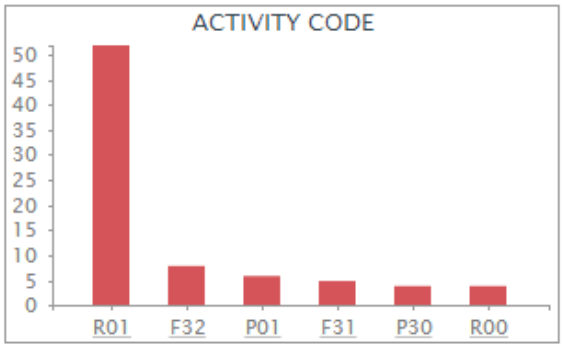
Matchmaker | New Query

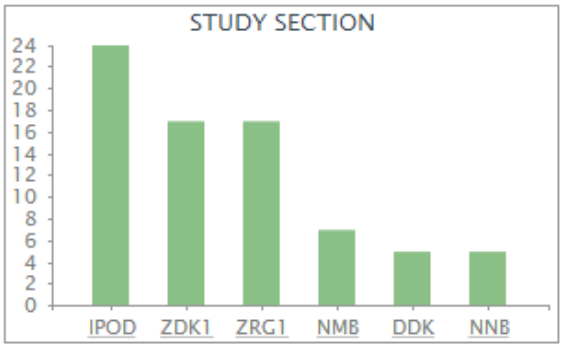
Export All Projects GO

100 projects similar to concepts from the entered text. (100 maximum). Show/Hide Search Criteria

Click on chart labels to filter search results by the Institute/Center or Activity Code or Study Section







Click on the column header to sort the results

Records per page 25

1 2 3 4

Click here to view detailed Charts

1 of 4 Next Last

T: Application Type; Act: Activity Code; Project: Admin IC,Serial No.; Year: Support Year/Supplement/Amendment

Match Score	T	Act	Project	Year	Sub #	Project Title	Contact PI / Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC	Similar Projects
679	5	P01	DK068384	05	0003	INTEGRATION OF LONG- AND SHORT-TERM CONTROL OF FEEDING	SCHWARTZ, MICHAEL W	UNIVERSITY OF WASHINGTON	2008	NIDDK		*$270,123*	
642	5	R01	DK080427	05		HYPOTHALAMIC PI3K SIGNALING IN REGULATION OF ENERGY BALANCE & GLUCOSE HOMEOSTASIS	XU, ALLISON W.	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	2012	NIDDK	NIDDK	$389,371	
642	3	K99	DK078779	02S1		BRAIN INTEGRATION OF ADIPOSITY AND SATIETY SIGNALS IN THE CONTROL OF FOOD INTAKE	WILLIAMS, DIANA L	FLORIDA STATE UNIVERSITY	2009	NIDDK	NIDDK	$1,080	
641	3	R01	DK080427	02S1		HYPOTHALAMIC PI3K SIGNALING IN REGULATION OF ENERGY BALANCE & GLUCOSE HOMEOSTASIS	XU, ALLISON W.	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	2010	NIDDK	NIDDK	$96,938	

THE NIH BLOGOSPHERE

grantsmanship tips, changes in NIH or an Institute-specific policy, data on past and future funding, research priorities and news, concerns or misconceptions, event announcements

Rock Talk

Helping connect you with the NIH perspective

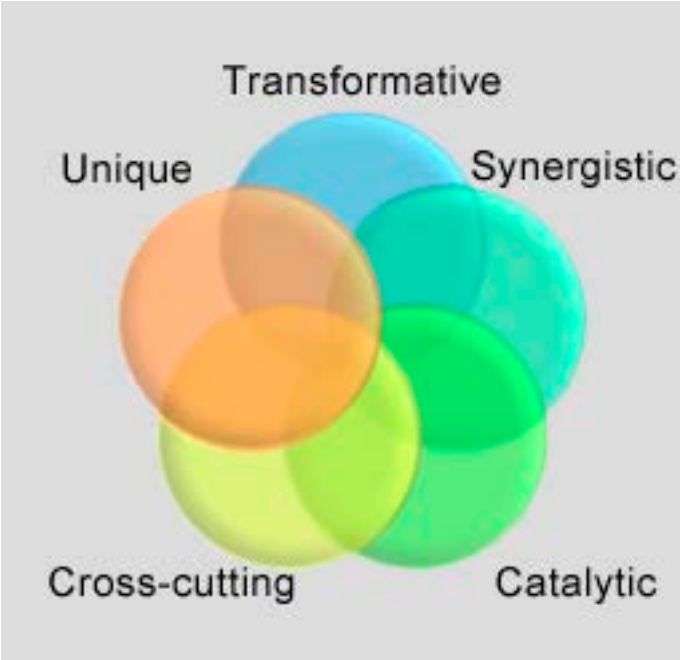
http://nexus.od.nih.gov/all/category/blog/#sthash.3oxB3eRJ.dpuf

