National Institute of Allergy and Infectious Diseases

Science of Team Science, 2019

Endemic / Epidemic Diseases in the MENA NIAID Model for Research Support

Peter R. Jackson, PhD
Chief, ARRB, SRP, DEA, NIAID
On Detail: Office of Global Research, NIAID

NIAID

DISCLOSURE

Peter Jackson, PhD is not associated with the similarly named director of intervention films that, despite their popularity, violate regulations on human and animal subject use.

The Lord of the Rings Trilogy chronicles excessive serious adverse events within cohorts of relief-seeking, bling-addicted humanoids recruited, without consent, into risky interventions with no stopping rules.

King Kong follows a rare non-human primate trapped in a poorly planned observational study non-compliant with respect to scientific justification, enrollment, species, sample size, care, feeding, restraints, social enrichments, and euthanasia.

AGENDA

1. NIH and NIAID national / international missions
2. Middle East and North African Region (MENA) – Importance to Global Health
3. The NIAID MENA Region Workshops / Seed Grant Programs
4. Results of the Workshops / Seed Grants

NIH Mission

To seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability.

NIH achieves its mission largely through awarding research grants based upon review of applications from extramural scientists.

NIH SUPPORTS INTERNATIONAL RESEARCH

Special opportunities for research programs through unusual talents, resources, populations, or environmental conditions not available in the U.S., or that augment existing U.S. resources.

Specific relevance to the mission / objectives of the Institute / Center

Potential to significantly advance health sciences in the U.S.

International Research also:

- **Generates Scientific Excellence**
- **Drives Innovation**
- **Create Jobs and Economic Growth**
- **Delivers New Global Health Technologies**
- **Increases Preparedness Against New Threats**
- **Protects Human Health**

NIAID

NIH Fogarty International Center

Supports/Facilitates health research by U.S. and international investigators

Builds partnerships between US / international health research institutions

Trains scientists to address global health needs; ~ 6,000 so far

Convenes conferences to address global health research problems

Funds > 500 projects ; ~ 100 U.S. universities; foreign investigators in mostly low- and middle-income countries (LMICs).

www.fic.nih.gov

NIAID MISSION

Conduct and support basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases and to respond rapidly to research challenges posed by disease outbreaks /emerging epidemics.

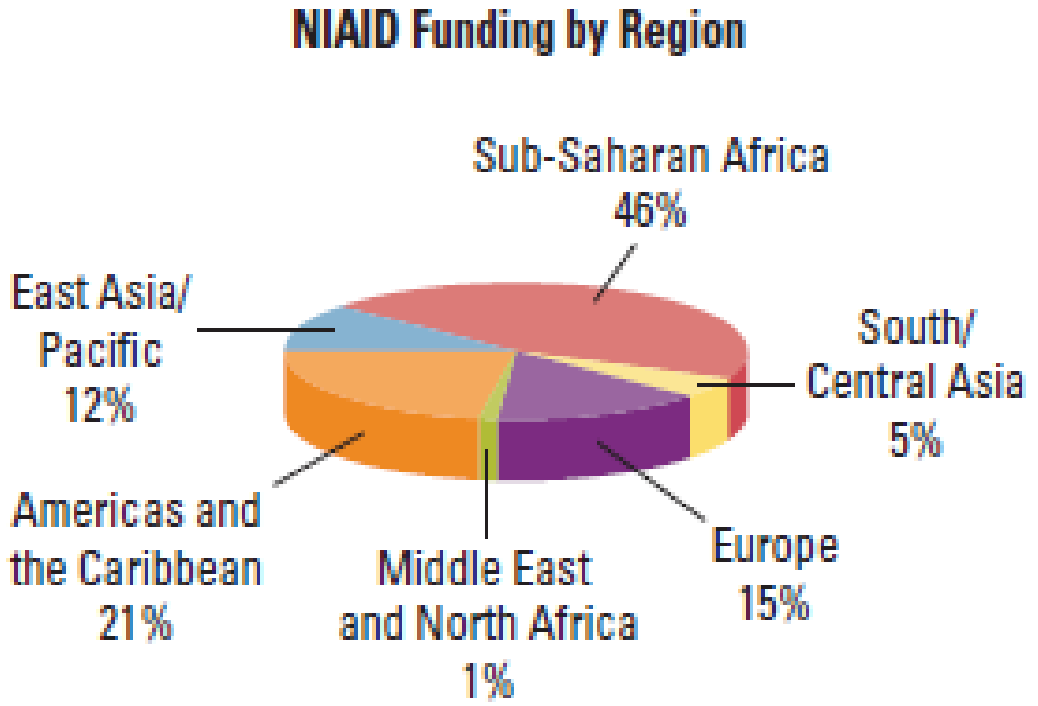
This mission is most effectively met when the NIAID has established grantees or collaborations in affected areas.

