

# *Curriculum Vitae of* **Alison Callahan, Ph. D.**

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## EDUCATION

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<b>Doctor of Philosophy, Biology – Department of Biology, Carleton University</b>	2014
Thesis: <i>Semi-automated hypothesis evaluation using semantic technologies</i>	
Supervisor: Dr. Michel Dumontier	
<b>Master of Information Studies (ALA accredited) – Faculty of Information, St. George Campus, University of Toronto</b>	2009
Thesis: <i>Contextual cocitation: Augmenting cocitation analysis and its applications</i>	
Supervisor: Dr. Stephen Hockema	
<b>Honors Bachelor of Science (highest honors) – Integrated Science Institute, Carleton University</b>	2007
Honors Project: <i>Quantifying crypsis: analyzing the resting site selection of moths in their natural habitats</i>	
Supervisor: Dr. Tom Sherratt	

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## RESEARCH APPOINTMENTS

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<b>Postdoctoral scholar – Stanford Center for Biomedical Informatics Research, Stanford University</b>	05/2014 - present
Supervisor: Dr. Nigam Shah	
<b>Research assistant – Stanford Center for Biomedical Informatics Research, Stanford University</b>	09/2013-05/2014
Supervisor: Dr. Nigam Shah	
<b>Researcher – Canada Institute for Scientific and Technical Information, National Research Council</b>	05/2008-08/2008, 05/2009-08/2009
Supervisor: Glen Newton	
<b>Researcher – Department of Biology, Carleton University</b>	05/2005-08/2005,
NSERC Undergraduate Student Research Award	05/2006-08/2006,
Supervisor: Dr. Michel Dumontier	05/2007-08/2007

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## TEACHING EXPERIENCE

### **Undergraduate student project supervisor – Carleton University**

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BIOL4901 Directed studies: <b>Annotating research statements about Alzheimer’s Disease</b>	05/2012-08/2012
BIOC4908 Honors Project: <b>Discovering therapeutically significant biological entities in research claims about Alzheimer’s disease</b>	09/2011-05/2012

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### **Teaching assistant – Carleton University**

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BIOC3008 <b>Introduction to Bioinformatics</b>	09/2009-12/2009,
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BIOL2104 <b>Introductory Genetics</b>	01/2009-04/2009 01/2010-04/2010 01/2011-04/2011 01/2012-04/2012
BIOC2200 <b>Cell Biochemistry</b>	09/2011-12/2011
BIOL1103 <b>Foundations of Biology</b>	09/2010-12/2010

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### Instructor – Algonquin College

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CHE4047: <b>Decision Making in Scientific Enquiry</b> (Statistics and ethics in scientific research) Program: Biotechnology Technologist	09/2009-12/2009
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### LIBRARIAN EXPERIENCE

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<b>Graduate student library assistant – Gerstein Science Information Centre, University of Toronto</b> <i>Part-time reference librarian, serving library patrons and completing attendant projects to improve library services and resources available to University of Toronto students and faculty</i>	04/2008-05/2008, 09/2008-04/2009
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### SELECTED PEER-REVIEWED PUBLICATIONS

Banda, Juan M., **Alison Callahan**, Rainer Winnenburg, Howard R. Strasberg, Aurel Cami, Ben Y Reis, Santiago Vilar, George Hripcsak, Michel Dumontier and Nigam H. Shah. 2015. **Feasibility of prioritizing drug-drug-event associations found in electronic health records.** *Drug Safety* 2015-10-08: 1-13.

**Callahan, Alison**, Igor Pernek, Gregor Stiglic, Jure Leskovec, Howard R. Strasberg and Nigam H. Shah. 2015. **Analyzing information seeking and drug-safety alert response by health care professionals as new methods for surveillance.** *Journal of Medical Internet Research* 17(8): e204.

**Callahan, Alison**, Juan José Cifuentes and Michel Dumontier. 2015. **An evidence-based approach to identify aging-related genes in *Caenorhabditis elegans*.** *BMC Bioinformatics* 16:40.

Rodríguez González, Alejandro, **Alison Callahan**, José Cruz-Toledo, Adrian Garcia, Mikel Egaña Aranguren, Michel Dumontier and Mark D. Wilkonson. 2014. **Automatically exposing OpenLifeData via SADI semantic web services.** *Journal of Biomedical Semantics* 5:46.

Harpaz, Rave, **Alison Callahan**, Suzanne Tamang, Yen Low, David Odgers, Sam Finlayson, Kenneth Jung, Paea LePendu and Nigam H. Shah. 2014. **Text mining for adverse drug events: The promise, challenges and state of the art.** *Drug Safety* 37(10): 777-790.

