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# Sriram Jayabal

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## WORK EXPERIENCE

**Postdoctoral research associate**

**Oct 2017 - Present**

Raymond Lab – Dept. of Neurobiology,  
Stanford University School of Medicine, USA

## EDUCATION

**PhD in Neuroscience**

**Sep 2011 – Sep 2017**

McGill University, Canada

*Dissertation title:* Cerebellar pathophysiology and its treatment in spinocerebellar ataxia type 6 mice

*Advisor:* Dr. Alanna J. Watt, Assistant Professor, McGill University

**Bachelor of Technology in Biotechnology**

**Aug 2006 – May 2010**

PSG College of Technology, India

*Dissertation title (honors):* On the biochemical basis for the cooperation of Sox2 and Pax6 in lens development

*Advisor:* Dr. Ralf Jauch, exchange program (Group leader, Chinese Academy of Sciences)

## PEER-REVIEWED PUBLICATIONS

- **Jayabal, S.,** Ljungberg, L., Watt, A.J. 2017. Transient cerebellar alterations during development prior to obvious motor phenotype in a mouse model of spinocerebellar ataxia type 6. *The Journal of Physiology*, **595**(3), 949-966. *This article was featured in the journal with a perspective article.*
- Ljungberg, L., Lang-Ouellette, D., Yang, A., **Jayabal, S.,** Quilez, S., Watt, A.J. 2016. Transient developmental Purkinje cell axonal torpedoes in healthy and ataxic mouse cerebellum. *Frontiers in Cellular Neuroscience*, **10**, 248.
- **Jayabal, S.,** Chang, H.H.V., Cullen, K.E., Watt, A.J. 2016a. 4-aminopyridine reverses ataxia and cerebellar firing deficiency in a mouse model of spinocerebellar ataxia type 6. *Scientific Reports*, **6**.
- **Jayabal, S.,** Ljungberg, L., Erwes, T., Cormier, A., Quilez, S., El Jaouhari, S., Watt, A.J. 2015. Rapid onset of motor deficits in a mouse model of spinocerebellar ataxia type 6 precedes late cerebellar degeneration. *eNeuro*, **2**(6), 0094-15.2015.

**PEER-REVIEWED PUBLICATIONS (Continued)**

- Narasimhan, K., Pillay, S., Huang, Y.-H., **Jayabal, S.**, Udayasuryan, B., Veerapandian, V., Kolatkar, P., Cojocaru, V., Pervushin, K., Jauch, R. 2015. DNA-mediated cooperativity facilitates the co-selection of cryptic enhancer sequences by SOX2 and PAX6 transcription factors. *Nucleic Acids Research*, 1390.
- Narasimhan, K., Hilbig, A., Udayasuryan, B., **Jayabal, S.**, Kolatkar, P.R., Jauch, R. 2014. Crystallization and preliminary X-ray diffraction analysis of the Pax9 paired domain bound to a DC5 enhancer DNA element. *Acta Crystallographica Section F: Structural Biology Communications*, **70**(10), 1357-1361.
- Ferreira, T.A., Blackman, A.V., Oyrer, J., **Jayabal, S.**, Chung, A.J., Watt, A.J., Sjöström, P.J., van Meyel, D.J. 2014. Neuronal morphometry directly from bitmap images. *Nature Methods*, **11**(10), 982-984.

**BOOK CHAPTERS**

- **Jayabal, S.**, Watt, A.J. Turning on the juice: development of physiological activity in the cerebellum. *Handbook of the Cerebellum and Cerebellar Disorders*. In Press.

**COMMENTARIES**

- **Jayabal, S.** 2016. Sudden Onset of Motor Abnormalities in a Mouse Model of Spinocerebellar Ataxia Type 6. My *eNeuro* paper was chosen to be one of the featured summaries in *Neuronline*, a Society for Neuroscience online portal.

**AWARDS, HONORS, AND SCHOLARSHIPS**

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|---|-------------|
| • Integrated Program in Neuroscience (IPN) Returning Student Award (\$ 10000) | <b>2016</b> |
| • IPN GREAT Travel Award (\$ 500)   | <b>2016</b> |
| • Canadian Association of Neuroscience Travel Award (\$ 200)                  | <b>2016</b> |
| • McGill 3-minute graduate thesis competition finalist                        | <b>2016</b> |
| • IPN Returning Student Award (\$ 10000)                                      | <b>2015</b> |
| • Scientifica Imaging Competition – First prize                               | <b>2014</b> |
| • IPN Returning Student Award (\$ 10000)                                      | <b>2013</b> |
| • IPN Recruitment Award (\$ 5000)   | <b>2011</b> |
| • Best outgoing student - Biotechnology                                       | <b>2010</b> |

**CONFERENCE PRESENTATIONS**

- **Jayabal, S.**, Chang, H.H.V., Quilez, S., McNicholas, E., Guo, Y., Cullen, K.E., Watt A.J. 2017. Cerebellar pathophysiology and its treatment in spinocerebellar ataxia type 6 mice. Poster (#3-C-93) presented at the **11<sup>th</sup> Annual Canadian Neuroscience Meeting**, Montreal, QC, Canada.