More **ASSIST**ance Options for Submitting Your Application to NIH
Posted on April 30, 2015 by Sally Rockey

I'm excited to tell you about a new option for submitting your R01 applications to NIH. Today, we made ASSIST (the Application Submission System and Interface for Submission Tracking) available as an option for submitting your R01 applications, as well as most individual career development (K) award applications. ASSIST is a web-based system that was developed by NIH, in close partnership with Grants.gov, to address common application submission challenges identified by the community.

NIH Common Fund

http://commonfund.nih.gov/about



4D Nucleome

Big Data to Knowledge

Bioinformatics and Computational Biology

Building Blocks, Biological Pathways and Networks

Enhancing the Diversity of the NIH-Funded Workforce

Epigenomics

Extracellular RNA Communication

Genotype-Tissue Expression (GTEx)

Global Health

Glycoscience

Gulf Oil Spill

HCS Research Collaboratory

Health Economics

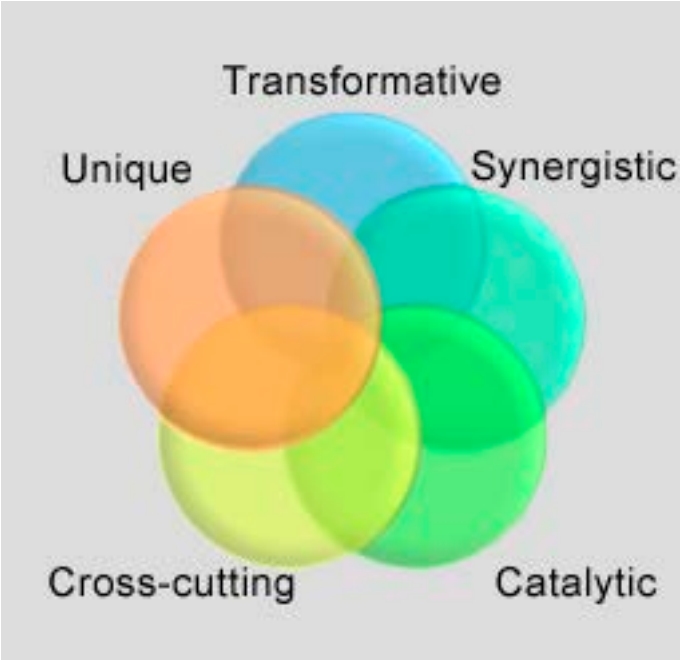
High-Risk Research:

- NIH Director's Early Independence Award (EIA)
- NIH Director's New Innovator Award
- NIH Director's Pioneer Award
- NIH Director's Transformative Research Awards

NIH Common Fund

http://commonfund.nih.gov/about

Human Microbiome Project
Illuminating the Druggable Genome
Knockout Mouse Phenotyping
Library of Integrated Network-Based Cellular Signatures (LINCS)
Metabolomics
Molecular Libraries and Imaging
Nanomedicine
NIH Center for Regenerative Medicine (NIH CRM)
PROMIS: Patient-Reported Outcomes Measurement Information System
Protein Capture Reagents
Regulatory Science
Science of Behavior Change
Single Cell Analysis
Stimulating Peripheral Activity to Relieve Conditions (SPARC)
Strengthening the Biomedical Research Workforce
Undiagnosed Diseases



BIOMEDICAL BIG DATA EXPLOSION

NIH National Center for Biotechnology Information

DATA STORAGE

In **1990** fit on 3 floppy disks

In **1993** fit on 1 CD-ROM

In **2014** could fill

400 MILLION

4-drawer filing cabinets

Types of BD2K Awards

- Enabling Data Utilization
- Analysis Methods and Software
- Enhancing Training
- Centers of Excellence

NIH Big Data to Knowledge (BD2K) is an initiative of the National Institutes of Health

Know your Institute(s)

Know your program officer(s)

New Investigator VS. Early Stage Investigator

Junior faculty

- Mentored Ks (K01, K08, K23, K25)
- When do I apply for an(R03, R21)?
- When do I apply for an R01?
- DP2 (New Innovator)
- L30 loan repayment

Early middle to middle

- R01, R01, R01 contd.
- R03, R21
- K02 – independent scientist award (accelerator)
- K24 (patient-oriented, combined purpose, mentoring, advancing own research career)

On not applying…

"I heard that it's so competitive now that a new investigator has no chance of funding."

