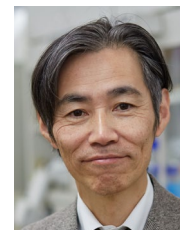


Curriculum Vitae

October 25, 2018

Name: Tadafumi Kato, M.D., Ph.D. (55 years old, male)
Position: Team Leader, Laboratory for Molecular
Dynamics of Mental Disorders
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Place of Birth: Tokyo, Japan

Date of Birth: August 16, 1963.

Nationality: Japanese

Marital Status: Married, two children.

Degrees: M.D. 1988 (University of Tokyo, Faculty of Medicine)

Ph.D. 1995 (Shiga University of Medical Science)

Education: March 1988, graduated from Faculty of Medicine, University of Tokyo

March 1984 graduated from 2 years pre-med course,
Faculty of Culture and Science, University of Tokyo.

Research Area: Translational neural genomics of bipolar disorder

Research Experiences:

April 1, 2018 – Present Team Leader, Laboratory for Molecular Dynamics of
Mental Disorders, RIKEN Center for Brain Science

April 1, 2018 – Present Director, Research Resources Division, RIKEN Center for
Brain Science

May 1, 2015 – March 2018 Director, RIKEN-BSI Takeda Collaboration Center

April 1, 2015 – March 2018 Deputy Director, RIKEN Brain Science Institute

April 1, 2009 – March 2018 Senior Team Leader, Laboratory for Molecular Dynamics of
Mental Disorders, RIKEN Brain Science Institute

April 1, 2017 – March 2018	Director, Research Resources Center, RIKEN Brain Science Institute
April 1, 2009 – March 2013	Director, Disease Mechanism Research Core
August 2004 – March 2009	Director, Aging and Psychiatric Research Group RIKEN Brain Science Institute
January 2001 – March 2009	Team Leader, Laboratory for Molecular Dynamics of Mental Disorders, RIKEN Brain Science Institute
July 1999 – December 2000	Lecturer Department of Neuropsychiatry Faculty of Medicine, University of Tokyo
July 1997 - July 1999	Assistant Professor Department of Neuropsychiatry Faculty of Medicine, University of Tokyo
June 1989 - July 1997	Assistant Professor Department of Psychiatry, Shiga University of Medical Science
April 1995 - February 1996	International Visiting Fellow Department of Psychiatry University of Iowa College of Medicine (The laboratory of Dr. Raymond R. Crowe)
June 1988 - May 1989	Resident Department of Neuropsychiatry University of Tokyo Hospital

Major Visiting Appointments

April 1, 2018 – Present	Coordinate Professor, Department of Brain Functional Dynamics, Division of Functional Biology, Graduate School of Medicine, University of Tokyo
April 1, 2018 – Present	Adjunct Professor, Graduate School of Medicine, Juntendo University
April 1, 2017 – Present	Adjunct Lecturer, Kumamoto University School of Medicine
March 31/2016 – Present	Program Supervisor, Strategic Research Program for Brain Sciences (SRPBS)
April 1, 2015 – Present	Adjunct Professor, Hoshi University
April 1, 2014 – Present	Adjunct Professor, Fujita Health University School of Medicine
April 1, 2011 – March 31/2016	Program Officer,

	Strategic Research Program for Brain Sciences (SRPBS)
April 1, 2010 – Mar 31/2013	Adjunct Professor, University of Tokyo, Faculty of Education
April 1, 2009 – Present	Adjunct Professor, Hiroshima University
April 2001 – Present	Adjunct Lecturer, Department of Neuropsychiatry University of Tokyo, Faculty of Medicine
April 2001 – Mar 2010	Adjunct Lecturer, Department of Psychiatry Tokyo Medical and Dental University
April 2006 – Mar 2008	Adjunct Lecturer, Nagasaki University, Faculty of Medicine
April 2003 - Mar 2006	Adjunct Lecturer, Department of Psychiatry Mie University School of Medicine
April 2000 – Mar 2006	Adjunct Lecturer, Department of Psychiatry Sapporo Medical College
April 2004 – March 2005	Adjunct Lecturer, University of Tokyo, Faculty of Education
April 2003 – March 2005	Adjunct Lecturer, Department of Psychiatry Kobe University School of Medicine
September 1997 – March 2001	Adjunct Lecturer, Department of Psychiatry Shiga University of Medical Sciences

