

Tang, Leo Tsz Ho -Curriculum Vitae

Current position: Assistant Professor, Department of Biology, University of Vermont

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Office: MLS 337A, 109 Carrigan Drive, Burlington, VT 05405

Education

2001 September – 2007 June

Institute: La Salle College, Hong Kong, China

Program: Secondary education, science stream.

2007 September – 2011 September

Institute: Chinese University of Hong Kong, Hong Kong, China

Program: Bachelor of Science in biochemistry (2:1), school of life science

2011 October – 2015 May

Institute: University of Bristol, Bristol, UK

Program: PhD in biochemistry, school of medical and veterinary science

Professional Appointments

2009 May – 2011 September

Institute: Chinese University of Hong Kong, Hong Kong, China

Position: Undergraduate researcher

Research Focus: Application of *in vitro* SUMOylation

2009 June – August, 2010 June – August

Institute: Ohio State University, Columbus, Ohio, USA

Position: Intern researcher

Research Focus: Applications of expanded genetic code

2011 October – 2015 May

Institute: University of Bristol, Bristol, UK

Position: PhD Candidate

Research Focus: The effect of SUMOylation of Synapsin Ia on synapse transmission

2015 October – 2024 Aug

Institute: Albert Einstein College of Medicine, Bronx, New York, USA

Position: Postdoctoral fellow/Staff Scientist

Research Focus: Study of genetics elements involved in dendrite morphogenesis; Connectivity plasticity in learning

2024 Aug – present

Institute: University of Vermont, Burlington, Vermont, USA

Position: Assistant Professor

Research Focus: Genetic and cellular basis of learning, insulin signaling in learning.

Scholarships, Fellowships and Awards

2016 Croucher Fellowship for Postdoctoral Research (2 years), Croucher Foundation, Hong Kong.
Junior Investigator Neuroscience Research Award, Dominick P. Purpura Department of Neuroscience, Albert Einstein College of Medicine, NY, USA.

Conference attended

2013 Nov 8-13, Society of Neuroscience annual conference, San Diego

Poster Presentation - SUMOylation of Synapsin Ia regulates neurotransmitter release

2017 Jun 21-25, Genetic Association of America 2017 *C.elegans* International Meeting

Poster Presentation - A asymmetric sensory neuronal circuit in *C. elegans*

2018 Jun 24-29, 68th Lindau Nobel Laureate Meetings

2019 Jan 18, The New York Area Worm Meeting

Oral Presentation – Building complex dendrites: how DMA-1 shapes PVD through regulating cytoskeleton dynamics

2019 June 20-24, Genetic Association of America 2019 *C.elegans* International Meeting

Poster Presentation - The TIAM-1 guanine nucleotide exchange factor shapes somatosensory dendrites independently of Rac1 guanine nucleotide exchange activity

2021 June 21-24, Genetic Association of America 2021 *C.elegans* International Meeting

Oral Presentation - Synaptic Function and Circuits Platform – Insulin-like signaling regulates left/right asymmetric synaptic connection

2022 July 24-27, *C. elegans* Topic Meeting: neuronal development, synaptic function and behaviour

Oral Presentation - INS-6 regulates experience dependent changes in an asymmetry synaptic connection.

2022 Nov 16, Worm Neuro NYC symposium, New York

Oral Presentation - Anatomical restructuring of a lateralized neural circuit during associative learning by asymmetric insulin signalling.

2023 Jun 24-28 Genetic Association of America 2023 *C.elegans* International Meeting

Poster Presentation - - Anatomical restructuring of a lateralized neural circuit during associative learning by asymmetric insulin signalling

Other skills and experiences

Teaching experience:

2011-2014: Demonstrator for year 1 biochemistry undergraduate student laboratory module in University of Bristol

2012: Supervised year 3 biochemistry undergraduate student project, University of Bristol

2015 - 2021: Supervised and mentored year 6 graduate rotation students, 2 undergraduate students and 2 high school student, Albert Einstein College of Medicine

2023 April: *Albert Einstein College of Medicine, department of Genetics, departmental retreat Organizing committee*

Fluent in Chinese (Cantonese and Mandarin) and English

Publications

Tang, L.T.*, Lee, G.A.*, Cook, S.J., Ho, J., Potter, C.C., Bülow, H.E. (2023). Anatomical restructuring of a lateralized neural circuit during associative learning by asymmetric insulin signaling. *Curr Biol.* 2023 Aug 10:S0960-9822(23)00982-X

Ramirez-Suarez, N.J., Belalcazar, H. M., Rahman, M., Trivedi, M., **Tang, L.T.**, Buelow, H.E. (2023). Convertase-dependent regulation of a membrane tethered ligand in trans tunes dendrite adhesion. *Development dev.*201208.

Trivedi, M., Camara, C.J., Bülow, H.E., **Tang, L.T.** (2023). CRISPR-mediated genome editing allows for efficient on demand creation. *MicroPublication; conditional accepted, under revision.*

of >200 kb deficiencies with precise boundaries

Tang, L.T.*, Trivedi, M.*, Freund, J., Salazar, C.J., Rahman, M., Ramirez-Suarez, N.J., Lee, G., Wang, Y., Grant, B.D., Bülow, H.E.(2021). The CATP-8/P5A-type ATPase functions in multiple pathways during neuronal patterning. *PLoS Genet.*;17(7):e1009475.

Cook, S.J., Jarrell, T.A., Brittin, C.A., Wang, Y., Bloniarz, A.E., Yakovlev, M.A., Nguyen, K.C.Q, **Tang, L.T.**, Bayer, E.A., Duerr, J.S., Bülow, H.E., Hobert, O., Hall, D.H., Emmons, S.W. (2019). Whole-animal connectomes of both *Caenorhabditis elegans* sexes. *Nature* 571(7763). 63-71

Tang, L.T.*, Diaz-Balzac, C.A.*, Rahman, M., Ramirez-Suarez, N.J., Salzberg, Y., Bülow, H.E. (2019). The TIAM-1 guanine nucleotide exchange factor shapes somatosensory dendrites independently of Rac1 guanine nucleotide exchange activity by controlling F-actin localization. *ELife* 8

Celestrin, K., Díaz-Balzac, C., **Tang L.T.**, Ackley B.D., Bülow. H.E. (2018). Four specific Ig domains in UNC-52/Perlecan function with NID-1/Nidogen during dendrite morphogenesis in *Caenorhabditis elegans*. *Development.* 145(10)

Tang, L.T., Craig, T.J. & Henley, J.M. (2015). SUMOylation of synapsin Ia maintains synaptic vesicle availability and is reduced in an autism mutation. *Nat Commun* 6, 7728

Luo, J., Ashikaga, E., Rubin, P.P., Heimann, M.J., Hildick, K.L., Bishop, P., Girach, F., Josa-Prado, F., **Tang, L.T.**, Carmichael, R.E., et al. (2013). Receptor trafficking and the regulation of synaptic plasticity by SUMO. *Neuromolecular Med* 15, 692-706.

Lee, M.M., Fekner, T., **Tang, T.H.**, Wang, L., Chan, A.H., Hsu, P.H., Au, S.W., and Chan, M.K. (2013). A click-and-release pyrrolysine analogue. *ChemBiochem* 14, 805-808.

**Equal Contributions*