You have no chance of funding if you don't apply.

On not applying…

“I applied once and the people who reviewed my application did not understand it. So I didn’t get funded. What’s the point in my applying again?

You might get funded next time (if you apply).

On not applying…

“Joe Smith got funded under that special program. That was a one time only deal. There’s no point in my applying.”

There are many funding opportunities available (if you apply).

On knowing what to apply for…

Profile of a typical R01 grantee:

Has been in the research field post PhD/MD for several years; will have more than a few first-authored, peer-reviewed publications; will likely have been reviewing papers for journals for some time; will be known to colleagues in the research field; WILL HAVE A PRIOR GRANT HISTORY.

WILL HAVE A PRIOR GRANT HISTORY….

On knowing what to apply for…

Funding on someone else's grant (e.g., co-investigator, diversity supplements…)

AREA (R15) grants (Academic Research Enhancement Awards)

R03 pilot grants
R21 exploratory grants.

Loan repayment programs

Fellowships (F-series awards)

Career awards (K-series)

Non-NIH sources

R03s and R21s (Small Grants and Exploratory/Developmental awards)

Community lore:

- They are part of the progression to an R01
- They are easier to obtain than an R01
- Obtaining one, makes you more competitive for an R01

Fact:

- Most people who obtain R01s have not previously held R03s or R21s
- New investigator success rates for R03s and R21s are lower than for R01s
- People who have held R03s or R21s hold no competitive advantage for R01s

So when do I apply for an R03?

When you envision a small project that will be complete in itself and will advance the science.

Like secondary data analysis.

On knowing what to apply for…

The NIH Small Grant Program (R03)

http://grants.nih.gov/grants/guide/pa-files/PA-13-304.html

$50,000 (direct costs) per year for up to two years.
Submission dates: February 16, June 16, October 16

R21 Exploratory/ Developmental Award

- Up to $275,000 across two years (e.g., $100,000 in the first year, $175,000 in second year)
- Submission: February, June, October 16

http://grants.nih.gov/grants/guide/pa-files/PA-13-303.html

NIH Purpose for R21

- The evolution and vitality of the biomedical sciences require a constant infusion of new ideas, techniques, and points of view. These may differ substantially from current thinking or practice and may not yet be supported by substantial preliminary data. By using the R21 mechanism, the NIH seeks to foster the introduction of novel scientific ideas, model systems, tools, agents, targets, and technologies that have the potential to substantially advance biomedical research.

So when DO I apply for an R21?

When you need to test a new methodology, or test, or procedure. The work should be complete in itself. There's an emphasis on innovation.

On knowing what to apply for…

K01 — Mentored Research Scientist Development Award
An early or mid-career award for individuals with some prior postdoctoral research experience.
(75% min effort, Salary $75k, Research $20k)

Critical: Show need for career development.
Contrast with R03, R21, R01

http://grants.nih.gov/grants/guide/pa-files/PA-14-044.html

On knowing what to apply for…

Research Career Development Awards contd.

K08 — Mentored Clinical Scientist Development Award
An award for junior clinicians with little-to-moderate research training who wish to become independent clinician-scientists.
$75k plus fringe (75% effort) $25k a year research development

For physicians or other health-professionally trained-researchers

http://grants.nih.gov/grants/guide/pa-files/PA-14-046.html

On knowing what to apply for…

Research Career Development Awards contd.

K23 – Mentored Patient-Oriented Research Career Development Award $75k salary 25k/50k research development expenses

When a physician and patient are in the same room at the same time and at least one is alive.

http://grants.nih.gov/grants/guide/pa-files/PA-14-046.html

On knowing what to apply for

Research Career Development Awards contd.

K25 --- Mentored Quantitative Research Career Development Award

An award for relatively junior scientists who have been trained in quantitative disciplines (mathematics, statistics, economics, computer science, imaging science, informatics, physics, chemistry ands engineering) who now wish to develop their careers in biomedical research. Salary up to $75,000. Research expenses up to $40,000 a year

http://grants.nih.gov/grants/guide/pa-files/PA-14-048.html

On knowing what to apply for

Research Career Development Awards contd.