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**CONFERENCE PRESENTATIONS (Continued)**

- **Jayabal, S.,** Chang, H.H.V., Cullen, K.E., Watt A.J. 2016. 4-Aminopyridine alleviates ataxia and reverses cerebellar cortical output deficiency in a mouse model of spinocerebellar ataxia type 6. Poster (**#43.04**) presented at the **Neuroscience 2016**, Annual SfN Meeting, San Diego, CA, USA.
- **Jayabal, S.,** Chang, H.H.V., Cullen, K.E., Watt A.J. 2016. 4-Aminopyridine alleviates ataxia and reverses cerebellar cortical output deficiency in a mouse model of spinocerebellar ataxia type 6. Poster (**#2-C-55**) presented at the **10<sup>th</sup> Annual Canadian Neuroscience Meeting**, Toronto, ON, Canada.
- **Jayabal, S.,** Ljungberg, L., Liang, K., Erwes, T., Quilez, S., Watt, A.J. 2015. Altered precision of Purkinje cell firing in a mouse model of spinocerebellar ataxia type 6. Poster (**#400.6**) presented at **Neuroscience 2015**, Annual SfN Meeting, Chicago, IL, USA.
- **Jayabal, S.,** Ljungberg, L., Watt, A.J. 2015. Altered precision of Purkinje cell firing in mouse model of spinocerebellar ataxia type 6. Poster (**#1-C-94**) presented at the **9<sup>th</sup> Annual Canadian Neuroscience Meeting**, Vancouver, BC, Canada.
- **Jayabal, S.,** Ljungberg, L., Erwes, T., Cormier, A., Watt, A.J. 2014. Homeostatic plasticity in the cerebellum of spinocerebellar ataxia type 6 mice. Poster (**#139.07**) presented at **Neuroscience 2014**, Annual SfN Meeting, Washington, D.C, USA.
- **Jayabal, S.,** Erwes, T., Cormier, A., Watt, A.J. 2014. Developmental abnormalities in the cerebellum of spinocerebellar ataxia type 6 mice. Poster (**#LB 22**) presented at **Physiology 2014**, Annual Physiological Society Meeting, London, UK.
- **Jayabal, S.,** Watt, A.J. 2014. Developmental abnormalities in the cerebellum of spinocerebellar ataxia type 6 mice. Poster (**#3-C-106**) presented at the **8<sup>th</sup> Annual Canadian Association for Neuroscience Meeting**, Montreal, QC, Canada.

**RESEARCH EXPERIENCE****Doctoral Researcher***Integrated Program in Neuroscience, McGill University, Canada***2011 - present**

- Whole-cell electrophysiology
- Extracellular recording (young (p4) and old (19 months) mice)
- Acute brain slicing
- 2-Photon imaging (live acute slices and fixed)
- Behavioral assays (motor coordination assays)
- Confocal imaging
- Immunohistochemistry
- Mouse colony management
- Whole cell calcium imaging (currently learning)
- **Software:** Neurolucida, ImageJ, Volocity, Igor Pro, Illustrator, and JMP.

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**Exchange Student Researcher**

**2009 - 2010**

*Genome Institute of Singapore, Singapore*

- Electrophoretic mobility shift assays
- Protein purification (chromatography techniques)
- PCR
- GATEWAY cloning
- Agarose and polyacrylamide gel electrophoresis

**TEACHING EXPERIENCE**

**Teaching Assistant**

**2012 – 2016**

*Department of Biology, McGill University, Canada*

Cell and Molecular Laboratory

Led the laboratory sessions, gave instructions, and guidance to students to teach them basic molecular biology techniques.

**ADMINISTRATIVE AND VOLUNTEERING EXPERIENCE**

- IPN 3-minute thesis competition organizing committee member **2016**
- Canada Wide Youth Science Fair Judge **2016**
- International student buddy program - McGill **2014 - 2017**
- Student Life Ambassador - McGill **2016 - 2017**

**LANGUAGES**

English (fluent), Tamil (fluent), and Telegu (working knowledge).