

Curriculum Vitae

**VASUNUN CHUMCHUA**

Position: Assistant Professor in Neuroscience

Nationality : Thai

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**AREAs OF INTEREST**

- Brain and behavior development
- Brain executive function
- Cognitive Neuroscience (Learning and Memory)
- Cognitive and Behavior
- Cognitive and Executive Function development
- Computational Neuroscience

**RESEARCH INTEREST**

- Research and development in Cognitive Behavioral neuroscience and Executive function throughout life span
- Development of Intervention and Innovation for Cognitive development/GRIT/EMPATHY/RESILIENCE/GROWTH MINDSET
- Computational Modeling in Cognitive Neurosciences and Brain science development

Computer programming

- Python for Bioinformatics
- R-program for next sequence generation
- Window OS, Linux OS, and Mac OS

## Extracurricular and Postdoctoral Fellowship

- 2020 Cert Biohacking Your Brain's Health, Emory University, USA
- 2020 Cert Simulation Skills: This is Your Brain on the Future, Institute for the Future, USA
- 2020 Cert Understanding child development: from synapse to society, Utrecht University, Netherland
- 2020 Cert Philosophy and the Sciences: Introduction to the Philosophy of Cognitive Sciences, The University of Edinburgh, UK
- 2019 Cert. The Iterative Innovation process, Massachusattes Institute of Technoloy, USA
- 2018 Cert. Fundamental Neuroscience for Neuroimaging, Johns Hopkins University, USA
- 2018 Cert. Introduction to User experience Design, Georgia Institute of Technology
- 2018 Cert. Schizophrenia Wesleyan University
- 2017 Cert. Neuroscience of Music, Harvard Medical School
- 2017 Cert. International Travel preparation, Safety, Wellness, Johns Hopkins University, USA
- 2017 Cert. Introduction to Neuroeconomics: How the brain makes Decisions, National Research University Higher School of Economics, Moscow
- 2016 Cert. Memory and Movies: Explaining the Psychology of Memory through Films Wesleyan University
- 2015 Cert. Intensive of Introduction computer science, Harvard University, Department of continuing study
- 2015 Cert. Brain and Space Duke University USA
- 2015 Cert. Computational Neurosciences University of Washington USA
- 2015 Cert. Fundamental of music theory University of Edinburgh UK
- 2014 Research and Development of Intervention and Innovation for Cognitive neuroscience
- 2013 Research and Drug discovery and delivery for vascular dementia and Cognitive aging
- 2011 Research in Metabolomics and Neurotransmitter in learning ,Attention and Memory

## Academic

2008: Ph.D of Pharmaceutical Science (Biomedical Chemistry)

## AWARDS and SCHOLARSHIPS

2018 Global Community Bio summit award , MIT media lab ,Massachusetts Institute of technology , MIT , USA

2012 Early Career Scholarship Award of International Society for the Study of Behavioural Development and Pre-conference workshop of the ISSBD Biennial Meetings at Edmonton, Canada from July 8-12, 2012.

2006 Fellowship award for Conference with paper title "Comparative modeling of Mycoplasma pneumoniae enolase" for the 5th European Conference on Computational Biology (ECCB), Eilat, Israel, 2006

2006 Fellowship award for Conference with paper title Computer model of the interaction of human plasminogen with M. pneumoniae enolase/ 8th International Bioinformatics 2006 Conference at Århus, Denmark

2006 SOKENDAI Scholarship award for attending lecture in Molecular Simulation "SOKENDAI" Okazaki Lecture: Asian Winter School" Institute for Molecular Science, Okazaki, Japan, February 20-28, 2006

## Patent

2020 Help me Help you friend Board game

## PUBLICATIONS

### 2023

1 V. Chumchua, et al, "THE RELATIONSHIP BETWEEN POSITIVE EMOTIONS AND SELF-EFFICACY OF HIGH SCHOOL STUDENTS"(2023) 1st National Conference Suvarnabhumi Institute of Technology 2023 "Create Sustainable Research"pp 150-161