K99/R00 – Pathway to Independence Award. Salary: Up to $75k, Research Development to $25k (mentored phase). R00 phase: Total cost to $249k

K99 applicants must have no more than 4 years of postdoctoral research experience at the time of the initial or the subsequent resubmission or revision application, and must be in mentored, postdoctoral training positions to be eligible to apply to the K99/R00 program.

There is no citizenship requirement for K99 applicants.

http://grants.nih.gov/grants/guide/pa-files/PA-15-083.html

K Kiosk - Information about NIH Career Development Awards

http://grants1.nih.gov/training/careerdevelopmentawards.htm

Career Award Wizard

http://grants1.nih.gov/training/kwizard/index.htm

This Career Award Wizard is designed to help you identify an Individual NIH Career Award that might be right for you. Please be warned that it isn't fool-proof. After you have identified a program that looks like it might work and you've downloaded and read the program announcement, please call the identified contact at the most likely funding Institute or Center and confirm your selection. This call might save you a lot of time and effort so it is very important to make that call before you begin work on your application. If you can think of ways to enhance the wizard, please send email to NIHTrain@mail.nih.gov.

K99/R00 Individuals are NOT eligible if they:

Have currently or previously held an independent research faculty or tenure-track faculty position, or its equivalent, in academia, industry or elsewhere; or

Have more than 4years of related postdoctoral research training at the time of initial application or resubmission; or

Have been an independent PD/PI on NIH research grants (e.g. R01, R03, R21), NIH career development awards (e.g., K01, K07, K08, K23, K25), or other peer reviewed NIH or non-NIH research grants over $100,000 direct costs per year, or project leaders on sub-projects of program project (P01) or center (P50) grants

On knowing when to apply:

When are you likely to be competitive?

How long does it take to get an award?

The more that you know about the process in advance then the less time it takes.

FOA varieties

RFA – request for applications

- Focus on a particular topic, single submission date, usually about three months' notice, special review group, set-aside money

PAS – program announcement with a set-aside

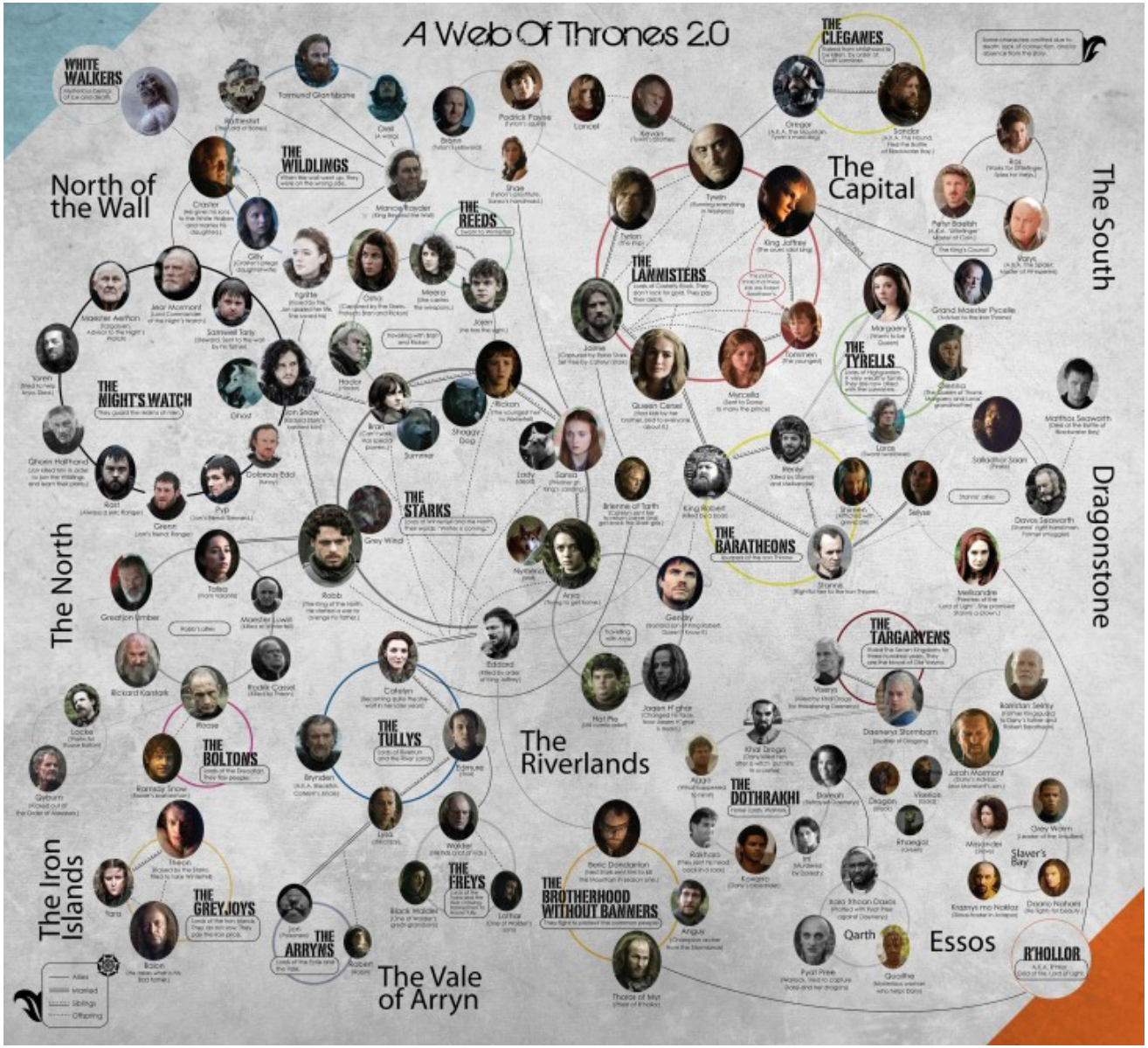
- Broader focus than RFA, multiple submission dates, regular review groups, set-aside money