NIAID Global Research Vision

- Seek scientific opportunities and identify shared priorities
- Develop capacity through research cooperation and training
- Support domestic grantees to expand international collaborations and engage with investigators
- Establish partnerships among scientists and with governments, companies, and non-government organizations

NIAID International Projects – 2018

- **1,435 international research projects**
- **$704.2 Million**
- **54% HIV/AIDS**
- **28% Biodefense-related pathogens**
- **18% Other infections and immunologic diseases**



NIAID OFFICE OF GLOBAL RESEARCH (OGR)

- **Facilitates and coordinates NIAID's international activities and collaborative research programs.**

- **Works with other NIH Institutes and Centers, HHS offices and agencies, and foreign government agencies.**

http://www.niaid.nih.gov/research/global-research

OGR Regional Activities Add Value to NIAID Goals

Concept

- NIAID Program Officers often engage in bilateral meetings and workshops in regions with little/no NIAID activity.
- OGR provides travel and seed grants to enable regional scientists to benefit from meetings.
- NIAID Program Officers improve information exchanges with regional experts and promote NIAID research.
- Seed grants may help to quick-start collaborations among meeting attendees and lead to future NIH grant applications.
- NIAID improves regional presence and improves ability to address endemic diseases and to conduct control and research activities if there are outbreaks, epidemics, pandemics.

OGR/NIAID REGIONAL WORKSHOP MODEL

- NIAID and interested groups decide on Workshop theme/goals/commit funds.
- NIAID develops Workshop Planning Group & Scientific Advisory Committee (SAC).
- SAC invites US / MENA researchers to submit abstracts for the Workshop.
- Abstracts reviewed, attendees selected by NIAID and other experts. Travel awards $1-2K.
- Workshop Planning Group and SAC develop final Workshop Agenda. In regional location; sometimes hosted by academic institution.
- Workshop attendees present thematic /regional research, discuss priorities, and take advantage of opportunities to interact. NIAID contractor (CRDF Global) announces plans for small seed collaboration grants. NIH Biosafety and Grantsmanship training often provided.
- After the Workshop CRDF Global holds grant competition for collaborative projects. Applications are peer reviewed, winners receive awards. Seed Grants are $25-50 K awards.

COLLABORATING ENTITIES

The Defense Science and Technology Laboratory (Dstl), Porton Down:

- Supports science and technology for the defense and security of the UK.
- Works with the Ministry of Defense, and > 40 UK government departments and agencies.
- Works with academic, science and technology, industry, and international partners.

Qatar National Research Fund (QNRF):

- Established by Qatar Foundation in 2006. Goal is to establish Qatar as a knowledge-based economy.
- Views research as essential to national and regional growth. Fosters original, competitively selected research in sciences, engineering, and the arts. QNRF encourages dialogue and partnerships internationally.

The Scientific and Technological Research Council of Turkey (TÜBİTAK):

- Lead agency for management, funding, and conduct of research in Turkey.
- Established in 1963 to advance science and technology, conduct research, and support Turkish researchers. It is an autonomous institution governed by a Scientific Board of scholars.
- TÜBİTAK advises the Turkish Government on science and research issues and is the secretariat of the Supreme Council for Science and Technology (SCST), the highest S&T policy making body in Turkey

MENA REGION

For this activity, NIAID defines the Middle East and North Africa (MENA) region to include the following countries.

Afghanistan, Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestinian Territories,, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates, and Yemen.

FOCUS ON THE MENA REGION

- NIAID had few links with this region of approximately 400 million people.
- Many LMC nations.
- Strong interest in collaborations with NIAID-funded and other experts.
- Many endemic diseases, several with epidemic /pandemic potential.
- Some nations with civil unrest/ wars/ conflicts.
- Large displaced / migratory populations.
- Poor living conditions and poor water and food quantity / quality.
- Many insect and other vectors and susceptible vertebrate animals.
- Traditional mass gatherings (annual Haj) and Umrah pilgrimage.
- Consanguineous marriages

MENA REGION DISEASES / CONDITIONS OF INTEREST

- MERS-CoV; Alkhurma hemorrhagic, West Nile, Rift Valley, Q, and Dengue fevers; leishmaniasis, brucellosis; H5N1 influenza; polio; HIV/AIDS (rapidly increasing; new populations, hard to track and treat); Hepatitis especially A and C; typhoid; Crimian Congo Hemorrhagic Fever (CCHF); sandfly fever virus; cholera; trachoma; schistosomiasis; filariasis; various NTDs; leptospirosis; malaria; TB.
- Insect and other invertebrate vectors; other mammalian hosts.
- Consanguineous marriages and associated high levels of primary immuno-deficiencies, and infections.

FIVE MENA REGION WORKSHOPS

Tunis, Tunisia – June 2009- "Leishmania: Collaborative Research Opportunities in North Africa and the Middle East". The topic of this workshop was leishmaniasis and its related vector biology. NIAID Grantsmanship training provided. 11 MENA nations; 54 MENA and 26 US attendees.