### 2022

1 V.Chumchua, et al. (2022). Inorganic arsenic contamination and the health of children living near an inactive mining site: northern Thailand. *EXCLI Journal*, 21, 1007 - 1014.2021

### 2021

1 V. Chumchua, et al,"Research Project for Follow up the Effect of Arsenic, Manganese, Cyanide and Promotion of Cognitive and Learning Disability in Elementary School Grade 4-6",2021,

<https://kb.hsri.or.th/dspace/handle/11228/5316>

2 V.Chumchua et al "The Effects of Digital Device on Human Development in 21st Century",2021,

<https://kb.hsri.or.th/dspace/handle/11228/5312>

## 2020

1 K. Thanontip, B. Chetsawang and V. Chumchua, "Novel Protein-Protein Interaction Network of Antipsychotic Drugs and Cognitive Function," 2019 12th Biomedical Engineering International Conference (BMEICON), Ubon Ratchathani, Thailand, 2019, pp. 1-5

## 2019

1 Pichita Teeravisutkul,1 Vasunun Chumchua\*, Pichai Saengcharnchai, Thawatchai Leelahanaj (2019) Stress and craving reduction under treatment with heart rate variability biofeedback and the Phramongkutklao model among patients with alcohol use disorder, J Psychology Research and Behavior Management Vol 12 August : 619—627

2 Kamonpot Reamkidkarn\*, Vasunun Chumchua\* (2019) Impact of Family Card Board Game to Increase Attention and Reduce Inattention, Impulsivity and Hyperactivity in Children with ADHD, J Psychiatr Assoc Thailand, Vol.64No.3July-September 2019

3 Natta Bhumadhana, Sawanee Sutheworapong, and Vasunun Chumchua\* (2019) Neuroscience of music in early childhood brain promotion: a systematic review , The 23<sup>rd</sup> Thai neuroscience Society conference 2019 Chulabhorn graduate Institute

## 2018

1 Pichitra Teeravisukul, Vasunun Chumchua\*, Pichai Saengcharnchai(2018) The Effectiveness of Combination of Phramongkutklao Model and Heart Rate Variability Biofeedback on Alcohol Use Disorder Patients, J Psychiatr Assoc Thailand Vol. 63 No. 3 July - September 2018

2 กาญจนา วงศ์นิรามัยกุล อนุช สีนารอด อธิวัฒน์เจียวิวรรณ์กุล วสุนันท์ ชุ่มเชื้อ\* การศึกษา ความรอบรู้สุขภาพและพฤติกรรมการนอนในผู้ใหญ่และปัจจัยที่เกี่ยวข้อง, ความรอบรู้สุขภาพเพื่อเป้าหมายการพัฒนาที่ยั่งยืน มิติการพัฒนาทรัพยากรมนุษย์ การประชุมวิชาการสาธารณสุขแห่งชาติ มิถุนายน 2561, 49-60

## 2016

1. Vasunun Chumchua, et al (2016) Card Board Game Intervention; Aid Executive Function in a Child with Epilepsy and Development Delay, International Journal of Humanities and Management Sciences (IJHMS) Volume 4, Issue 3, ISSN 2320–4044: 297-301, impact factor 1.713

2. Vasunun Chumchua, et al (2016) The Application Of Senses Me Smart (Sms) Program for Task of Executive Control in Autistic Spectrum Disorders Child, International Journal of Humanities and Management Sciences (IJHMS) Volume 4, Issue 3, ISSN 2320–4044 :302-305, impact factor 1.713

3. Vasunun Chumchua, et al (2016) The impact of designed card board game to perform attention in child with epilepsy and global developmental delay, PROCEEDINGS The 1st ASIAN RESEARCHER SYMPOSIUM, 148-155

