As scientists, we are responsible for the accurate interpretation, representation, and dissemination of our research. Our publications and associated press releases inform future research, policy-making, and clinical practice. However, “science hype,” or the biased presentation of data used to skew audiences’ views, does occasionally happen in scientific manuscripts. Some examples of science hype include using causal language when no such relationship exists and detracting from statistically non-significant results.¹

Science hype can also extend beyond the pages of research journals and enter the realm of news media. Flashy headlines often use language that minimizes the complexity of research findings, failing to explain the nuances of such results. Character limits on Twitter tweets, competition to capture readers with bold headlines, and initiatives to increase the number of followers and promote “likes” on news accounts all contribute to science hype. Translating peer-reviewed papers into headline-grabbing stories often yields fake scientific news.² Such stories are known to influence the readers’ behavior and decisions.³

We point our fingers at media outlets for distorting research findings, but scientists must also assume responsibility for hyped claims related to their own work. The frequency of positive words (i.e. innovative, novel, robust, unprecedented, groundbreaking) has risen in the titles and abstracts of research papers on PubMed.⁴ Optimism and innovation certainly drive funding and publications; however, misrepresenting findings to appease gatekeepers who review grant applications and manuscript submissions does more harm than good. How can scientists avoid hyping their research, but still get it published and funded?

To address this, let’s look at the opposite problem: not sharing the broader implications of your research clearly enough. Dr. Henry Levin, senior investigator of the NICHD Section on Eukaryotic Transposable Elements, shared one particular experience on the topic. In 2015, his research group demonstrated that human immunodeficiency virus (HIV)-1 preferentially integrates into genes with high levels of splicing.⁵ The proposed mechanism opens the door to new antiviral strategies and safer gene therapy options.

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Letter from the Editor

Over the years of editing this newsletter, I have noticed that some topics garner more interest than others. Our “tough topics” theme appears to be one such area. Thanks to the NICHD fellows who volunteered to explore difficult issues in biomedical research, this theme will stretch beyond our planned two-part series into a third issue next month.

For Part II of our “tough topics” series, postbac Audrey Lee talks about the difficult skill of selling your work without overstretching the implications of your findings. In her interview with NICHD Principal Investigator Dr. Henry Levin, we learn about striking this tricky balance.

For NICHD fellows who aren’t quite at the publication phase, graduate student Allison Dennis offers a personal narrative about her decision to start a new project already two years into her degree program. I think we can all relate to her experience on some level.

We’re in for a busy few months with plenty of opportunities and events; just take a look at the “Rep Report,” March Announcements, and several valuable activities sponsored by the central Office of Intramural Training & Education (OITE).

I’ll stop here so you can dig in to this great issue!

Your Editor in Chief,
Shana R. Spindler, PhD

We love to hear from you! Please send your questions and comments to our editor at Shana.Spindler@gmail.com.
What's All the (Science) Hype About?  
(continued from page 1)

Given the importance of this finding, Dr. Levin did not expect to submit this paper to many journals before it was reviewed and accepted. However, the manuscript was declined for review by two different journals before it was positively received. Dr. Levin attributes the publication obstacles to the cover letter, which serves as the manuscript’s first introduction to the editor and provides authors the opportunity to “sell” their paper to that journal. The level of detail in the original cover letter took attention away from the study’s true significance.

Upon the advice of his colleague, Dr. Levin carefully reworked the cover letter, using plain language that clearly articulated the finding and its impact. He advised NICHD fellows to “put much more effort into how results are described [in various manuscript components]. This is not the same as hyping the result, but rather providing a clear, contextualized explanation.”

Due to the far-reaching effects of published research findings, there are many consequences of science hype. For one, “misrepresenting results and over-interpretations are violations of scientific ethics which have led to the erosion of trust with the public and elected officials,” explained Dr. Levin. Along similar lines, science hype can promote unrealistic expectations for future medications and therapies and misinform policy debates. Unfortunately, Dr. Levin also expressed concerns that “under current conditions overhyping can pay off ... unrealistic conclusions can lead to having your paper sent out for review which gives you a much greater chance of acceptance.”