Honors and Awards:

2019	Mogens Schou Award for Research, International Society for Bipolar Disorders
2017	Colvin Prize, Brain and Behavior Foundation
2014	Tsukahara Memorial Award, Brain Science Foundation
2008	NARSAD Independent Investigator's Award
2000	NARSAD Independent Investigator's Award
1998	CINP Rafaelson Fellowship Award
1995	Stanley Foundation Research Award
1995	Academic Prize of Japanese Society of Biological Psychiatry

Membership:

Collegium Internationale Neuro-Psychopharmacologium (CINP) (Councilor 2006-2008)
International Society of Bipolar Disorder (Councilor 2005-2007, 2011-2013)
Society of Biological Psychiatry
International Society of Psychiatric Genetics
Society for Neuroscience
Japan Neuroscience Society (Councilor, 2011-2016)
Japanese Society of Biological Psychiatry (Councilor, 2013-2015)

Japanese Society of Neurology and Psychiatry
Japanese Society of Human Genetics (Board Member)
Japanese Society of Neurochemistry (Councilor 2011-2013)
Japanese Society of Neuropsychopharmacology (Councilor 2012-2016)
Japanese Society of Mood Disorders (Councilor 2012 - present)

Board Certification:

2007 Board Certified Member of Japanese Society of Neurology and Psychiatry (#8167)
1994 Designated Psychiatrist by Japanese Ministry of Health, Labour and Welfare (#9769)

Editorship:

Editor in Chief "*Psychiatry and Clinical Neurosciences*"
Section Editor "*Neuroscience Research*"
Academic Editor "*PLOS One*"
Editorial Board Member "*Journal of Affective Disorders*"
 "*Bipolar Disorders*"
 "*International Journal of Bipolar Disorders*"

Refereed Original Articles

1. Kato TM, Kubota-Sakashita M, Fujimori-Tonou N, Saitow F, Fuke S, Masuda A, Itohara S, Suzuki H, Kato T*. *Ant1* mutant mice bridge the mitochondrial and serotonergic dysfunctions in bipolar disorder. ***Molecular Psychiatry*** (in press)
2. Nakamura T, Nakajima K, Ohnishi T, Yoshikawa T, Nakanishi M, Takumi T, Tsuboi T, Kato T. Quantitative evaluation of incomplete preweaning lethality in mice by using the CRISPR/Cas9 system. ***Scientific Reports*** (in press)
3. Nishioka M, Bundo M, Ueda J, Yoshikawa A, Nishimura F, Sasaki T, Kakiuchi C, Kasai K, Kato T*, Iwamoto K*. Identification of somatic mutations in monozygotic twins discordant for psychiatric disorders. ***npj Schizophrenia*** (in press)
4. Kageyama Y, Kasahara T, Nakamura T, Hattori K, Deguchi Y, Tani M, Kuroda K, Yoshida S, Goto Y, Inoue K, Kato T* (2018) Plasma nervonic acid is a potential biomarker for major depressive disorder: a pilot study. ***International Journal of Neuropsychopharmacology*** 21: 207-215
5. Nishioka M, Bundo M, Ueda J, Fumiki K, Sato Y, Kuroki Y, Ishii T, Ukai W, Murayama S, Hashimoto E, Nagasaki M, Yasuda J, Kasai K, Kato T*, Iwamoto K* (2017) Identification of somatic mutations in postmortem human brains by whole genome sequencing and their implications for psychiatric disorders. ***Psychiatry Clin Neurosci*** 72: 280-294, 2018
6. Ikeda M, Takahashi A., Kamatani Y, Okahisa Y, Kunugi H, Mori N, Sasaki T, Ohmori T, Okamoto Y, Kawasaki H, Shimodera S, Kato T, Yoneda H, Yoshimura R, Iyo M, Matsuda K, Akiyama M, Ashikawa K, Kashiwase K, Tokunaga K, Kondo K, Saito T, Shimasaki A, Kawase K, Kitajima T, Matsuo K, Itokawa M, Someya T, Inada T, Hashimoto R, Inoue T, Akiyama K, Tanii H, Arai H, Kanba S, Ozaki N, Kusumi I, Yoshikawa T, Kubo M, Iwata N (2018) A genome-wide association study identifies two novel susceptibility loci and trans population polygenicity associated with bipolar disorder. ***Molecular Psychiatry*** 23: 639-647
7. Takata A, Miyake N, Tsurusaki Y, Fukai R, Miyatake S, Koshimizu E, Kushima I, Okada T, Morikawa M, Uno Y, Ishizuka K, Nakamura K, Tsujii M, Yoshikawa T, Toyota T, Okamoto N, Hiraki Y, Hashimoto R, Yasuda Y, Saitoh S, Ohashi K, Sakai Y, Ohga S, Hara T, Kato M, Nakamura K, Ito A, Seiwa C, Shirahata E, Osaka H, Matsumoto A, Takeshita S, Tohyama J, Saikusa T, Matsuishi T, Nakamura T, Tsuboi T, Kato T, Suzuki T, Saitsu H, Nakashima M, Mizuguchi T, Tanaka F, Mori N, Ozaki N, Matsumoto N (2018) Integrative Analyses of De Novo Mutations Provide Deeper Biological Insights into Autism Spectrum Disorder. ***Cell Reports*** 22: 734-747.
8. Takata A*, Matsumoto N, Kato T* (2017) Genome-wide identification of splicing QTLs in the human brain and their enrichment among schizophrenia-associated loci. ***Nature Communications*** 8: 14519