4. Vasunun Chumchua, et al (2016) Classroom Atmosphere have Effect to Attention When Children do Task of Executive Control in Early Childhood, International Journal of Management and Applied Science (IJMAS) Volume 2, Issue 8 ISSN: 2394-7926 :156-18, impact factor 3.664
5. Vasunun Chumchua, et al (2016) Study on Father Socioeconomic Status (SES) and Executive Function in Early Childhood, International Journal of Management and Applied Science (IJMAS) Volume 2, Issue 8 ISSN: 2394-7926 : 159-161, impact factor 3.664
6. Vasunun Chumchua, et al (2016) The Quality of Communication and Parent-Child Relationship in Early Childhood, International Journal of Management and Applied Science (IJMAS) Volume 2, Issue 8 ISSN: 2394-7926 : 162-164, impact factor 3.664
7. Vasunun Chumchua, et al (2016) , Arts Integration Creates an Effective Learning Environment For Children in Kindergarten, International Journal of Management and Applied Science (IJMAS) Volume 2, Issue 8 ISSN: 2394-7926 : 165-167 impact factor 3.664,

## 2015

1. Nootchanart Ruksee Ratchanee Jomsri, Vasunun Chumchua Panadda Thanasetkorn Orapin Lertawasadrakul THE EFFECT OF CHILDREN WITH HYPERMOBILITY OF JOINT ON VISUAL-MOTOR INTEGRATION, PINCH STRENGTH AND PENCIL GRIP IN PRESCHOOL CHILDREN AGE 5-6 YEARS, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp 163-168
2. Jutathip Siriploy, Rattana Swangkotchakorn, Nuanchan Chutabhakdikul, Vorasith Siripornpanichb, Vasunun Chumchua\* The Impact of Transcranial Magnetic Stimulation for Promoting Cognitive Emotional Control in Late Adult: A Pilot Study, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp 46-52
3. Patcharaporn Lekaparn, Panadda Thanasetkorn, Nootchanart Ruksee, Vasunun Chumchua\*, MUSIC LESSON TRAINING BENEFITS ON VISUAL AND MOTOR INTEGRATION IN EARLY CHILDHOOD AGE 4-5 YEARS, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp 140-148
4. Panthip Praisan, Panadda Thanasetkorn, Nootchanart Ruksee, Vasunun Chumchua\*, THE ADVANTAGE OF MUSIC LESSON IN SCHOOL ON ATTENTION AND WORKING MEMORY, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp150-162
5. Rattana Swangkotchakorn, Jutathip Siriploy, Chanin Sinsook, Vasunun Chumchua\* The Contribution of Repetitive Transcranial Magnetic Stimulation for Early Prevention of Cognitive Decline in Late Adults: A Pilot Study, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp 20-36

6. Vasunun Chumchua\*, Paranan Chorachit, THE EFFECT OF EQUINE- ASSISTED THERAPY ON TASK OF EXECUTIVE CONTROL IN HIGH-FUNCTIONING AUTISM, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp 37-44
7. Panadda Thanasetkorn, Nutsuda Panprasitwaj, Vasunun Chumchua, Nuanchan Chutabhakdikul, The Impact of the Yoga and 101s Storybook Integration Program on Preschoolers' Executive Function Skills in Thailand, The Proceedings of the 2015 International Hokkaido Forum- Organizational Behavior, Psychology, and Education pp 261-276
8. Hiranya Sirisumthum, Panadda Thanasetkorn, Nuanchan Chutabhakdikul, Vasunun Chumchua\*, Role of Executive Function Among Young Adults in Music and Non-Music Programs, The Asian Conference on Psychology & the Behavioral Sciences,2015 pp. 379 – 386,2015, Osaka, Japan Official Conference Proceedings ISSN: 2187-474
9. Tantiya Thitithumrongkul, Panadda Thanasetkorn, Nuanchan Chutabhakdikul, Vasunun Chumchua\*, Switching Task in Thai University Students in Music and Non-Music Program, The Asian Conference on Psychology & the Behavioral Sciences,2015 pp. 433 – 440 Osaka, Japan Official Conference Proceedings ISSN: 2187-474
10. Duangporn Jinnatanapong, Vasunun Chumchua, Nuanchan Chutabhakdikul, Panadda Thanasetkorn, The Impact of the 101s Storybook Intervention Program on Executive Function, The 101s Social-Emotional Skills, and School Achievement in Preschoolers, The Asian Conference on Psychology & the Behavioral Sciences,2015, pp. 655 - 672 Osaka, Japan Official Conference Proceedings ISSN: 2187-474

