Office of Research & Development (ORD)
Rehabilitation Research & Development Service (RR&D)

Precision Rehabilitation: Utilizes technology to provide custom interventions tailored to Veterans' specific needs based on functional status and health to maximize recovery. Technologies can be used to gather, analyze, and interpret health information and to engage patient participation in rehabilitation interventions. Data sources can include (but are not limited to) the following:

- Electronic Health Record
- Functional/Rehabilitation Outcomes
- "omics" and other biomarker analysis
- Phenotyping
- Smart devices and wearable sensors

Precision Rehabilitation is the integration and analysis of these data to better understand the biology, function, treatment, prognosis, and recovery for those with disabilities following injury and disease.

References:

Adans-Dester, C., Hankov, N., O'Brien, A. et al. Enabling precision rehabilitation interventions using wearable sensors and machine learning to track motor recovery. npj Digit. Med. 3, 121 (2020). https://doi.org/10.1038/s41746-020-00328-w

Wagner AK Translational TBI rehabilitation research in the 21st century: exploring a rehabilomics research model. *Eur J Phys Rehabil Med* 2010;46(4):549–56

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VA Resources for Precision Rehabilitation Research

1. Electronic Health Record (EHR): VA migrated from paper to electronic medical records in the 1980's. Corporate Data Warehouse stores all EHR information. VA's Informatics and Computing Infrastructure (VINCI) provides the platform to access, search and extract information from the EHR for clinical or research purposes.

Reference:

 https://www.hsrd.research.va.gov/for_researchers/vinci/

2. CIPHER (Centralized Interactive Phenomics Resource) – Launched in 2019, CIPHER is a catalog and knowledge-sharing platform of EHR-based phenomic metadata to optimize Veterans' health data, drive research and improve clinical outcomes. CIPHER Serves as a central location for collaborating, sharing and browsing content curated by researchers and clinical stakeholders.

Benefits:
- Sharing of Phenotype definitions and improving reusability/scalability of information across VA projects/publications.
- Providing a platform to enhance collaboration across the VA research/clinical communities.
- Expediting VA science by serving as a ready resource to define eligible cases for VA research; clinical/epidemiological studies.

CIPHER Contents:

Algorithm Description	Data Sources Used
Data Mappings	Citation
Validation Process	Author Contact
Links to Useful Resources	

Contact Information: CIPHER@va.gov

Reference: https://www.research.va.gov/resources/CIPHER.pdf

3. Million Veterans Program (MVP)- Launched in 2011, MVP is a national research program to learn how genes, lifestyle and military exposures affect health and illness. Over 825,000 Veterans have joined the world's largest program on genetics and health.   MVP is dedicated to understanding the role of genes in explaining why some Veterans respond to specific interventions, while others do not.

- There are currently over 30 projects that leverage the MVP program to access genomic and epidemiological studies to inform health care delivery. Data is currently available to VA investigators and approved partners with plans to expand to non-VA investigators.

- The next MVP RFA is expected summer/fall of 2021. Collaborators from university affiliates and other organizations are encouraged. The goal is to broadly open the computing, operational, and regulatory environments.

On-going Study: Genetics of Osteoarthritis and Joint Replacement Recovery: Key to Precision Rehabilitation

PI: Singh, Jasvinder   Location: Birmingham VAMC

The goal of this study is to explore how genetics affect the prevalence/progression of osteoarthritis (OA). By understanding the genetic predictors of OA, the researchers may understand how genetic variance is related to knee arthritis and lead to new treatments both before and after surgery.