9. International Consortium on Lithium Genetics (ConLi+Gen), Amare AT, Schubert KO, Hou L, Clark SR, Papiol S, Heilbronner U, Degenhardt F, Tekola-Ayele F, Hsu YH, Shekhtman T, Adli M, Akula N, Akiyama K, Ardau R, Arias B, Aubry JM, Backlund L, Bhattacharjee AK, Bellivier F, Benabarre A, Bengesser S, Biernacka JM, Birner A, Brichant-Petitjean C, Cervantes P, Chen HC, Chillotti C, Cichon S, Cruceanu C, Czerski PM, Dalkner N, Dayer A, Del Zompo M, DePaulo JR, Étain B, Falkai P, Forstner AJ, Frisen L, Frye MA, Fullerton JM, Gard S, Garnham JS, Goes FS, Grigoriou-Serbanescu M, Grof P, Hashimoto R, Hauser J, Herms S, Hoffmann P, Hofmann A, Jamain S, Jiménez E, Kahn JP, Kassem L, Kuo PH, Kato T, Kelsoe J, Kittel-Schneider S, Kliwicky S, König B, Kusumi I, Laje G, Landén M, Lavebratt C, Leboyer M, Leckband SG, Tortorella A, Manchia M, Martinsson L, McCarthy MJ, McElroy S, Colom F, Mitjans M, Mondimore FM, Monteleone P, Nievergelt CM, Nöthen MM, Novák T, O'Donovan C, Ozaki N, Ösby U, Pfennig A, Potash JB, Reif A, Reininghaus E, Rouleau GA, Rybakowski JK, Schalling M, Schofield PR, Schweizer BW, Severino G, Shilling PD, Shimoda K, Simhandl C, Slaney CM, Squassina A, Stamm T, Stopkova P, Maj M, Turecki G, Vieta E, Volkert J, Witt S, Wright A, Zandi PP, Mitchell PB, Bauer M, Alda M, Rietschel M, McMahon FJ, Schulze TG, Baune BT (2017) Association of Polygenic Score for Schizophrenia and HLA Antigen and Inflammation Genes With Response to Lithium in Bipolar Affective Disorder: A Genome-Wide Association Study. **JAMA Psychiatry** 75: 65-74.
10. Sugawara H, Murata Y, Ikegame T, Sawamura R, Shimanaga S, Takeoka Y, Saito T, Ikeda M, Yoshikawa A, Nishimura F, Kawamura Y, Kakiuchi C, Sasaki T, Iwata N, Hashimoto M, Kasai K, Kato T, Bundo M, Iwamoto K (2018) DNA methylation analyses of the candidate genes identified by a methylome-wide association study revealed common epigenetic alterations in schizophrenia and bipolar disorder. **Psychiatry Clin Neurosci** (epub).
11. Murata Y, Bundo M, Ueda J, Kubota-Sakashita M, Kasai K, Kato T, Iwamoto K (2017) DNA methylation and hydroxymethylation analyses of the active LINE-1 subfamilies in mice. **Sci Rep** 7:13624.
12. Kageyama Y, Kasahara T, Kato M, Sakai S, Deguchi Y, Tani M, Kuroda K, Hattori K, Yoshida S, Goto Y, Kinoshita T, Inoue K, Kato T (2017) The relationship between circulating mitochondrial DNA and inflammatory cytokines in patients with major depression. **J Affect Disord** Jun 6
13. Kasahara T, Ishiwata M, Kakiuchi C, Fuke S, Iwata N, Ozaki N, Kunugi H, Minabe Y, Nakamura K, Iwata Y, Fujii K, Kanba S, Ujike H, Kusumi I, Kataoka M, Matoba N, Takata A, Iwamoto K, Yoshikawa T, Kato T* (2017) Enrichment of deleterious variants of mitochondrial DNA polymerase gene (POLG1) in bipolar disorder. **Psychiatry and Clinical Neurosciences** 71: 518-529.
14. Kageyama Y, Kasahara T, Morishita H, Mataga N, Deguchi Y, Tani M, Kuroda K, Hattori K, Yoshida S, Inoue K, Kato T (2017) Search for plasma biomarkers in drug-free patients with bipolar disorder and schizophrenia using metabolome analysis. **Psychiatry and Clinical Neurosciences** 71: 115-123
15. Ueda J, Murata Y, Bundo M, Oh-Nishi A, Kassai H, Ikegame T, Zhao Z, Jinde S, Aiba A, Suhara T, Kasai K, Kato T, Iwamoto K (2017) Use of human methylation arrays for epigenome

