

# Stanford

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## Alison Callahan

Research Engineer, Med/BMIR

 Curriculum Vitae available Online

### Bio

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#### BIO

Alison Callahan is a research scientist in the Center for Biomedical Informatics and a member of the Shah Lab. Her work involves research and development of informatics methods for the analysis of biomedical and clinical data, to derive insights and inform medical decision making.

Alison completed her PhD in the Department of Biology at Carleton University in Ottawa, Canada. Her doctoral research focused on developing HyQue, a framework for representing and evaluating scientific hypotheses, and applying this framework to discover genes related to aging. She was also a developer for Bio2RDF, an open-source project to build and provide the largest network of Linked Data for the life sciences.

#### EDUCATION AND CERTIFICATIONS

- Doctor of Philosophy, Biology, Carleton University, Ottawa, Canada (2014)
- Master of Information Studies, University of Toronto, Toronto, Canada (2009)
- Bachelor of Science, Carleton University, Ottawa, Canada (2007)

#### LINKS

- Shah Lab: <http://shahlab.stanford.edu>
- Google scholar profile: <https://scholar.google.com/citations?user=0w8U7NQAAAAJ&hl=en>

### Professional

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#### PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, American Medical Informatics Association (2014 - present)

### Publications

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#### PUBLICATIONS

- **Developing a data sharing community for spinal cord injury research.** *Experimental neurology*  
Callahan, A., Anderson, K. D., Beattie, M. S., Bixby, J. L., Ferguson, A. R., Fouad, K., Jakeman, L. B., Nielson, J. L., Popovich, P. G., Schwab, J. M., Lemmon, V. P.  
2017
- **Machine Learning in Healthcare** *Key Advances in Clinical Informatics: Transforming Health Care through Health Information Technology*  
Callahan, A., Shah, N. H.  
Elsevier.2017: 279–291

- **RegenBase: a knowledge base of spinal cord injury biology for translational research** *DATABASE-THE JOURNAL OF BIOLOGICAL DATABASES AND CURATION*  
Callahan, A., Abeyruwan, S. W., Al-Ali, H., Sakurai, K., Ferguson, A. R., Popovich, P. G., Shah, N. H., Visser, U., Bixby, J. L., Lemmon, V. P.  
2016
- **Feasibility of Prioritizing Drug-Drug-Event Associations Found in Electronic Health Records.** *Drug safety*  
Banda, J. M., Callahan, A., Winnenburg, R., Strasberg, H. R., Cami, A., Reis, B. Y., Vilar, S., Hripcsak, G., Dumontier, M., Shah, N. H.  
2016; 39 (1): 45-57
- **The health care and life sciences community profile for dataset descriptions.** *PeerJ*  
Dumontier, M., Gray, A. J., Marshall, M. S., Alexiev, V., Ansell, P., Bader, G., Baran, J., Bolleman, J. T., Callahan, A., Cruz-Toledo, J., Gaudet, P., Gombocz, E. A., Gonzalez-Beltran, et al  
2016; 4
- **An evidence-based approach to identify aging-related genes in *Caenorhabditis elegans*** *BMC BIOINFORMATICS*  
Callahan, A., Cifuentes, J. J., Dumontier, M.  
2015; 16
- **Analyzing search behavior of healthcare professionals for drug safety surveillance.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*  
Odgers, D. J., Harpaz, R., Callahan, A., Stiglic, G., Shah, N. H.  
2015; 20: 306-317
- **Analyzing Information Seeking and Drug-Safety Alert Response by Health Care Professionals as New Methods for Surveillance.** *Journal of medical Internet research*  
Callahan, A., Pernek, I., Stiglic, G., Leskovec, J., Strasberg, H. R., Shah, N. H.  
2015; 17 (8)
- **Text Mining for Adverse Drug Events: the Promise, Challenges, and State of the Art** *DRUG SAFETY*  
Harpaz, R., Callahan, A., Tamang, S., Low, Y., Odgers, D., Finlayson, S., Jung, K., LePendu, P., Shah, N. H.  
2014; 37 (10): 777-790
- **Minimum Information about a Spinal Cord Injury Experiment: A Proposed Reporting Standard for Spinal Cord Injury Experiments** *JOURNAL OF NEUROTRAUMA*  
Lemmon, V. P., Ferguson, A. R., Popovich, P. G., Xu, X., Snow, D. M., Igarashi, M., Beattie, C. E., Bixby, J. L.  
2014; 31 (15): 1354-1361
- **The SemanticScience Integrated Ontology (SIO) for biomedical research and knowledge discovery.** *Journal of biomedical semantics*  
Dumontier, M., Baker, C. J., Baran, J., Callahan, A., Chepelev, L., Cruz-Toledo, J., Del Rio, N. R., Duck, G., Furlong, L. I., Keath, N., Klassen, D., McCusker, J. P., Queralt-Rosinach, et al  
2014; 5 (1): 14-?
- **Automatically exposing OpenLifeData via SADI semantic Web Services** *Journal of Biomedical Semantics*  
Rodriguez Gonzalez, A., Callahan, A., Cruz-Toledo, J., Garcia, A., Egana Aranguren, M., Dumontier, M., Wilkinson, M. D.  
2014; 5
- **Ontology-Based Querying with Bio2RDF's Linked Open Data.** *Journal of biomedical semantics*  
Callahan, A., Cruz-Toledo, J., Dumontier, M.  
2013; 4: S1-?
- **Evaluating Scientific Hypotheses Using the SPARQL Inferencing Notation** *The Semantic Web: Research and Applications*  
Callahan, A., Dumontier, M.  
Springer Berlin Heidelberg.2012: 647-658
- **HyQue: evaluating hypotheses using Semantic Web technologies.** *Journal of biomedical semantics*  
Callahan, A., Dumontier, M., Shah, N. H.  
2011; 2: S3-?
- **Contextual Cocitation: Augmenting Cocitation Analysis and its Applications** *JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY*  
Callahan, A., Hockema, S., Eysenbach, G.

2010; 61 (6): 1130-1143

- **Behaviourally mediated crypsis in two nocturnal moths with contrasting appearance** *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*

Webster, R. J., Callahan, A., Godin, J. J., Sherratt, T. N.

2009; 364 (1516): 503-510

- **Empirical tests of the role of disruptive coloration in reducing detectability** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*

Fraser, S., Callahan, A., Klassen, D., Sherratt, T. N.

2007; 274 (1615): 1325-1331