Science hype is a real problem. In an effort to combat this phenomenon, the International Society for Stem Cell Research has called on researchers to acknowledge the growing role they play in the science communication process. Dr. Levin encourages scientists to be factual and precise, avoiding grand speculations when communicating research findings. He advises basic language and clear articulation of how a result contributes to the field of study. “It’s really using communication as an art to better educate the public. This would lead to healthy skepticism when results sound too good to be true,” said Dr. Levin. Certainly exciting new research findings should be celebrated and shared with the public, but not in a way that leads to misrepresentation and public distrust.

REFERENCES
When to Give it Another Go

By Allison Dennis

I watched Lee Sedol place a black piece down in a gentle motion so subtle I couldn’t understand what it meant until the commentators described it as resignation. Curious about the infamous match between 18-time world Go champion Lee Sedol and a computer program built by Google, I had turned on the documentary AlphaGo. However, with fourth-year-graduate-student woes festering in the back of my mind, I was mesmerized by this game that seemed at its very root an exercise in accepting when to move on. Go is the oldest continually played board game in the world. Although there are clear rules for ending a match, such as running out of pieces, game etiquette results in most games being scored as a “win by resignation.” This is when one of the players has assessed an inability to win based on the current state of the board. After 186 moves against a computer that Sedol had been confident he could beat, he accepted this conclusion.

I have yet to play a game of Go, and I can’t think of an equivalent game in my experience that teaches you the quiet resignation that I saw displayed by Lee Sedol at the end of his first game. Growing up playing this game could have helped teach me the grace I am certainly going to master before I can move onto the next stage of my career.

When I started graduate school, I knew it would be a lesson in perseverance. By design, getting a PhD requires you to create something from nothing. I was matriculating from a two-year postbac at the NIH, where I had been following the evolution of circulating rotaviruses in the years following the introduction of what has proven to be an incredibly successful vaccine program. My research was exploratory. My hypothesis was usually “I will find something cool to talk about after sequencing the genomes of these quickly evolving pathogens.” I was always proven right and was supplied with more than enough material to contribute to several publications. I think I knew then that this experience was atypical. In my mind, having a PhD in biology reflects a demonstrated acumen for following the logical architecture of the scientific method. To me, this meant I would have to step away from the exploratory research of my postbac and dive into a truly hypothesis-driven project.

I found what I was looking for in the lab of Dr. David Clark in the Section on Chromatin and Gene Expression. Sitting in his office, Dr. Clark explained that no one really understands the way polymerase gains access to the DNA wrapped around nucleosomes. There was a lot of work in vitro that had been used to develop a model, and he had a clever trick to study it in vivo. We knew what we were looking for, and we knew what it would mean if we saw it. This was scientific method gold as far as I

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was concerned. I could tell during my rotation that Dr. Clark was the kind of mentor I needed to bring me into the world of classical science. He’s the kind of experimentalist who puts you in the practice of contemplating the role of each reagent in a borrowed protocol. He’s the type of scientist who uses the word Mechanism with a capital M, and knows that it means much more than a picture you drew at the end of a paper.

I dug in. My first year in the lab, I developed several strains of yeast that I thought could help us unravel the mechanism. But it seemed like nature was fighting us—I hadn’t quite gotten the resolution we would need to draw conclusions. At the time of my first annual committee meeting, I explained that my current strategy wasn’t working, but that I knew what to try next. I distinctly remember one of my committee members arming me for the possible disappointment ahead by urging me, “Look around this room. I’m sure no one here finished graduate school with the same project he started with.”

A stroke of inspiration for how to proceed had come from a postdoc in the lab who was treating yeast nuclei with purified proteins. This could help me overcome the issues that were arising from forcing yeast to express a protein harmful to them. My second year was all about running with her idea to treat the nuclei directly. Adapting her technique to my parameters, I was finally ready to begin developing a method to let us observe polymerase in its dance around the nucleosome structure.

But when the results came back, they didn’t match our expectations. Our first guess of what was going wrong couldn’t solve it. Neither could the second. The inconsistent results began to pile up, slowly burying the hypothesis that was so clear at the project’s inception.