Nicosia, Cyprus – January 2011- "Bacterial, Waterborne and Emerging Infectious Diseases in North Africa and the Middle East: Opportunities for Collaboration". Topics covered included surveillance of water-borne diseases, cholera, biosafety, leptospirosis, typhoid, and brucellosis. NIAID Grantsmanship and Biosafety training. 15 MENA nations; 39 MENA and 37 US attendees.

MENA REGION WORKSHOPS

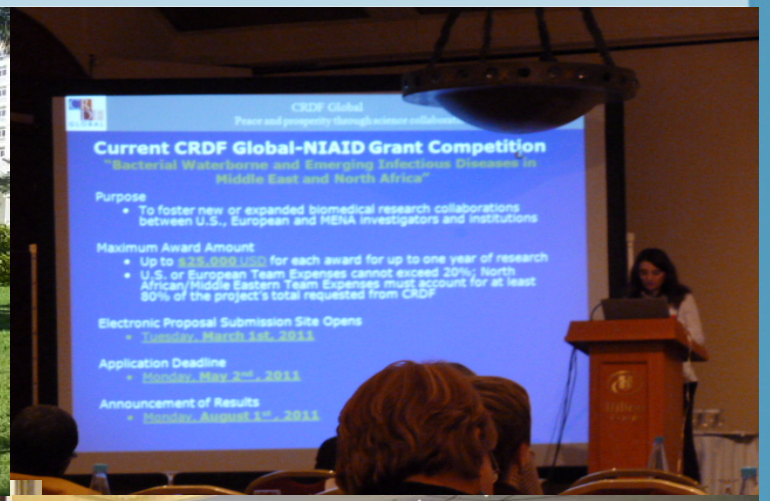
Istanbul, Turkey– June 2012 -"Conference on Endemic and Emerging Infectious Diseases of Priority in the Middle East and North Africa – Research Opportunities and Biosafety in a Changing Environment" . The topics covered included Crimean Congo hemorrhagic fever, West Nile fever, sand fly fever, H5N1 avian influenza, Rift Valley fever, Alkhurma hemorrhagic fever, Q fever, and their related vector biology and control. Co-hosted by the Defense, Science, and Technology Laboratory from Porton Down, UK. NIAID Grantsmanship training. 9 MENA nations; 32 MENA and 38 US attendees.

Doha, Qatar – May 2014 -*Endemic and Emerging Viral Diseases of Priority in the Middle East and North Africa (MENA): A Scientific Workshop to Promote Collaboration* -- The topics covered included HIV/AIDS, hepatitis C and E, MERS CoV, influenza, and other viral diseases. NIAID Grantsmanship training. 15 MENA nations; 137 MENA and 42 US attendees.

Ankara, Turkey – October 2014 -*Scientific Workshop on Genetically Based Immune Disorders—* Only Turkey participated in this meeting to develop country-wide genomic networks where these diseases are highly prevalent. 1 MENA nation; 50 MENA and 17 US attendees.

NIAID

National Institute of Allergy and Infectious Diseases



NIAID

National Institute of Allergy and Infectious Diseases

Cyprus – 2011 – "Bacterial, Waterborne and Emerging Infectious Diseases in North Africa and the Middle East: Opportunities for Collaboration"

Endemic and Viral Diseases of Priority in the MENA Region

May, 2014, DOHA, Qatar

Press Coverage

Qatar Tribune
First with the news and what's behind it
Nation · Business · Sports · Chill Out

GULF TIMES

May 28, 2014

Experts to discuss infectious diseases plaguing region

Medical and public health experts from all over the world have gathered in Doha this week to discuss serious viral diseases affecting the Middle East and North Africa (Mena), such as Hepatitis C, HIV/Aids and Mers.

The Endemic and Emerging Viral Diseases of Priority in the Middle East and North Africa workshop is being held until tomorrow and is supported by the National Institutes of Health, the Weill Cornell Medical College in Qatar (WCMC-Q), the Qatar National Research Fund of Qatar Foundation, the Supreme Council of Health (SCH), Hamad Medical Corporation and the Sidra Medical and Research Centre.

The inter-disciplinary workshop is part of a collaborative initiative between Qatar, the US and the rest of the region.

Dr Saleh al-Marri, assistant secretary-general for Medical Affairs at the SCH, said: "Bringing renowned experts in the field of viral diseases to Qatar from elite institutions all over the world is an extremely important step in the effort to control infectious diseases that affect people in the Middle East and North Africa."

Dr Laith Abu-Raddad

Dr Javaid Sheikh

Its a series of plenary sessions held over four days in Doha, researchers are discussing a variety of issues related to viral diseases, including the status of the HIV epidemic, Hepatitis C treatment, biology of the Middle East Respiratory Virus-Coronavirus (MERS-CoV) and vaccine development.

The aim is to promote international collaboration on research to combat viral diseases in the Mena region, an issue that has been highlighted recently by fatalities caused by the Mers virus.