## 2014

1. Obbasi Suthita, Ruksee Nootchanart, Permpoopattana Kannika, Chumchua Vasunun\*, Ranking candidate of *Cyperus rotundus* Linn lead compound interact with nitric oxide synthase-2 for cognitive impair, MU research expo 2014
2. Ninuma Artprom, vasunun Chumchua, Nuanchan Jutabhakdikul, Panadda Thanasetkorn,  
The impact of music and movement on executive function in pre school children, Proceedings of the 2nd ASEAN plus three research graduate congress, P-, 5-7 Feb 2014
3. Jutamard Suttho, Vasunun Chumchua, Nuanchan Jutabhakdikul, Panadda Thanasetkorn,  
The preliminary research study on the impact of the 101S: A guide to positive discipline parent training on parenting practices and preschooler's executive function. Proceedings of the 2nd ASEAN plus three research graduate congress, P-ss004, 5-7 Feb 2014
4. Krittiyaneer Thammarn, Panadda Thanasetkorn, Nuanchan Chutabhakdikul Vasunun Chumchua\*. Correlation between the visual-motor integration (VMI) and the task of executive control(TEC) in school age children between 7 to 9 years. Proceedings of the 2nd ASEAN plus three research graduate congress, P-ss007, 5-7 Feb 2014

5. Ratchanee Jomsri, Vasunun Chumchua, Panadda Thanasetkorn. The cause and effect of levels of visual-motor integration skills on task of executive function in children at age 5 to 6 years old. Proceedings of the 2nd ASEAN plus three research graduate congress, P-ss010 5-7 Feb 2014 2013 1.

6. Thanasethakon P\*, Artprom N, Chumchua V, Jutapakdeegul N. The impact of music and movement on executive function in preschool children. The second Thailand national research universities submit (ThaiNRU2). 2013;327.

### 2013

1. Chumchua, Vasunun,; Sinarod, Anuch; Boonpen, Usa; Thanasetkorn, Panadda; Chutabhakdikul, Nuanchan, Influences of Music Training on Decision Making in Thai Adolescence, ThaiNRUII, P324-325, 2013

2. Chumchua, Vasunun,; Ninuma Artprom; Panadda; Chutabhakdikul, Nuanchan, The impact of music and movement on executive function in preschool children, ThaiNRUII, P326-327, 2013

### 2012

1. Chumchua, Vasunun; Suppalarkbunlue, Warabud ; Thanasetkorn, Panadda, Music- Movement Program and Executive Function Development, ISSBD 2012, P3.113

2. Sinarod, Anuch; Boonpen, Usa; Chumchua, Vasunun ; Thanasetkorn, Panadda; Chutabhakdikul, Nuanchan, influences of Music Training on Decision Making in Thai Adolescence, ISSBD 2012, P3.110

3. Boonphen, Usa; Chumchua, Vasunun ; Thanasetkorn, Panadda ; Lertawasathakul, Orapin ; Chutabhakdikul, Nuanchan, Influence of Music Training on Cognitive Executive Function i

4. Thanasetkorn, Panadda; Supplakbunlue, Warabud ; Chumchua, Vasunun\*, Executive Function in Elementary Schools: A Preliminary Comparison Between Elementary Students in a Music-movement School and Bilingual School, ISSBD 2012, P3.112

5. Suppalarkbunlue, Warabud; Thanasetkorn, Panadda; Chumchua, Vasunun\*, The Impact of Physical Kinesiology-music on Creative Thinking in Elementary School, ISSBD 2012, P3.114