- research in the common marmoset (*Callithrix jacchus*). **Neuroscience Research** 120:60-65.
16. Kasahara T*, Takata A*, Kato TM*, Kubota-Sakashita M, Sawada T, Kakita A, Mizukami H, Kaneda D, Ozawa K, Kato T(*co-first authors) (2016) Depression-like Episodes in Mice Harboring mtDNA Deletions in Paraventricular Thalamus. **Molecular Psychiatry**, 21: 39-48
 17. Kataoka M, Matoba N, Sawada T, Kazuno AA, Ishiwata M, Fujii K, Matsuo K, Takata A, Kato T (2016) Exome sequencing for bipolar disorder points to roles of de novo loss-of-function and protein-altering mutations. **Molecular Psychiatry** 21: 885-93.
 18. Nakajima K, Kazuno A, Kelsoe J, Nakanishi M, Takumi T, Kato T (2016) Exome sequencing in the knockin mice generated using the CRISPR/Cas system. **Scientific Reports** 6: 34703
 19. Nakamura T, Kazuno AA, Nakajima K, Kusumi I, Tsuboi T, Kato T (2016) Loss of function mutations in ATP2A2 and psychoses: A case report and literature survey. **Psychiatry and Clinical Neurosciences** 70: 342-50
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 21. Kimura H, Tsuboi D, Wang C, Kushima I, Koide T, Ikeda M, Iwayama Y, Toyota T, Yamamoto N, Kunimoto S, Nakamura Y, Yoshimi A, Banno M, Xing J, Takasaki Y, Yoshida M, Aleksic B, Uno Y, Okada T, Iidaka T, Inada T, Suzuki M, Ujike H, Kunugi H, Kato T, Yoshikawa T, Iwata N, Kaibuchi K, Ozaki N (2015) Identification of Rare, Single-Nucleotide Mutations in NDE1 and Their Contributions to Schizophrenia Susceptibility. **Schizophrenia Bulletin**, 41: 744-753
 22. Sugawara H, Bundo M, Asai T, Sunaga F, Ueda J, Ishigooka J, Kasai K, Kato T, Iwamoto K (2015) Effects of quetiapine on DNA methylation in neuroblastoma cells. **Progress in Neuro-Psychopharmacology and Biological Psychiatry**, 56: 117-121
 23. Fuke S, Kametani M, Yamada K, Kasahara T, Kubota-Sakashita M, Kujoth GC, Prolla TA, Hitoshi S, Kato T (2014) Heterozygous Polg mutation causes motor dysfunction due to