The workshop is also discussing the risks to public health in the Mena region posed by Hepatitis C and E and Flaviviruses like the Alkhumra virus.

The researchers contributing to the workshop are drawn from elite global institutions, including the Johns Hopkins University and Harvard University in the US, Toulouse University in France, as well as leading institutions from the Mena region such as WCMC-Q, American University of Beirut, Tripoli Medical Centre in Libya, Cairo University in Egypt and the University of Jordan.

The NIH and QNRF have formed a partnership to provide seed funding to scientists to collaborate at the workshop for research projects into infectious diseases.

Dr Javaid Sheikh, dean of WCMC-Q, said: "Through collaboration, countries and research institutions can combine their efforts and their knowledge to combat these diseases."

Samuel Zinder, US ambassador to Qatar, said: "The US is deeply committed to working with the government of Qatar and others in the region and elsewhere, as they strive to improve the health of individuals and communities throughout North Africa, the Middle East and South Asia.

Dr Laith Abu-Raddad, associate professor of Public Health at WCMC-Q, said: "Viral diseases pose a significant threat to the health of people across the Mena region and more needs to be done to enhance the capacity of this region to combat this threat."

The Boston Globe

Dana-Farber researcher blocks MERS virus in experiment

By Carolyn Y. Johnson | GLOBE STAFF MAY 20, 2014

Dr. Wayne Marasco, a professor of medicine at Harvard Medical School and Dana-Farber who led the research, will travel to Qatar this weekend to present to an array of government and public health officials his new leads — including the identification of a molecule that can neutralize a key fragment of the virus. So far, his work has only been done in laboratory dishes, but he plans to begin testing in animals.

EMBASSY OF THE UNITED STATES
AMMAN • JORDAN

U.S.-Qatar-MENA Infectious Disease Research Initiative

CRDF Global is accepting proposals from collaborative research teams involving scientists from the United States, Qatar, and the rest of the Middle East/North Africa for the **2014 U.S-Qatar-MENA Infectious Disease Research Initiative** announced in conjunction with the "Endemic and Emerging Viral Infectious Diseases of Priority North Africa and the Middle East

العَرَب
يومية سياسية مستقلة تأسست عام ١٩٧٢

رئيس مجلس الإدارة: ثاني بن عبد الله آل ثاني
رئيس التحرير المدير العام: أحمد بن سعيد الرميحي

الخميس 07 أغسطس
الموافق 10 شوال 5

مناقشة سبل مواجهة الأمراض المُعْدِية في الشرق الأوسط وشمال أفريقيا

يلتئم في الدوحة هذا الأسبوع أطباء وخبراء في مجال الرعاية الصحية من حول العالم لمناقشة الأمراض الفيروسية الخطيرة التي تتهدّد منطقة الشرق الأوسط وشمال أفريقيا، مثل التهاب الكبد الوبائي "سي"، وفيروس نقص المناعة البشرية/الأيدز، ومتلازمة الشرق الأوسط التنفسية "فيروس كورونا".

تنعقد ورشة العمل "الأمراض الفيروسية المستوطنة والناشئة ذات الأولوية في منطقة الشرق الأوسط وشمال أفريقيا"، والتي افتتحت يوم أمس الأحد وتستمر لغاية 29 مايو، بدعم من معاهد الصحة الأميركية (NIH)، كلية طب وايل كورنيل في قطر، الصندوق القطري لرعاية البحث العلمي المنبثق عن

Social Media

Feedback from Participants

"…so well organized, so interesting and uniquely inclusive of diverse expertise from the broader Middle East region."

- Dr. Wafaa El Sadr, Columbia University

"It sparked new opportunities for collaborations and potential funding opportunities."

- Dr. Natasha Halasa, Vanderbilt University

ALL Workshops Attendance

- 21 MENA nations
- 296 MENA attendees
- 160 US attendees
- 485 total attendees
- Many attendees from Europe and other countries.
- 194 women attendees
- ~30% of the attendees were young investigators / students

Outcome	Tunisia	Cyprus	Istanbul	Qatar	Ankara	Total
Seed grants	5	4	9	6	None	24
Completed seed grants	3	3	8	Award Reports pending		14
Publications	34	8	32	12	6	100
Publications – Seed Grants	10	4	8	4		26
Training	1 NIAID fellowship		1 Fulbright fellowship; 2 fellowships at Public Health England; 1 post-doc position			

OUTCOME (cont)	Tunesia	Cyprus	Istanbul	Qatar	Ankara
Additional Awards	1 NIAID award		Several small continuation awards – various sources		
Other Outcomes	Policy brief on Leishmania research needs Leishmania and Sandfly reagent repository support By NIAID		1 planned and 2 submitted joint patent applications on a vaccine and diagnostic tests	2 MERS-CoV Workshops NIAID MERS-CoV collaboration with Saudi Arabia	2 Collaborative awards Expansion of NIAID immune deficiency network

