

Request For Applications: Data Scholars Program

The Translational Research Institute (TRI) at UAMS is pleased to invite applications for the Data Scholars Program. The Program will provide support for UAMS, VA, and ACH faculty with a terminal degree (MD, PhD, PharmD, DNP, DrPH, DO, etc.) in learning and applying the principles and methods of **data analytics and data sciences** — *generating and applying knowledge from data to inform clinical practice and policy.*

Program Summary

The Data Scholars Program is a one-year program that combines training in data analytics with mentored support of a data-oriented project in the faculty member's clinical area. Data Scholars will receive:

- 20% salary support (up to NIH annual salary cap: \$192,300 + fringe)
 - Scholars are required to dedicate 20% effort to the program. The sponsoring department or college may be required to supplement support to meet the 20% salary (per NIH salary cap requirements). Salary supplementation may be from a variety of sources except federal funds.
- Tuition support up to a maximum of \$2,500/semester and \$5,000/year for customized, didactic training. Scholars may enroll in course work as degree seeking or non-degree seeking students. Data scholars are expected to successfully complete at least 6 credit hours of data science or data analytics courses in the following programs (see Appendix 1 for course listing):
 - Graduate Healthcare Analytics certificate or MS program offered by the College of Public Health (<https://publichealth.uams.edu/academics/certificates/healthcare-analytics/>)
 - Graduate coursework in a data analytics related course available in the following graduate programs:
 - College of Pharmacy – Pharmaceutical Evaluation and Policy: (PEP) MS/PhD
 - College of Public Health – Health Systems and Services Research: PhD
 - College of Public Health – Health Care Analytics: Certificate, MS
 - College of Medicine – Biomedical Informatics: Certificate, MS, PhD
 - Graduate coursework offered at other University of Arkansas System Schools
 - University of Arkansas Fayetteville College of Engineering
 - University of Arkansas at Little Rock Department of Computer Science
- Close mentoring from UAMS TRI faculty and staff in developing a research project in the Data Scholar's clinical area of interest using existing UAMS data resources (e.g UAMS Enterprise Data Warehouse, LifeLink, Arkansas All Payers Claims Data, Healthcare Cost and Utilization Project) or publicly available data. A complete listing of data resources can be found at: https://dbmi.uams.edu/databases/?_ga=2.109160134.258776721.1574690046-966288700.1570544700
- Eligible applicants must;
 - Hold a terminal degree as described above
 - Have at least a 50% appointment at UAMS, ACH, or CAVHS (preference given to faculty

with 100% appointments)

- Be able to devote 20% effort for 12 months starting July 1, 2021, documented by the applicants Supervisor
- It is recommended that the applicant propose to use:
 - Existing TRI data resources or data resources already available to UAMS/ACH faculty. Funding to acquire new data will not be provided.
 - A multidisciplinary, team science approach to accomplish the research and training goals

Important Dates

- **Program Informational Session: 10:00 AM, January 14, 2021:**
 - Jan 14, 2021 10:00 AM Central Time (US and Canada)

Join Zoom Meeting

<https://uams.zoom.us/j/3016855184?pwd=VWRHU2grdnNSb0JIRGZOOHdMYk5NQTO9>

Meeting ID: 301 685 5184

Passcode: TRI2020

- March 1, 2021: Applications due
- March 19, 2020: Awardees Notified (approximate)
- July 1, 2020: Data Scholars Program Begins

Research Plan

Applicants will submit a **three-page** (maximum) research plan covering the following topics: 1) research aim(s) to be addressed using data analytics, 2) research strategy, including potential data resources that will be utilized and methods to address the research aims and 3) training goals, including candidate's background, interest, and experience in data analytics/sciences or experience that lead to interest in this field and proposed coursework to be completed.

- **Research Aims:** Describe the specific research aims and the rationale for exploring those aims. Applicants may explore topics across all clinical areas and may propose the development of new data tools that can be used to improve care (clinical decision support, predictive analytics, etc), propose comparative effectiveness research assessing the benefits and harms of preventive, diagnostic, therapeutic, and palliative care; population health; health policy analyses; epidemiologic or real world evidence studies addressing focused research question(s) using observational data; or elucidate predicted clinically relevant biological pathways using computational systems biology approaches (genomics, transcriptomics, proteomics, and metabolomics. The applicant should describe what is known about the research area, including theories or conceptual models guiding the research if applicable, and what unmet needs the research plan proposes to address.
- **Research strategy:** Provide a brief description of the research approach the applicant will take to address research aims. Central to the research strategy is a description of the data resources that will be utilized and the analytic approaches that will be undertaken. The research strategy should outline study subjects, study measures and analytic approach.