6. Pichitkusalachai, Piyada; Sutipan, Pitchada ; Chumchua, Vasunun; Thanasetkorn, Panadda, Self-regulation in Thai Preschoolers: The Impact of the 101s Positive Discipline Teacher Training on Teacher Interactions and Children's Self-regulation in Thailand, ISSBD 2012, P3.117

7. Thsananuphan, Chutinatt; Khamnong, Thirata; Chutabhakdikul, Nuanchan ; Thanasetkorn, Panadda; Chumchua, Vasunun\*, The Influence of Music Listening on Working Memory in Elderly People, ISSBD 2012, P3.131

8. Sutipan, Pitchada; Pichitkusalachai, Piyada; Chumcha, Vasunun ; Thanasetkorn, Panadda, The Impact of the 101s Positive Discipline Teacher Training on Teacher Practices and Preschoolers' Executive Function Skills, ISSBD 2012, P3.109
9. Vasunun Chumchua \*, Usa Boonphen, Panadda Thanasetkorn, and Nuanchan Chutabhakdikul, influence of Music Training on Executive Function in Thai Adolescence, GRC 2012,SS-P-003
10. Pitchada Sutipan\*, Vasunun Chumchua, Nuanchan Chutabhakdikul and Panadda Thanasetkorn\*\*,The Impact of The 101s Positive Discipline Teacher Training on Teacher Practices and Preschoolers' Executive Function skills, GRC 2012 ss-1
11. Piyada Pichitkusalachai\*, Panadda Thanasetkorn\*\*, VasununChumchua\*\* and Nuanchan Chutabhakdikul\*\*\*,Self-Regulation in Thai Preschoolers: The Impact of the 101s Positive Discipline Teacher Training on Teacher Interaction Practices and Children's Self-regulation, GRC 2012, SS-4
- 12.Chutinat Thasananuphan\*, Vasunun Chumchua<sup>1</sup>, Thirata Khamnong<sup>2</sup>, Panadda Thanasetkorn<sup>3</sup>. Vorasith Siripornpanich<sup>4</sup> and Nuanchan Chutabhakdikul<sup>5</sup>\*\*, The Influence of Music Listening on Working Memory in Elderly People, GRC 2012, HS-83

## 2011

1. P. Nuchnoi<sup>1,2\*</sup>, D.Nantakomol<sup>3</sup>, V.Chumchua <sup>4</sup>, C.labplueng<sup>1,2</sup>, C.Isarankura- Na-Ayudhya<sup>5</sup> and V.Prachayasittikul<sup>5\*</sup>. The Identification of Functional Non- Synonymous SNP in Human ATPBindingCassette (ABC), Subfamily Member 7 Gene:Application of Bioinformatics Tools in Biomedicine. J Bioanal Biomed 2011, 3:1 26-31
2. P. Tantayapirak C, C. Thammamongtham , T. Saithong , J. Senachak and V. Chumchua C. Finding relevant protein of ADRs using text mining in Taverna, ANSCSE 15, 2011
5. Junnara Pengwong, Panadda Thanasetkorn,Nuanchan Jutaphakdikul , Orapin Lertawasdatakul and Vasunun Chumchua\*: "Effect of intensity exercise on gross and fine motor in early childhood.Science and Technology, Huacheow,2011,
6. Dutchanee Mungdee, Vasunun Chumchua, Nuanchan Jutaphakdikul , Orapin Lertawasdatakul and Panadda Thanasetkorn \*: "The development of SUKIT-program to enhance fine motor proficiency in early childhood. Science and Technology, Huacheow,2011,
7. Wantanee Thongphiew, Vasunun Chumchua, Nuanchan Chutabhakdikul, Orapin Lertawasdatakul, and Panadda Thanasetkorn \*: The development of voluntary exercise-program to boost exercise for gross motor proficiency in early childhood. Science and Technology, Huacheow,2011,