Details can be found on NIH Reporter at
https://reporter.nih.gov/search/sCqDsmdY002KTgpJh9HEgg/project-details/10174848

For more on MVP:

Reference: https://www.research.va.gov/MVP/research.cfm

Other MVP studies listed here: https://www.mvp.va.gov/webapp/mvp-web-participant/#/public/science

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VA Research Information on the Web

VA ORD Supported Research

- Search on NIH RePORTER website: report.nih.gov/index.aspx
- Search on Clinical Trials website: clinicaltrials.gov

VA ORD Main Site: www.research.va.gov

- Career Development Program: www.research.va.gov/funding/cdp.cfm
- Centers: www.research.va.gov/programs
- Research Videos: www.research.va.gov/news/videos.cfm

Grant Writing Seminars:

- Training in Grantsmanship for Rehabilitation Research (TIGRR) http://tigrr.bme.unc.edu/
- NIA Butler-Williams Scholars Program (formerly Summer Institute on Aging Research) – Applications accepted in March for attendance in July
- US Bone & Joint Initiative (USBJI) Young Investigator Initiative http://www.usbji.org/programs/yii

Additional ORD Information

- Handbooks: select under General ORD Policies
  http://www.research.va.gov/resources/policies/

- Rehabilitation Research and Development
  http://www.rehab.research.va.gov/

- Health Services Research and Development
  http://www.hsrd.research.va.gov/

- Biomedical Laboratory Research and Development
  http://www.research.va.gov/services/blrd/default.cfm

- Clinical Science Research and Development
  http://www.research.va.gov/services/csrd/default.cfm

Office of Research & Development (ORD)
Rehabilitation Research & Development Service (RR&D)

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Office of Research & Development (ORD)
Rehabilitation Research & Development Service (RR&D)

RR&D Research Award Types

All applications undergo scientific peer review

- **Merit Awards**
  - Up to 4 years, $1.2M total budget cap
- **Research Career Scientists**
  - 5 - 7 years, salary support
- **Center Awards**
  - 5 years, $1.26M/year
- **Research Enhancement Award Program (REAP)**
  - 5 years, $440K/year
- **Small Projects in Rehabilitation Research (SPiRE)**
  - 1-2 years, $115K/year
  Intended for:
  - High Risk/High Impact research; for preliminary data & feasibility
  - Small projects that can be completed in a two-year period, no powered studies
  - Preference given to Early Career Stage Investigators
  - New scientific areas of focus for established investigators
  - Editorial-style review; 3 independent reviews in written form only
  - Scoring limited to three designations: Highly Meritorious, Meritorious, or Not Meritorious
- **Research Career Scientist**
  - 5-7 years of salary support
- **Career Development Awards (CDA)** - mentored research opportunities
  All awards
  - US citizen
  - VA at time of award but not when submit application
  - VA primary mentor
  - Support includes awardee salary (except MD, shared with clinical care), protected research time
  - Review criteria emphasize candidate's qualifications, as well as mentorship, career development,
  - and research plans
- **CDA – 1**
  - Must apply within 2 years of training
  - Award up to 2 years, provides full salary support, $20K/year operational funds
- **CDA – 2**
  - Must apply within 5 years of training
  - Award up to 5-years, full salary support, $75K/year operational funds
- **Minority Serving Institution (MSI)** (previously Historically Black Colleges & University (HBCU))
  - Features of CDA-2
  - Additional mentor(s) from MSI/HBCU

Department of Veterans Affairs (VA)

Office of Research & Development (ORD)
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CDA Submission Deadlines and Contacts

Letter of Intent (LOI) Submission			
SERVICE	**DEADLINE per Cycle**	**Email ADDRESS**	**CONTACT**
Biomedical Laboratory R&D	May 1 Nov1	vhacadereview@va.gov	Questions about the program should be send to the Career Development mailbox.
Clinical Science R&D	May 1 Nov 1	vhacadereview@va.gov	Questions about the program should be send to the Career Development mailbox.
Health Services R&D	April 15 Oct 15	robert.small@va.gov	Robert Small, BA (202) 443-5743
Rehabilitation R&D	May 1 Nov 1	rrdreviews@va.gov	Shirley Groer, PhD (202) 443-5767
MSI-CDA (HBCU & other)	Follows Service LOI Deadlines	BLRD/CSRD: vhacadereview@va.gov HSRD: Robert.Small@va.gov RRD: rrdreviews@va.gov	Contact the appropriate Service representative above regarding submissions