mtDNA deletions. *Annals of Clinical and Translational Neurology*, 1: 909-920

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26. Bundo M, Toyoshima M, Okada Y, Akamatsu W, Ueda J, Nemoto-Miyauchi T, Sunaga F, Toritsuka M, Ikawa D, Kakita A, Kato M, Kasai K, Kishimoto T, Nawa H, Okano H, Yoshikawa T, Kato T, Iwamoto K (2014) Increased L1 retrotransposition in the neuronal genome in schizophrenia. *Neuron* 81: 306-313
27. Mehta D, Iwamoto K, Ueda J, Bundo M, Adati N, Kojima T, Kato T (2013) Comprehensive survey of CNVs influencing gene expression in the human brain and its implications for pathophysiology. *Neuroscience Research* 79: 22-33
28. Ikegame T, Bundo M, Sunaga F, Asai T, Nishimura F, Yoshikawa A, Kawamura Y, Hibino H, Tochigi M, Kakiuchi C, Sasaki T, Kato T, Kasai K, Iwamoto K (2013) DNA methylation analysis of BDNF gene promoters in peripheral blood cells of schizophrenia patients. *Neuroscience Research* 77: 208-214
29. Yoshida S, Esposito G, Ohnishi R, Tsuneoka Y, Okabe S, Kikusui T, Kato T, Kuroda KO (2013) Transport Response is a filial-specific behavioral response to maternal carrying in C57BL/6 mice. *Frontiers in Zoology*, 10: 50
30. Asai T, Bundo M, Sugawara H, Sunaga F, Ueda J, Tanaka G, Ishigooka J, Kasai K, Kato T, Iwamoto K (2013) Effect of mood stabilizers on DNA methylation in human neuroblastoma cells. *International Journal of Neuropsychopharmacology*, 16: 2285-2294
31. Kondo K, Ikeda M, Kajio Y, Saito T, Iwayama Y, Aleksic B, Yamada K, Toyota T, Hattori E, Ujike H, Inada T, Kunugi H, Kato T, Yoshikawa T, Ozaki N, Iwata N (2013) Genetic Variants on 3q21 and in the Sp8 Transcription Factor Gene (SP8) as Susceptibility Loci for Psychotic Disorders: A Genetic Association Study. *PLOS One*, 8: e70964
32. Manchia M, Adli M, Akula N, Arda R, Aubry JM, Backlund L, Banzato CE, Baune BT, Bellivier F, Bengesser S, Biernacka JM, Brichant-Petitjean C, Bui E, Calkin CV, Cheng AT, Chillotti C, Cichon S, Clark S, Czerski PM, Dantas C, Zompo MD, Depaulo JR, Detera-Wadleigh SD, Etain B, Falkai P, Fris?n L, Frye MA, Fullerton J, Gard S, Garnham J, Goes FS, Grof P, Gruber O, Hashimoto R, Hauser J, Heilbronner U, Hoban R, Hou L, Jamain S, Kahn JP, Kassem L, Kato T, Kelsoe JR, Kittel-Schneider S, Kliwicki S, Kuo PH, Kusumi I, Laje G, Lavebratt C, Leboyer M, Leckband SG, L?pez Jaramillo CA, Maj M, Malafosse A, Martinsson L, Masui T, Mitchell PB, Mondimore F, Monteleone P, Nallet A, Neuner M, Nov?k T, O'Donovan C, Osby U, Ozaki N, Perlis RH, Pfennig A, Potash JB, Reich-Erkelenz D, Reif A, Reininghaus E, Richardson S, Rouleau GA, Rybakowski JK, Schalling M, Schofield PR, Schubert OK, Schweizer B, Seem?ller F, Grigoriou-Serbanescu M, Severino G, Seymour LR, Slaney C,