So how do you know when to stop? Tracing my steps back through the last two years, I can still justify taking the next step each time I made it. At this point, I can think of a few things to try to move forward with my original project, but none seem as promising as spending some time on something totally new. The good news is that I have a supportive mentor and committee who agree that it’s time to explore new options. I miss the days of my postbac, when the observations came easy and fast. But I do feel that I am on the brink of crossing one of those graduate school
rites of passage, knowing when to resign, to put the lab book on the shelf, until the world has gained just enough wisdom to point the way forward. Like all trainees at the NIH, I am on a tight deadline and just can’t wait for that to happen.

To gather insights into my decision to switch projects, I conducted a small poll amongst my interest group. I was trying to learn more about what a typical graduate experience was like. Half of the respondents had actually made it through graduate school with the project they came in with. Nonetheless, I find myself in good company with the half who admitted it took more than one try. Up until now, I have been focusing pretty exclusively on a single project, but three-quarters of the respondents said they balanced more than one project at a time, and I think this might be helpful to me moving forward. Thirty percent said they shared my feeling that they were starting over at some point during graduate school. However, I am truly comforted to see that no one said that they felt like they were starting over and they regretted doing so.

This is what amazed me watching a national Go champion resign to a computer; with the stakes so high, someone could be so sure about the decision to move on. To give it up to tomorrow’s game. Lee Sedol would resign from two more games, but he did go on to win his fourth game against AlphaGo. This game wasn’t enough for a comeback, but in graduate school, you only need one project to take root and start telling a story. I think at this point I am ready to accept that that project I chose so carefully isn’t going to be my thesis project. I will have to take what I’ve learned and move on to the next hypothesis.
As the current NICHD Basic Sciences Representative, I represent NICHD postdoctoral fellows at the FelCom meeting every month and share the latest news with you here. Do you have a concern or question that you want brought up at the next meeting? Contact me at suna.gulay@nih.gov!

In the February meeting, FelCom discussed the development of a social media hub for postdocs (similar to Club PCR for postbacs and GS-Underground for graduate students). This will be used to disseminate helpful information for new postdocs and to bring the NIH postdoctoral community together. While Fellow-L is a useful listserv, and all postdoctoral fellows are encouraged to continue subscribing to it (all FelCom openings get advertised there!), the new non-NIH associated social platform will provide a place to share resources, as well as news of local social activities and career development opportunities, without the reagent requests. An ad hoc committee will be formed this month to create relevant accounts, add content, and reach out to all current postdocs to join the new platform.

New HHS rules have been established regarding research fellow positions. The cap that has been in place for about a year for these fellowships has been removed. However, these positions are considered FTE (Full-Time Equivalent Employment), and as such, they are now subject to the overall cap regarding all NIH employment. Postdoctoral IRTA, CRTA and visiting fellow positions are considered non-FTE, and hence, they are not affected by these new rules. Institutes and centers will make individual decisions on how many research fellows to employ based on the total number of government employees that can be hired. They may also choose to employ new research fellows as contractors, which increases IRTA and CRTA fellows’ chances to be hired. Unfortunately, visiting fellows may not be hired as research fellows through this mechanism. Research fellows hired as contractors will still be subject to the 5-Year / 8-Year Duration Rule. I will keep you up-to-date on this issue in the upcoming months.

The Visiting Fellows Committee has launched their new website. They are also in the process of recruiting volunteers to organize this year’s International Opportunities Expo. Anyone interested in finding a job overseas, and adding organizational skills to your CV, is welcome to join their meetings. Please contact the co-chairs Ulrike Boehm and Daphnée Villoing for more information.

Last but not least, The Foundation for Advanced Education in the Sciences (FAES), with the help of NIH Korean Scientists Association, has established a memorial fund in honor of Dr. Sang-A Park, who lost her life in a traffic accident on January 22, 2018 at the NIH campus. If you wish to donate, please visit https://faes.org/content/donate-faes and choose “Park Memorial Fund.”
Meet Our New Fellows

We are happy to welcome new fellows to the NICHD family. If you arrived recently at the NICHD and would like us to introduce you in our quarterly “Meet Our New Fellows” column, please contact our editor, Dr. Shana Spindler, at Shana.Spindler@gmail.com.

CARISSA STOVER
Postbac Fellow
Home city: Kansas City, MO
Undergraduate school: Wichita State University, Wichita, Kansas
NICHD mentor: Dr. Rich Maraia
Area of research: I study tRNA expression and codon bias with an interest in wobble activity.