CDA Award Types: Eligibility and Conditions
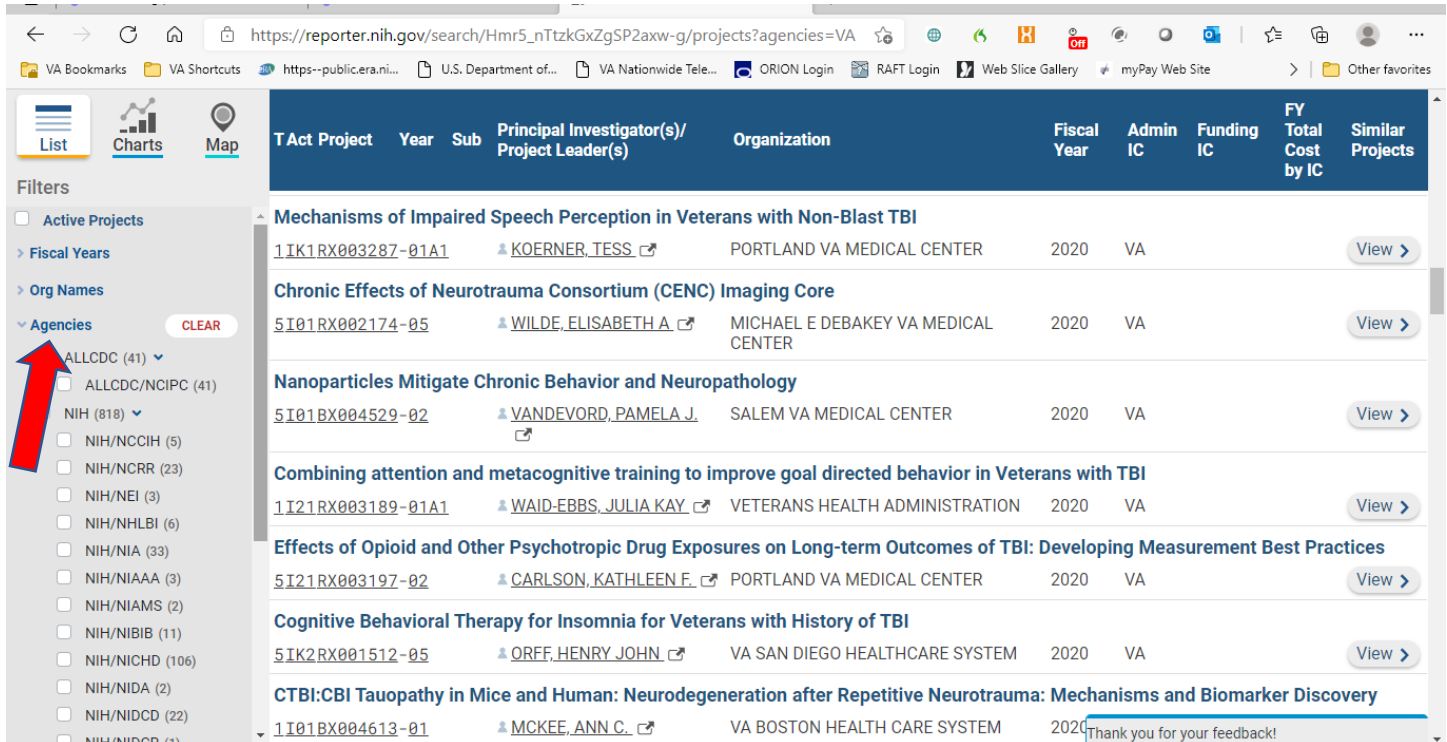
	CDA-1 (CS/BL* & RR&D)	**CDA-2**	**MSI**
Clinician salary	9 calendar months plus 1/8th from VAMC	6-9 calendar months plus 1/8th from VAMC	6-9 calendar months plus 1/8th from VAMC
Non-clinician salary	7.5-12 calendar months	7.5-12 calendar months	7.5-12 calendar months
Project funds	$20K/yr to extend work of mentor	$75K/yr for independent Work	As per service-specific RFA
Award duration	Up to 2 years	3-5 years	Up to 2 years (BL/CS)* 3-5 years (RR&D)
Eligibility	Max of 2 years beyond completion of training	Max of 5 years beyond completion of training	Same as 1 or 2 plus mentors at both HBCU and VA