- **Training goals:** Describe the knowledge and research skills to be acquired relevant to the applicant's career goals. This section should describe the plan of study over the year, current and proposed professional responsibilities, prior training and research efforts and how those relate to the training goals. This section should also articulate plans for future grants, publications, and other ways in which they will continue to apply what they learned after the program ends. Applicants may identify a mentoring team consisting of one primary mentor and at least one secondary mentor as part of the application. The mentor and candidate is responsible for the planning, directing, monitoring, and executing the proposed program. If mentors are identified, they must provide a letter of support specifically describing their role in mentoring the applicant. If a mentor is not identified, the data scholars program will assist the candidate in selecting a mentor based on their background and research goals.

Application Checklist

Please bundle your application into one PDF with the documents in the order listed below.

1. Research Plan (as described above, 3-page maximum)
2. NIH Biosketch (format and instructions can be found at <https://grants.nih.gov/grants/forms/biosketch.htm>)
3. Letter of support from relevant supervisor (e.g. department chair, ICE and/or ICHPP leadership) detailing support for the candidate and the proposed project. Letters should include salary information for applicant, and an explicit statement of support to devote 20% effort to the program.
4. Letter of Support from Mentor(s) – *optional*

Submission Information and Inquiries

Completed applications should be submitted as a single pdf document through our submission portal: <https://crisredcap.uams.edu/redcap/surveys/?s=CHYW39XPML>

All applications must be submitted no later than 11:59 PM, March 1, 2021.

Inquiries regarding the application procedures can be directed to Paul Duguid PDuguid@uams.edu and inquiries regarding the scope of the Data Scholars program can be directed to Bradley Martin, PharmD, PhD bmartin@uams.edu.

Appendix 1 – Suggested Data Analytics Courses offered at UAMS

BMIG 5011 Introduction to Biomedical Informatics
BMIG 5002 Biomedicine for Informaticists
BMIG 5001 Information Modelling: From Data to Knowledge
BMIG 5003 Computational Methods in Biomedical Informatics
BMIG 5014 Anatomy for Imaging (1 credit)
BMIG 5017 Clinical Data Standards (1 credit)
BMIG 5021 Medical Decision-Making (1 credit)
BMIG 5211 Scientific Data Visualizations (1 credit)
BMIG 5101 Foundations of Biomedical Informatics- Sequences as Biological Information (2 credits)
BMIG 5102 Foundations of Biomedical Informatics - Clinical Information (2 credits)
BMIG 5103 Foundations of Biomedical Informatics: Population Health Information: (2 credits)
BMIG 5113 Clinical Imaging Informatics
BMIG 5210 Genomics and Metagenomics
BMIG 6010 Information Systems in Clinical Research
BMIG 6050 Research Design in Biomedical Informatics
BMIG 5114 Bioconductor for Genomic Scale Data Analysis
BMIG 6101 Fundamentals of Managing Data Research
BMIG 6110 Clinical Decision Support
BMIG 6112 Clinical Research Informatics Synthesis
BMIG 6201 Machine Learning for Biomedical Informatics
BMIG 6202 Fundamentals of the Human Microbiome
BMIG 6012 Data Warehousing, Aggregation, and Reporting
BMIG 6014 Natural Language Processing in Biomedical Informatics

ENVH 5447 Geographic Information Systems for Health Professionals

HPMT 5212 Healthcare Information Systems
HPMT 5334 Data Visualization for Healthcare Analytics
HPMT 5214 Decision Analytics in Healthcare
HPMT 5335 Data Mining in Healthcare
HPMT X Healthcare Data Management using SQL

BIOS 5212 Biostatistics II Advanced Linear Models
BIOS 5223 Biostats III: Multivariate Analysis & Linear Models
BIOS 5213 Biostatistics Computing with SAS I
BIOS 5317 Biostatistics Computing with SAS II
BIOS 5233 Statistical Methods for Clinical Trials
BIOS 5111 Biostatistics Computing with R I (1 hour)
BIOS 5200 Biostatistics Computing with R II (1 hour)
BIOS 5315 Logistic Regression and Survival Analysis

PSGP 5118 Applied Research Methods using Retrospective Data
PSGP 5122 Applied Health Econometrics

Courses are 3 or 4 credit hours unless otherwise noted.