NIAID

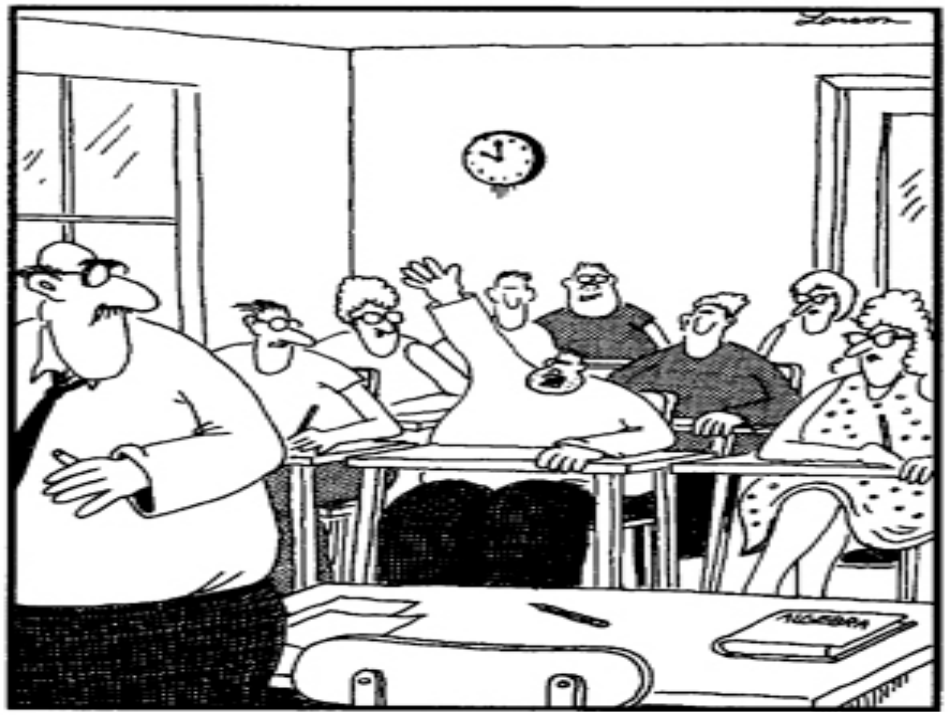
MENA WORKSHOP ASSESSMENT

- The model of focused meetings and small grant competitions successfully promoted collaborations among MENA U.S. and/or European counterparts.
- Many high quality regional scientists were eager for collaborations with U.S./European counterparts.
- Workshops showcased new, high-quality information about diseases in the MENA region.
- Meeting structure facilitated discussion and opportunities to explore potential areas of cross-region research collaborations and scientific exchange.
- However, language barriers still need to be overcome at the meetings and in grant competitions.
- Seed Grant competitions solidified collaborations and several investigators obtained additional funding.
- Many publications resulted from collaborative peer-reviewed research supported by NIAID and other entities.
- Numerous training opportunities enhanced the capacity to conduct research.
- The results represent significant success towards the goal of fostering and promoting research collaboration in the MENA region.

MENA WORKSHOP ASSESSMENT (continued)

- However, the NIAID OGR considers the outcomes from the Workshops to be short to midterm in nature.
- The research required is long-term and momentum should be maintained to achieve solid collaborative research capabilities in the MENA.
- There is a need to foster regional infrastructure and collaborations in the face of new or emerging infectious diseases.
- Future success will require additional regional investments by international and national entities.

Is it Possible to Provide too Much Information!?



Dr. Jackson – Can I be excused, my brain is full!

"This is where our trails divide, Luke. You have my E-mail address, right?"

Pjackson@niaid.nih.gov

THANK YOU / QUESTIONS ?

ADDITIONAL SLIDES FOR NIH APPLICANTS

NIH Supports International Research: WHY?

- Special opportunities for furthering research programs through unusual talents, resources, populations, or environmental conditions not available in the U.S., or that augment existing U.S. resources.

- Specific relevance to the mission and objectives of the IC

- The potential for significantly advancing health sciences in the U.S.

- International Research also:
  - Generates Scientific Excellence
  - Drives Innovation
  - Create Jobs and Economic Growth
  - Delivers New Global Health Technologies
  - Increases Preparedness Against New Threats
  - Protects Human Health
- INFORMATION FOR FOREIGN GRANTS

Funding Opportunities – Grants

- NIH has many grant types.
- Each type has a different number, name, function, format and $ limit Example: R series (R01, R21, R03) awards are types of "Research Project Grants" https://www.niaid.nih.gov/grants-contracts/types-funding-opportunities
- The NIH (and all US funding agencies) announce grants in Funding Opportunity Announcements (FOAs).
- FOA types (RFA, PAR, PA etc) have different names, goals and requirements.
- Each FOA describes the grant type and research area and includes links to the correct application forms, instructions,
- Follow these instructions carefully in order to be responsive to the requirements of the FOA.
- Non-responsive applications are not evaluated