*BL & CSR&D have targeted CDA-1 RFAs for VA psychiatrists, US military veteran scientists, suicide prevention, & MSI

INTERESTED TO LEARN ABOUT VA RESEARCH?
GET STARTED!
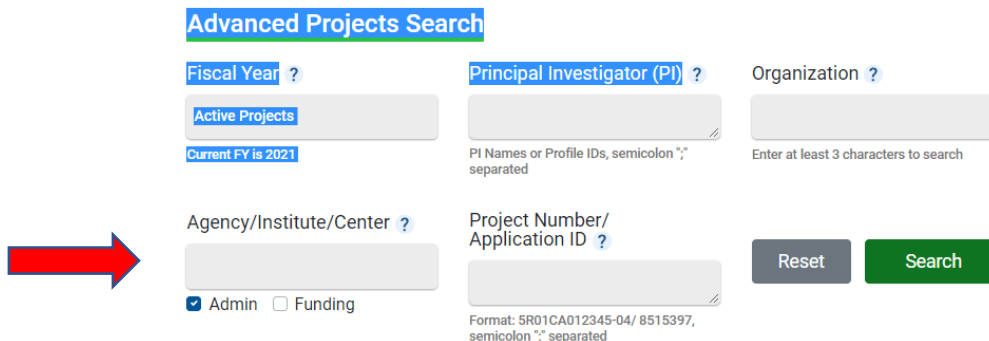
Does VA fund research in my scientific area of interest and at what facilities?

• Search NIH RePORTER tool and use guidance as indicated below
- User's guide manual and video: https://obssr.od.nih.gov/research-support/nihreporter/
- NIH RePORTER query form: https://reporter.nih.gov/
- Enter topic(s) of interest in the Quick Search box. Then from the results:

- Click on "Agencies" and choose "VA" (red arrow-above)

• **Or** begin query for VA funded research and for VA Investigators:
- NIH RePORTER query form: https://reporter.nih.gov/
- Scroll down to Advanced Projects Search
- **Search by Agency/Institute/Center**: Select Veterans Affairs (VA)

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o   The query will generate a list of active VA funded projects. Click column headers to sort information.

o   Clicking on the project column header will sort using the 5th and 6th characters of the project number and reflects the VA funding service to which the project is assigned.
   - BX for Biomedical Laboratory R&D (see red circles below)
   - CX for Clinical Science R&D (see red circles below)
   - HX for Health Services R&D
   - RX for Rehabilitation R&D (see red circles below)

o   Click on the project title hypertext in the search results to get more information on each project.
   - Note the panel on the left for categories of information on the project.

Who can I contact to learn more about VA research mission and priorities in my scientific area of interest?

• Contact the Office of Research and Development Scientific Program Managers:
  ○ Rehabilitation R&D: https://www.rehab.research.va.gov/staff/science1.html
  ○ Biomedical Laboratory R&D and Clinical Science R&D:
     https://www.research.va.gov/services/shared_docs/contacts.cfm
  ○ Health Services R&D: https://www.hsrd.research.va.gov/about/portfolio.cfm

Does VA support researchers early in their career?

• Yes, go to https://www.research.va.gov/funding/cdp.cfm

How do I find a VA mentor?

• Search the NIH RePORTER tool https://reporter.nih.gov/ for VA investigators working in your area of interest.

How do I learn more about starting research at a VA near me?

• Contact Associate Chiefs of Staff for R&D: https://www.research.va.gov/about/national_directory.cfm

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