8. Warabud Supalakhbunlue, Panadda Thanasetkorn, Nuanchan Chutabhakdikul, Orapin Lertawasdatakul, and Vasunun Chumchua \*: Influence of Movement Music on Executive function in elementary child. Science and Technology, Huacheow, 2011,

## 2010

1. P. kawmanee, S. Hannongbua, P. Suparppakorn, K. Porkaw, V. Chumchua, N. Chirasuwan, M. Reungjitchatchawala, Molecular Docking of HSV-1 for identification of sulfolipid (SQDG) targeted protein. PACCON, 1-3, 2010
2. Jirarat Supon, Panadda Thanasetkorn, Nipa Jongkon, Supa Harnnongbua, V. Chumchua\*: "Ranking of Molecule docked to a candidate ligand binding to a receptor of Infantile Hemangioma", Computational Science in Biomedicine, 2010

## 2005

1. V. Chumchua Computational modeling of Mycoplasma pneumoniae virulence factors/ Pharmaceutical science research conference/ 2 December 2005
2. V. Chumchua Computational approach for analyzing and predicting the substrate specificity of adenylation domains in nonribosomal peptide synthetases / Biothailand/ 2-5 November 2005

## 2003

1. V. Chumchua A simple small scale Secondary Metabolite Screening Procedure for Filamentous Fungi, BIOTEC Symposium, Thailand, 2003
2. V. Chumchua A hybrid polyketide Synthase / Nonribosomal peptide synthase (PKS/NRPS) Gene from the wood decaying Fungus Xylaria Sp. BCC1067 BIOTEC Symposium, Thailand, 2003
1. V. Chumchua Mutagenesis of Cytochalasin Q of Xylaria Xylariciae, International conference of Bioinformatics (IncoB), 2002 Cambridge, UK

## 2001

1. V. Chumchua Molecular genetic study of Polyketide synthase derive from Xylaria Xylariciae, BioThailand congress, 2001

## 1997

1. V. Chumchua Development of Southern blotting techniques for the characterization of MAO-A deletions in Sudden Unexplained Nocturnal Death Syndrome, 23rd Congress on science and Technology of Thailand (1997) Abstract C-34. Pang Suan Kaew, Chiang Mai, Thailand

## Research Work Shops

1. Workshop on 3rd ASEAN Protein Crystallography Workshop at SLRI: How to crystallize protein”, National Synchrotron Research Center, April 26-29, 2011
2. Workshop on Synchrotron Protein Crystallography (Diffraction data and Phase Analyses) and Its Applications, National Synchrotron Research Center 2006, July20– 23
3. The 9th Annual National Symposium on Computational Science and Engineering, Mahidol University, 2005, March 23-25
4. “Technical Skills in preclinical Drug Metabolism and Pharmacogenomics for Drug Discovery and Development” Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand, 2004, July 19 - 23
5. “Application of Computational Chemistry and Molecular Modeling in Pharmaceutical Sciences” Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand, 2004, March 16 – 18
6. “Application of Bioinformatics to Fungal Genome Sequences in the Search for Bioinformatics Compounds”, National Center for Genetic Engineering and Biotechnology, Thailand, 2003, July 16.
7. Instructor activity of Molecular technique in International Brain Research Organization (IBRO), 1997
8. Trained in 1-month International Molecular Genetic Course Participated in the Congress on Foreign Asian Organization in Neuroscience (FAON), 1997

## Invite lecturer

Neuroscience mahidol university

Pharmaceutical Science Chulalongkron University

Biotechnology Science and Technology, Thammasart University

## Peer Reviewer

- |              |  |
|--------------|--|
| 2015-current | Nutrition Neuroscience journal<br>วารสารสังคมศาสตร์และมนุษยศาสตร์ คณะสังคมศาสตร์มก |
| 2011-current | Bioninformatics and Cheminformatics session in PACCON2011                          |

2016

APCAB 2016