PAR – program announcement with special review

- Broader focus than RFA, multiple submission dates, special review group, sometimes set-aside money

Program vs. Review

If you can't beat them join them …..



NIA Blog – Robin Barr, Director of NIA's Division of Extramural Research

The average age of first-time R01 funded investigators who have PhDs remains 42 even after seven years of policies at NIH to increase the numbers of new and early-stage investigators. And, over the same interval, age has continued to increase for first-time R01-funded MDs and MD-PhDs, despite the policies we have in place. What is going on?

R01 Teams and Grantee Age Trends in Grant Funding

"That started me chasing another thought. How many investigators does it take to write an R01? I looked at the 100 top-scoring R01 applications across NIH in January 2015 and compared them to a similar set from January 2005.

In 2005, more of the top scoring applications had a single principal investigator listed as the faculty on that application—just Professor X and the students and postdocs—than had two faculty, or three faculty or any other number.

By 2015, Professor X needed more help. Now, three faculty is the most common number of faculty members on an application. By 2015, the "average" top-scoring R01 at NIH had more than four faculty listed as participating on it."

Is Multi-PI R01 something junior faculty should apply for?

-depends

NIA Blog: Strengthen your Research for a Better Score Dos and Don'ts –

Posted on January 28, 2015 by Dallas Anderson, Program Director

Research Plan:

DO

Simplify (but don't oversimplify) your research plan.

Scientific justification, writing style, page limits

DO

Justify the proposed research scientifically, including theoretical motivations, relevant published data, and pilot data if appropriate. Obvious potential overlaps with existing grants should be thoroughly addressed.

DON'T

Don't skip the literature review entirely or ignore large chunks of the relevant literature in order to save space. Don't use a writing style that is dense and confuses the reviewers.

Specific aims

DO

Applications become stronger by reducing complexity and eliminating poorly developed aims from the proposed research. How many aims should an application have? No more than three or four. Select aims that are novel or fresh, and are capable of *substantially* advancing the field.

DON'T

Don't include untestable aims.

Key personnel

DO

Key personnel must have appropriate expertise and experience, specific to the stated aims.

DON'T

Don't assume that it's irrelevant whether key personnel have a history of successful collaboration together.

Data collection

DO

When it comes to data collection activities and the analytic plan, they need to be linked to the stated aims. Use preliminary data to show feasibility of aspects of the research design—it's important!

TAKE HOME MESSAGES

- **Maximize your chances to get funded**
  - Private Foundations
  - Shop around for an IC
  - Choose the appropriate study section
  - Work on your grantsmanship

- **Do your homework / read the funding opportunity instructions!!!** (due date, eligibility criteria, research objectives, responsiveness and/or special review criteria)

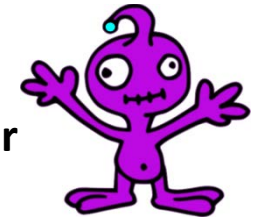
- **Know your eRA account and <u>use it</u> to get updates on your grant applications**

- Spend a couple of hours each week surfing the NIH web

- Choose your mentor carefully/be your own mentor

- **Be an informed and active citizen**

- **Build good working relationships including with your**



- Think Outside Academia

THANK YOU

petanceskas@nia.nih.gov