QIAOYUN ZHENG
Postdoctoral Fellow
Home city: China, Beijing
Graduate school: Cleveland State University, Cleveland, Ohio
NICHD mentor: Dr. Alan Hinnebusch
Area of research: Transcription regulation by using budding yeast.
Upcoming NIH-Wide OITE Events

Check Out These Activities Sponsored by the Central Office of Intramural Training & Education

To register, please follow the links below:

TUESDAY, MARCH 13, 9 AM – 4 PM

Grant Writing 101
Building 10, Masur Auditorium
Speaker(s): Sharon Milgram, PhD, Director, OITE

WEDNESDAY, MARCH 14, 11:30 AM – 1 PM

From PhD to NPR: Careers in Science Communication and Tips for Communicating Your Research
Building 50, Room 1227
Speaker(s): Madeline Sofia, Ph.D. | Science Desk of NPR

WEDNESDAY, MARCH 21, 10 AM – 12 PM

Talking Science: Designing and Delivering Successful Oral Presentations
Building 50, Room 1227/1328
Speaker(s): Philip Wang, PhD, Deputy Director, GPP

THURSDAY, MARCH 22, 2 – 3 PM

I Was Not Admitted to Medical School Yet: What Should I Do Now?
Building 50, Room 1227
Speaker(s): Bill Higgins, PhD, Pre-professional Adviser, OITE
March Announcements

REGISTRATION OPEN FOR ANNUAL NICHD FELLOWS MEETING

The 14th Annual Meeting for Postdoctoral, Clinical, and Visiting Fellows will be held in DC, at the Smithsonian’s National Museum of the American Indian, on April 20, 2018.

This meeting will allow you to step away from the lab for a day to network with your NICHD colleagues, participate in a career exploration session, and learn more about the recent developments in our intramural research programs.

This year’s retreat will include:

» Keynote Address by Dr. Yvette Seger, Director of Science Policy at Federation of American Societies for Experimental Biology (FASEB)
» Career round table discussions with professionals from academia, industry, teaching, government administration, grants management, consulting, science education, and technology transfer
» Opportunity to network with invited career speakers during lunch session
» Afternoon career services informational session, “Quick Tips for Career Success,” by Dr. Philip Ryan, Deputy Director of Graduate Programs and Student Services in the NIH Office of Intramural Training and Education (OITE)
» You can also stop by and talk one-on-one with Dr. Philip Ryan from OITE, for career services during the afternoon poster session
» You can be a highlight at the retreat, too! You can present your work during the poster session, and four fellows will be selected to give a talk from their submitted abstracts

Online registration is live at http://retreat.nichd.nih.gov.

Don’t forget to sign up early; space is limited to 110 fellows!

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March Announcements
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THE 2019 FARE COMPETITION FOR INTRAMURAL NIH IS NOW OPEN

An opportunity to win a $1,000 travel award

The FARE (Fellows Award for Research Excellence) competition provides recognition for outstanding scientific research. The 2019 winners will receive a $1,000 travel award for a scientific meeting you plan to attend during the 2019 fiscal year. Eligible fellows may submit an abstract online from Wednesday, February 14, 2018 to Wednesday, March 14, 2018 at http://www2.training.nih.gov/transfer/fareapp.

The FARE 2019 competition is open to postdoctoral IRTAs, pre-IRTAs, visiting fellows, and other fellows with less than five years total of intramural postdoctoral experience. Abstracts will be evaluated anonymously based on scientific merit, originality, experimental design, and overall quality/presentation.

Find more information at https://www.training.nih.gov/felcom/fare.

RECRUITING NICHD POSTDOC & GRADUATE STUDENT JUDGES FOR THE 2018 NIH POSTBAC POSTER DAY!

Please contact Dr. Yvette Pittman at yvette.pittman@nih.gov if you would like to help judge the NICHD postbaccalaureate fellows’ posters in May. We would like to recruit a few postdoc and graduate student judges to visit about five posters each, and attend a meeting to select the three “best poster” winners for 2018. This can be a great learning experience for both the judges and postbac trainees!

Postbac Poster Day will take place on Wednesday, May 2. For more information about the event, please visit https://www.training.nih.gov/postbac_poster_day.