NIH/NIAID Funding Opportunities – Grants *(cont'd)*

- Federal Funding Opportunity Announcements (FOA) can be found in Grants.gov and the NIH Guide
- For updates on NIAID's FOAs, subscribe to **NIAID Funding News**

  https://www.niaid.nih.gov/grants-contracts/funding-news-2017
- **NIAID Council-cleared concepts** – information on upcoming potential FOAs

  https://www.niaid.nih.gov/grants-contracts/potential-opportunities

NIH/NIAID Funding Opportunities – Grants *(cont'd)*

- **Eligibility** is explained in each FOA
- Eligibility may be restricted because of research type, topic, scope
- Non-US applicants can use many FOAs to apply for NIH funds
- NIH/NIAID support international institutions/researchers
- NIAID Eligibility information:
- https://www.niaid.nih.gov/grants-contracts/determine-eligibility-niaid-grants

- Examples of NIAID-funded international centers
  ICDR (U01, U19): International Centers for Excellence in Research
  CETR (U19): Centers of excellence for Translational Research
  ICMR (U19): International Centers for Malaria Research
  TMRC (U19): Tropical Medicine Research Centers
  Investigator Initiated Clinical Trials (IICTS)

FOA: ARE YOU AND/OR THE INSTITUTION ELIGIBLE?

Principal Investigator (PI/PD)

- Education requirements
- Citizenship requirements
- Qualifications/expertise

Applicant Organization

- E.g., non-profit status
- Ability to handle federal dollars
- Capacity to conduct research

NIAID Eligibility information:
https://www.niaid.nih.gov/grants-contracts/determine-eligibility-niaid-grants

NIH/NIAID Funding Opportunities – Grants

- All US Federal Funding Opportunity Announcements (FOAs) are in Grants.gov
- All NIH FOAs are in the NIH Guide
- For updates on NIAID's FOAs, subscribe to **NIAID Funding News**

  https://www.niaid.nih.gov/grants-contracts/funding-news-2017
- **NIAID Council-cleared concepts** – information on upcoming potential FOAs

  https://www.niaid.nih.gov/grants-contracts/potential-opportunities

Pursue Multiple Funding Sources

- **NIH RePORT** (https://report.nih.gov) – identify supported research & potential collaborators
- **Study** research/funds of other Institutes / Agencies / Institutions
- Compete for Earmarked Funds (New Money):

NIH: $39.1 B Budget = $2 B increase (+ 5.4%)
$ 425 M for Alzheimer's Disease / Related Dementias
$ 100 M for Cancer Moonshot
$ 86 M for *All of Us* (Precision Medicine Study)
NIAID: $ 5.5B Budget = +4.7%4.7 % increase to $5.5 Billion
$37 M for Antimicrobial Resistance
$40 M for Universal Flu Vaccine

Other Research Support Funding Websites

- **National Science Foundation (NSF):** Funds biomedical research but also education, human resources, environmental Research, international science and engineering, social, behavioral and economic sciences, etc.
- **Research.gov**: web-based computer system for grants management between NSF and its client community
- **USDA CRIS** (Current Research Information System): provides documentation and reporting for ongoing agricultural, food science, human nutrition, forestry research, education and extension activities for the USDA (Department of Agriculture)

Other Research Support Funding Websites
(cont'd)

- **Fogarty International Center**: supports global health research (and training) conducted by U.S. and international investigators
- **Bill and Melinda Gates Foundation**: Reduce inequity, improve delivery of health products, create scale market innovations, promote policies, improve US education
- **The Welcome Trust**: Supports sciences and ideas (e.g. vaccine development, behavioral and social project, public health interventions, advocacy, etc.
- **The Global Fund to Fight AIDS, Tuberculosis and Malaria**: Examples of funding: community responses, human rights, women and girls, resilient systems for health, etc.

Networking: Finding Collaborators

- Find a collaborator within the NIH: Intramural Database Resources

See Projects from Successful Investigators: Federal Reporter

- NIH PIO networking: bring your NIH supported research to the public
- Industry and public research institutions responsible partnerships: http://www.responsible-partnering.org/index.php
- Subscribe to list servers: https://list.nih.gov

Networking and Collaboration

- Access to expertise or particular skills
- Access to equipment or resources
- Stronger multidisciplinary proposals with cross-fertilization across disciplines
- Improved access to funding
- Improved knowledge about techniques
- Opportunities for prestige, visibility or recognition
- Enhanced trainee education

Team Science

Research conducted with the expertise of multidisciplinary collaborative groups:

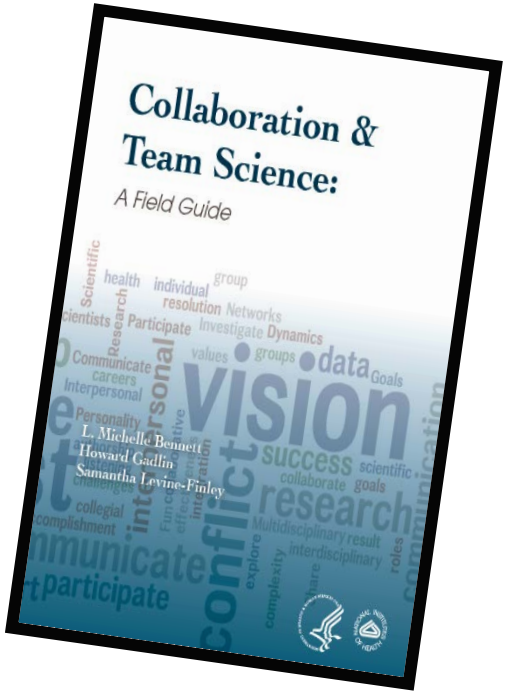
Team Science Toolkit: https://www.teamsciencetoolkit.cancer.gov/Public/Home.aspx

Collaboration and Team Science: Building Successful Research Collaborations

- Understanding what makes great collaborations and teams successful
- Sharing ideas for successful participation in and leadership of collaborations and multidisciplinary research teams

- Collaboration and Team Science Field Guide - cancer.gov

L. Michelle Bennett, PhD
Deputy Scientific Director, NHLBI, NIH
Howard Gadlin, PhD,
Former NIH Ombudsman



Research Administration Websites

- National Council of University Research Administrators: Advances the field of research administration through education and professional development programs. Selective training on specific focus (e.g. international)
- Johns Hopkins University School of Medicine of Research Administration: Provides resources for research administration and clinical research contracting
- World Intellectual Property Association: Provides IP resources
- European Association of Research Managers and Administrators: Training and mentoring resources for European scientists
- NIH Regional Seminars on Program Funding and Grants Administration: Yearly training provided by NIH staff (2-day seminar)
- Global Infectious Disease Research Administration Development Award for Low-and Middle-Income Country Institutions: This FOA invites applications from research institutions in low- to middle-income countries (LMIC) to provide senior administrators training in NIH grant management.

Examples of Training Opportunities for Foreign Applicants

- **D43: International Research Training Grant**
  Eligibility: Citizens of Low and Medium Income Countries (LMICs)
  Career Level: Graduate/Clinical Doctorate, Postdoctorate/Residency

https://grants.nih.gov/grants/guide/pa-files/PAR-18-840.html

- **D71: International Research Training Planning Grant**
  Eligibility: PD/PI should have research and training experience in the LMIC country
  Career Level: Established Investigator

https://grants.nih.gov/grants/guide/pa-files/PAR-17-058.html
https://grants.nih.gov/grants/guide/pa-files/PAR-17-097.html

Examples of Training Opportunities for Foreign Applicants (cont'd)

- **F05: International Research Fellowships**
  Eligibility: Only non-immigrant foreign scientists are eligible for this award
  Career Level: Early Career, Established Investigator

- **K43: Emerging Global Leader Award**
  Eligibility: PD/PI must be an LMIC citizen, with masters or doctoral degree, and junior faculty appointment
  Career Level: Postdoctorate/Residency, Early Career

https://grants.nih.gov/grants/guide/pa-files/PAR-17-001.html

- **Postdoctoral training in the NIH intramural Research Program (OITE):** Postdoctoral training in the NIH Intramural Research Program (IRP) provides the opportunity for recent doctoral degree recipients to enhance their research skills in the resource-rich National Institutes of Health (NIH) environment

https://www.training.nih.gov/postdoctoral/vf.asp
Currently available positions: https://www.training.nih.gov/career_services/postdoc_jobs_nih

New Investigator Guide to NIH Funding

- **New Investigator (NI):** The individual **has not previously received** substantial funding from NIH. Awards to NIs are made according to the programmatic/ strategic interests of the Institute.
- **Early Stage Investigator:** A PD/PI who has completed a terminal research degree or end of post-graduate clinical training (whichever occurs first) **within the past 10 years** and who has not previously competed successfully for a substantial NIH award. ESI applications will be prioritized for funding
- **Early Established Investigator (EEI):** A PD/PI who is **within 10 years of receiving** the first NIH R01 equivalent research award as an ESI. EEIs may be prioritized for funding if they are either: 1) losing or at risk for losing all NIH research support, 2) or supported by only one active award
- **Early Stage Investigator Policies** - information on the NIH Next Generation Researchers Initiative policies that support early-stage investigators (ESIs).
- Policy Supporting the Next Generation Researchers Initiative

New Investigator Guide to NIH Funding *(con't)*

- **Representative current paylines for NIAID (FY2018):** R01 (non-new PIs):14 percentile; R01 (non-new PIs): 18 percentile; R21: 30; R03: 30

Sample applications and more: https://www.niaid.nih.gov/grants-contracts/sample-applications