Dumontier, M, Christopher J. O. Baker, Joachim Baran, **Alison Callahan**, Leonid L. Chepelev, José Cruz-Toledo, Nicholas R. Del Rio, Geraint Duck, Laura Inés Furlong, Nichealla Keath, Dana Klassen, James P. McCusker, Núria Queralt-Rosinach, Matthias Samwald, Natalia Villanueva-Rosales, Mark D. Wilkinson and Robert Hoehndorf. 2014. **The Semanticscience Integrated Ontology (SIO) for biomedical research and knowledge discovery.** *Journal of Biomedical Semantics* 5:14.

- Callahan, Alison**, José Cruz-Toledo, Peter Ansell and Michel Dumontier. 2013. **Bio2RDF Release 2: Improved Coverage, Interoperability and Provenance of Life Science Linked Data**. *The Semantic Web: Semantics and Big Data, Lecture Notes in Computer Science 7882*, pp 200-212.
- Callahan, Alison**, José Cruz-Toledo and Michel Dumontier. 2013. **Ontology-Based Querying with Bio2RDF's Linked Open Data**. *Journal of Biomedical Semantics 4(Suppl 1): S1*.
- Callahan, Alison** and Michel Dumontier. 2012. **Evaluating scientific hypotheses using the SPARQL Inferencing Notation**. *The Semantic Web: Research and Applications, Lecture Notes in Computer Science 7295*, pp. 647-658.
- Webster, Richard J., **Alison Callahan**, Jean Guy J. Godin and Thomas N. Sherratt. 2011. **Camouflage behavior and body orientation on backgrounds containing directional patterns**. In Martin Stevens and Sami Merilaita (Eds.), *Animal Camouflage: Mechanisms and Function* (pp. 101-117). Cambridge UK: Cambridge University Press.
- Callahan, Alison**, Michel Dumontier and Nigam H. Shah. 2011. **HyQue: Evaluating hypotheses using Semantic Web technologies**. *Journal of Biomedical Semantics 2(Suppl 2): S3*.
- Callahan, Alison**, Michel Dumontier and Nigam H. Shah. 2010. **HyQue: Evaluating hypotheses using Semantic Web technologies**. Bio-Ontologies 2010, Boston MA, July 9-10 2010.
- Callahan, Alison**, Stephen Hockema and Gunther Eysenbach. 2010. **Contextual cocitation: Augmenting cocitation analysis and its applications**. *Journal of the American Society for Information Science and Technology 61(6): 1130-1143*.
- Webster, Richard, **Alison Callahan**, Jean-Guy Godin, and Thomas N. Sherratt. 2008. **Behaviourally-mediated crypsis in two nocturnal moths with contrasting appearance**. *Philosophical Transactions of the Royal Society of London B – Biological Sciences 364: 503-510*.
- Fraser, Stewart, **Alison Callahan**, Dana Klassen and Thomas N. Sherratt. 2007. **Empirical tests of the role of disruptive coloration in reducing detectability**. *Proceedings of the Royal Society B: Biological Sciences 274(1615): 1325-1331*.

## HONORS & AWARDS

- Natural Sciences and Engineering Research Council (NSERC) Canada Graduate Scholarship  
*For doctoral research in the Department of Biology, Carleton University*
- Social Sciences and Humanities Research Council (SSHRC) Canada Graduate Scholarship  
*For masters research at the Faculty of Information, University of Toronto*
- University of Toronto Fellowship  
*For masters research at the Faculty of Information, University of Toronto*
- Senate Medal for outstanding academic achievement  
*Upon graduating from Carleton University with Bachelors of Science degree*
- Natural Sciences and Engineering Research Council (NSERC) Undergraduate Student Research Award  
*For undergraduate research in the Department of Biology, Carleton University*

## PROFESSIONAL MEMBERSHIP

American Medical Informatics Association (AMIA)

## PROGRAM COMMITTEES

- 2015 AMIA Annual Symposium

Alison Callahan, PhD - *Curriculum Vitae*

- 2015 Bio-Ontologies SIG at the Intelligent Systems in Molecular Biology Conference
- 2014 Bio-Ontologies SIG at the Intelligent Systems in Molecular Biology Conference
- 2013 Bio-Ontologies SIG at the Intelligent Systems in Molecular Biology Conference
- 2013 International Conference on Biomedical Ontology
- 2012 Bio-Ontologies SIG at the Intelligent Systems in Molecular Biology Conference
- 2011 Bio-Ontologies SIG at the Intelligent Systems in Molecular Biology Conference

## CONFERENCE ORGANIZATION

Co-chair of Semantic Web Technologies for Libraries and Readers, a workshop at the ACM/IEEE Joint Conference on Digital Libraries, 2011