- Smoller JW, Squassina A, Stamm T, Steele J, Stopkova P, Tighe SK, Tortorella A, Turecki G, Wray NR, Wright A, Zandi PP, Zilles D, Bauer M, Rietschel M, McMahon FJ, Schulze TG, Alda M (2013) Assessment of Response to Lithium Maintenance Treatment in Bipolar Disorder: A Consortium on Lithium Genetics (ConLiGen) Report. *PLOS One*, 8: e65636
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- Kato T, Ando J, Toda T (2012) Genome-wide DNA methylation and gene expression analyses of monozygotic twins discordant for intelligence levels. *PLOS One*, 7: e47081
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Refereed Review Articles

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Book Chapters (Non-Refereed)

259. Bundo M, Kato T, Iwamoto K (2017) Estimation of LINE-1 Copy Number in the Brain Tissue and Isolated Neuronal Nuclei. In "Genomic Mosaicism in Neurons and Other Cell Types" (José María Frade, Fred H. Gage Eds), Neuromethods series, Vol 131, Springer, New York. pp 209-217
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266. Kato T (2002) Imaging Studies of Mood Disorder by Magnetic Resonance Spectroscopy and Near-infrared Spectroscopy. (In T. Okuma, S. Kanba and Y. Inoue, (eds) Recent Advances in the Research of Affective Disorder in Japan, p75-84, Elsevier Science, the Netherlands, Amsterdam)
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Invited Lectures (Selected 10 recent presentations)

- 1) Kato T (2017) Exome or whole genome sequencing in bipolar disorder. Symposium S01 "Elucidating the genetic architecture of psychiatric disease". The 30th ECNP Congress. September 2, 2017, Paris
- 2) Kato T (2016) Neurobiology of Bipolar Disorder: mitochondrial hypothesis and beyond. Symposium "Mitochondrial bioenergetics and genetics in bipolar disorder". International Society of Bipolar Disorder 2016 Symposium. July 15/2016, Amsterdam
- 3) Kato T, Matoba N, Kataoka M, Fujii K (2014) Exome analysis in trio families of bipolar disorder. 22nd World Congress of Psychiatric Genetics, Denmark, Copenhagen, Oct. 12-16
- 4) Kato T (2014) Development of mood stabilizers based on mitochondrial dysfunction hypothesis of bipolar disorder. 29th CINP World Congress of *Neuropsychopharmacology*, Canada, Vancouver, June 22-26
- 5) Kato T (2014) Neurobiological basis of bipolar disorder. **Keynote Lecture**, 16th annual conference of the international society for bipolar disorders, South Korea, Seoul, Mar. 18-21
- 6) Kato T (2013) Neurobiology of bipolar disorder. Toward development of new mood stabilizers. **Plenary Lecture**, CINP 2013 Thematic Meeting, Jerusalem, Israel, April 22
- 7) Kato T (2011) Neurobiology of bipolar disorder. **Plenary Lecture** at 10th World Congress of *Biological Psychiatry*, Prague, Czech Republic, May 29-June 2
- 8) Kato T (2011) Brain DNA Methylomes: Cell-specific Regulation, Subject-Specific Signatures, and Potential Changes in Bipolar Disorder. Symposium at the Society of *Biological Psychiatry* 66th Annual Meeting, San Francisco, USA, May 12-14
- 9) Kato T (2010) Neural basis of bipolar disorder-like phenotypes in mice accumulating deleted mitochondrial DNA. Symposium at American College of **Neuropsychopharmacology** (ACNP), Miami, USA, Dec. 5-9
- 10) Kato T (2010) Neurobiology of bipolar disorder. **Plenary Lecture** at 4th Annual Scientific Meeting (ASM) of Hong Kong Society of *Biological Psychiatry*, Hong Kong, China, Jan.8-9

Other publications

265 review/original articles in Japanese

10 books in Japanese