New policies website: https://grants.nih.gov/policy/notices.htm

WRITING RESOURCES

NIAID Sample applications and summary statements
https://www.niaid.nih.gov/grants-contracts/sample-applications

NIH SPECIFIC VOCABULARIES - Acronyms http://grants.nih.gov/grants/acronym_list.htm

NIH SPECIFIC VOCABULARIES - Terms http://grants.nih.gov/grants/glossary.htm

Dictionaries
https://www.nihlibrary.nih.gov/resources/subject-guides/writing-resources

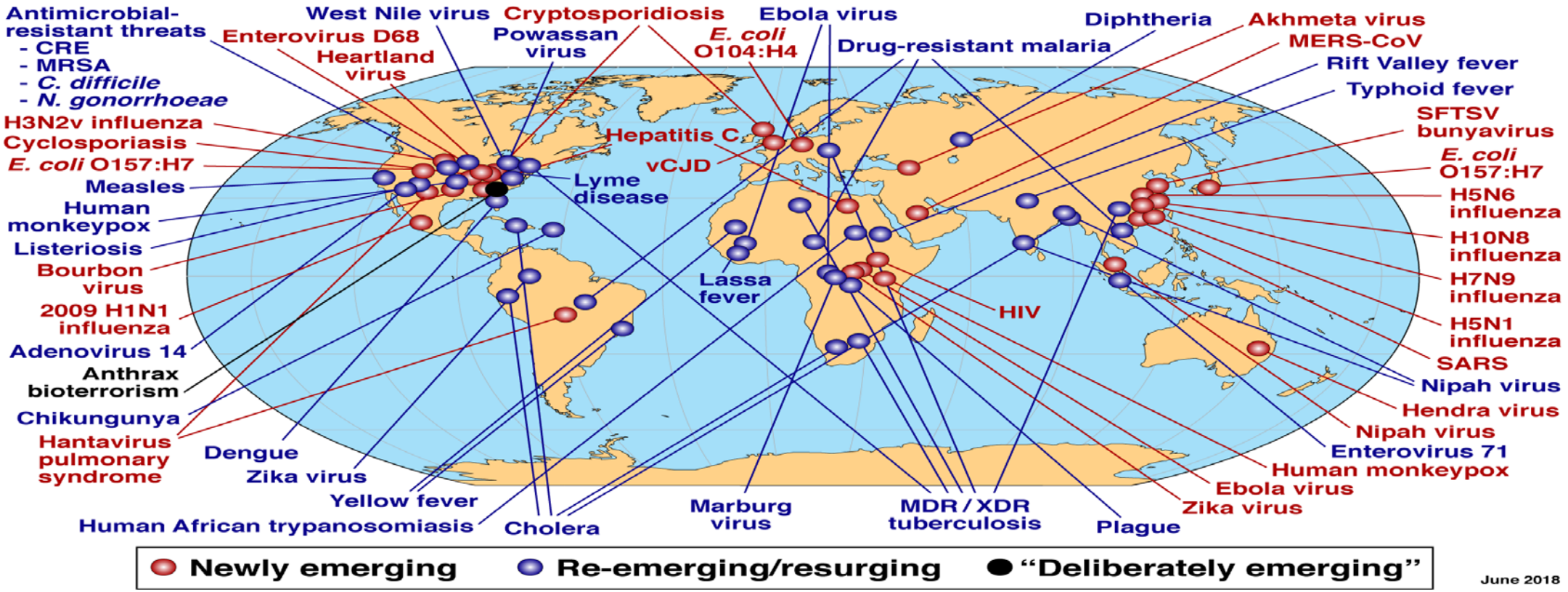
- **Dictionaries**
  - **Acronyms & Abbreviations**
  - **Medical and Scientific Dictionaries**
- **Grammar and Punctuation Links**
- **Open Access Links**
- **Style Guides**
- **Writing Training – Plain Language**

NIH - Intramural Research (on Bethesda, Maryland Campus)

27 Institutes & Centers; 1,500 PIs; 6,000 researchers; 27,000 staff
NIH Clinical Center - largest research hospital
National Library of Medicine - largest biomedical library
Approximately 80% of the NIH budget supports extramural research
Other Sites- Maryland, North Carolina, Michigan, Montana, and Arizona

NIAID

Global Emerging Re-Emerging Infectious Diseases



NIAID

Consequences of Disease Outbreaks

Diseases that escalate quickly undermine other health / economic objectives

50 MILLION
Deaths from Influenza in 1918

774
Deaths from SARS in 2003

11,310
Deaths from Ebola in 2014-16

$52 BILLION
Global economic loss from SARS in 2003

$2.8 BILLION
GDP Lost in 2014-15 Ebola outbreak in Guinea, Liberia, and Sierra Leone

$4 BILLION
Economic loss in 2015-16 in Zika affected countries in Latin America and the Caribbean

CSIS Policy Brief - Harnessing Multilateral Financing for Health Security Preparedness, 2019

NIAID

END