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March Announcements  
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RESPONSIBLE CONDUCT OF RESEARCH (RCR) MANDATORY TRAINING

“Discussion of Ethical Research Practices: Making Good Choices”

Mandatory for all NICHD fellows who started after January 1st, 2017.

As part of the new RCR requirements, all NICHD fellows must complete 8 hours of training within their initial two years. This training session (2 hrs.) will be held on Thursday, May 31st, 1:30 – 3 PM, in Building 31, conference room 2A48 (A-wing, 2nd floor).

Led by Dr. Erin Walsh, this session will begin with a brief discussion of pre-assigned reading materials, followed by small group, team-based learning exercises involving research ethics cases that promote discussions of fabrication, falsification, and plagiarism. It will end with a discussion on good practices of data management and presentation, including lab notebooks—both physical and electronic.

Reading assignments and case studies will be sent by email prior to the session. Please contact Dr. Yvette Pittman (yvette.pittman@nih.gov) by Monday, May 21, if you are planning to attend this mandatory session.

GENETICS POLICY AND GENETICS EDUCATION FELLOWSHIP OPPORTUNITIES

From the American Society of Human Genetics website:

Applications are currently being accepted for the 2018 Genetics and Public Policy, and Genetics Education and Engagement fellowships. The application deadline for both opportunities is Friday, April 27th.

These fellowships are cosponsored by the American Society of Human Genetics (ASHG) and the National Human Genome Research Institute (NHGRI).

The Genetics and Public Policy Fellowship is designed as a bridge for genetics professionals wishing to transition to a policy career. This unique fellowship provides three separate types of policy experience: within NHGRI’s Policy and Program Analysis Branch; on Capitol Hill serving elected officials in the Legislative Branch; and at ASHG in the non-profit science advocacy sector.

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GENETICS POLICY AND GENETICS EDUCATION FELLOWSHIP OPPORTUNITIES (CONTINUED)

The Genetics Education and Engagement fellowship program is designed for genetics professionals (or life scientists with substantial experience in genetics or genomics) who: have an advanced degree, are early in their careers, and are interested in developing and implementing genetic and genomic literacy, engagement, diversity, and/or professional development initiatives for audiences at all educational or career levels. The fellow will participate in rotations at the NHGRI and ASHG, and typically a third organization involved in genetic and genomic literacy, engagement, diversity, or professional development.

For more information, and to apply, visit Genetics & Public Policy Fellowship and Genetics Education & Engagement Fellowship.

SAVE THE DATE: APPLYING TO MEDICAL OR GRADUATE SCHOOL SOON?
A Lunchtime Session for Postbacs
Tuesday, April 3, 2018

The Office of Education is hosting a career panel session to answer your questions about applying and interviewing for graduate or medical school, and life during the first two years as a student.

Several panelists at various academic levels will be there to share with you their experiences of transitioning to professional school.

Topics may include: qualities of a strong application; survival tips for the intense course load; key factors when choosing a program; a typical day in professional school; how to handle being wait-listed; and what panelists wish they had known or done differently before entering an MD or PhD program.

Pizza will be served.

To register, contact Dr. Yvette Pittman (yvette.pittman@nih.gov).

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March Announcements
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SAVE THE DATE: NIH 24TH ANNUAL "TAKE YOUR CHILD TO WORK DAY"
Thursday, April 26, 9 AM – 4 PM

Bring your children in grades 1-12 and inspire them to explore career paths in science and public service at our nation's biomedical research agency. Together, you and your child/ren can choose from over 100 activities, from exploring NIH labs and technology, to being a hands-on genetic researcher, to learning about the day-to-day life of social workers, chemists, dieticians, peer reviewers and more. Children in grades 6-12 will also be able to register to volunteer to help with activities and may be able to earn Student Service Learning (SSL) credit, if offered by your school or school district. Please check with your school's SSL coordinator to find out if this volunteer opportunity meets your school's requirements.

Encourage your co-workers, supervisors, and colleagues/friends in other Divisions/ICs to participate, and mark your calendars. Key registration dates are listed below:

March 22 at 12 noon: Pre-registration (Site opens for you to enter your child/ren's information and preview activities ONLY).

**This year's registration will be conducted in two phases**

April 5 at 12 noon: Registration Phase 1 (Register child/ren for up to 2 limited space activities each).

April 12 at 12 noon: Registration Phase 2 (Register child/ren for up to 2 additional limited space activities for a maximum of four limited space activities).

More information will be sent out in March, so look for upcoming announcements via e-mails and Twitter.

The Office of Research Services, Program and Employee Services is the primary sponsor of TYCTWD 2018. Please e-mail any questions and comments to Take-Your-Child-To-Work@nih.gov.

If you are on Twitter, please follow @NIHEmplSrvc for more TYCTWD information and announcements (by using #MyNIHDay), plus find out about all of the other employee services we provide to assist you with balancing work and family.

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SAVE THE DATE: GRANT WRITING SESSION FOR INTRAMURAL RESEARCH FELLOWSHIP (IRF) APPLICANTS ON FRIDAY, MAY 18

Funding opportunity for all NICHD fellows

Last year, DIR launched the IRF, a competitive research funding opportunity for NICHD postdoctoral, visiting, and clinical fellows. Its main objective is to promote grant writing among our intramural trainees, while enhancing awareness of the various components of an NIH grant application. The IRF submission date is Monday, August 6, 2018.

For all prospective applicants, the Office of Education will offer a training session on Friday, May 18, in Building 31, conference room 2A48 (A-wing, 2nd floor), from 10 AM to 12 noon. We will cover various components of an NIH grant, details about the application and review processes, and tips on preparing an IRF application. Attendance at this training session is a requirement for submission.

For more information on the IRF, please visit NICHD Intramural Research Fellowship.
March Events

THURSDAY & FRIDAY, MARCH 8 & 9, AND MARCH 22 & 23
NIH Grant Writing Course

Led by Dr. Paula Gregory (Professor, Department of Genetics, Louisiana State University), this course will help students prepare a successful NIH grant proposal, with special emphasis on the career transition “K” grant series.

March sessions will be held at the following times (all sessions are mandatory):
March 8, 1 PM - 4 PM
March 9, 9 AM - 12 PM
March 22, 11 AM - 12 PM & 1 PM - 4 PM
March 23, 9 AM - 12 PM

The last two sessions, which are also mandatory, will be held next month on April 5 and 6.

There is one spot remaining for NICHD fellows. If you would like to join this course, please email Dr. Yvette Pittman at yvette.pittman@nih.gov and indicate which NIH grant you are planning to apply for.

FRIDAY, MARCH 9, AND WEDNESDAY, MARCH 21
Three-Minute Talks (TmT)

Individual coaching/practice sessions with Scott Morgan. Practice your talk and obtain feedback on oral presentation skills and speech development.

This event requires registration. For more information, please contact Dr. Yvette Pittman at yvette.pittman@nih.gov.

The NICHD and NIH TmT competitions will be held on Tuesday, May 8, and Thursday, June 28, respectively.

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March Events
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SATURDAY, MARCH 10, 9 AM – 4 PM
Montgomery County Science Fair

The Montgomery County Science Fair is an opportunity for several hundred Senior High and Middle School students to think creatively, problem solve, learn how to carry out a science experiment, and have some fun while doing so. Its success depends upon the many area scientists who judge so please consider volunteering.

The fair will take place at the FDA White Oak Campus, 10903 New Hampshire Avenue, Silver Spring, MD 20993. Registration for judges is 9 - 9:40 AM.

For more information visit: Montgomery County Science Fair 2018.

WEDNESDAY, MARCH 14, 11 AM – 3 PM
The NICHD WE (Worklife Enrichment) Committee Presents Pi Day 2018

6710B Rockledge Drive, Multipurpose room 1425 & 1427

Pi Day ˈpī dāˈ – the annual celebration commemorating the mathematical constant π.

NICHD will mark this significant occasion with a pie bake-off, open to all. Please plan to join us. You don’t have to bring a pie to participate—we need eaters, too!

11 AM – Pie entries due
1 – 3 PM – Pie eating/judging

For full details on this event: Pi Day 2018 (NIH login required).

For more information, or to sign up to submit a pie, contact the Worklife Enrichment (WE) Committee at nichdwecommittee@mail.nih.gov. If you are interested in judging, contact Reon Holloway.

Staff and fellows wishing to participate should get concurrence from their supervisor before attending this activity.