

CURRICULUM VITAE

Arthit Chairoungdua, Ph.D.

(Assistant Professor)

ADDRESS:

Work: Department of Physiology
Faculty of Science, Mahidol University
272 Rama VI Road, Ratchathewi, Bangkok 10400, THAILAND
Telephone: 66-2-201-5610
FAX: 66-2-354-7154
Email: arthit.chi@mahidol.ac.th

EDUCATION:

2000-2003	Ph.D. (Medical Sciences) Department of Pharmacology and Toxicology Kyorin University School of Medicine, Tokyo, Japan
1995-1998	M.Sc. (Toxicology) Toxicology Graduate Program Mahidol University, Bangkok, Thailand
1989-1993	B.Sc. (Nursing) Faculty of Nursing Khon Kaen University, Khon Kaen, Thailand

FACULTY POSITION:

2003-2006	Research Associate, Department of Pharmacology and Toxicology, Kyorin University School of Medicine, 6-20-2 Shinkawa, Mitaka, Tokyo 181-8611, JAPAN
2006-2012	Lecture, Department of Physiology, Faculty of Science, Mahidol University 272 Rama VI Road, Ratchathewi, Bangkok 10400, THAILAND
2012-present	Assistant Professor, Department of Physiology, Faculty of Science, Mahidol University 272 Rama VI Road, Ratchathewi, Bangkok 10400, THAILAND

POSTDOCTORAL TRAINING:

2006-2009

Department of Cellular and Molecular Physiology
Yale University School of Medicine
333 Cedar Street
New Haven, CT 06510, USA

PUBLICATIONS:

1. Nateewattana, J., Dutta, S., Reabroi, S., Saeeng, R., Kasemsook, S., Chairoungdua, A., Weerachayaphorn, J., Wongkham, S., and Piyachaturawat, P. (2014) Induction of apoptosis in cholangiocarcinoma by an andrographolide analogue is mediated through topoisomerase II alpha inhibition. *European journal of pharmacology* **723**, 148-155
2. Janpipatkul, K., Suksen, K., Borwornpinyo, S., Jearawiriyapaisarn, N., Hongeng, S., Piyachaturawat, P., and Chairoungdua, A. (2014) Downregulation of LAT1 expression suppresses cholangiocarcinoma cell invasion and migration. *Cellular signalling* **26**, 1668-1679
3. Tantikanlayaporn, D., Wichit, P., Weerachayaphorn, J., Chairoungdua, A., Chuncharunee, A., Suksamrarn, A., and Piyachaturawat, P. (2013) Bone sparing effect of a novel phytoestrogen diarylheptanoid from *Curcuma comosa* Roxb. in ovariectomized rats. *PloS one* **8**, e78739
4. Nateewattana, J., Saeeng, R., Kasemsook, S., Suksen, K., Dutta, S., Jariyawat, S., Chairoungdua, A., Suksamrarn, A., and Piyachaturawat, P. (2013) Inhibition of topoisomerase II alpha activity and induction of apoptosis in mammalian cells by semi-synthetic andrographolide analogues. *Investigational new drugs* **31**, 320-332
5. Chaturapanich, G., Yamthed, R., Piyachaturawat, P., Chairoungdua, A., Suvitayavat, W., Kongsaktragoon, B., Suksamrarn, A., and Pholpramool, C. (2013) Nitric oxide signalling is involved in diarylheptanoid-induced increases in femoral arterial blood flow in ovariectomized rats. *Clinical and experimental pharmacology & physiology* **40**, 240-249
6. Bryniarski, K., Ptak, W., Jayakumar, A., Pullmann, K., Caplan, M. J., Chairoungdua, A., Lu, J., Adams, B. D., Sikora, E., Nazimek, K., Marquez, S., Kleinstein, S. H., Sangwung, P., Iwakiri, Y., Delgado, E., Redegeld, F., Blokhuis, B. R., Wojcikowski, J., Daniel, A. W., Groot Kormelink, T., and Askenase, P. W. (2013) Antigen-specific, antibody-coated, exosome-like nanovesicles deliver suppressor T-cell microRNA-150 to effector T cells to inhibit contact sensitivity. *The Journal of allergy and clinical immunology* **132**, 170-181
7. Apiratikul, N., Penglong, T., Suksen, K., Svasti, S., Chairoungdua, A., and Yingyongnarongkula, B. (2013) In vitro delivery of curcumin with cholesterol-based cationic liposomes. *Bioorganicheskaia khimiia* **39**, 497-503
8. Bhukhai, K., Suksen, K., Bhummaphan, N., Janjorn, K., Thongon, N., Tantikanlayaporn, D., Piyachaturawat, P., Suksamrarn, A., and Chairoungdua, A. (2012) A phytoestrogen diarylheptanoid mediates estrogen receptor/Akt/glycogen synthase kinase 3beta protein-dependent activation of the Wnt/beta-catenin signaling pathway. *The Journal of biological chemistry* **287**, 36168-36178
9. Jariyawat, S., Thammaprati, T., Suksen, K., Wanitchakool, P., Nateewattana, J., Chairoungdua, A., Suksamrarn, A., and Piyachaturawat, P. (2011) Induction

- of apoptosis in murine leukemia by diarylheptanoids from *Curcuma comosa* Roxb. *Cell biology and toxicology* **27**, 413-423
10. Chairoungdua, A., Smith, D. L., Pochard, P., Hull, M., and Caplan, M. J. (2010) Exosome release of beta-catenin: a novel mechanism that antagonizes Wnt signaling. *The Journal of cell biology* **190**, 1079-1091
 11. Sakamoto, S., Chairoungdua, A., Nagamori, S., Wiriyasermkul, P., Promchan, K., Tanaka, H., Kimura, T., Ueda, T., Fujimura, M., Shigeta, Y., Naya, Y., Akakura, K., Ito, H., Endou, H., Ichikawa, T., and Kanai, Y. (2009) A novel role of the C-terminus of b^{0,+} AT in the ER-Golgi trafficking of the rBAT-b^{0,+} AT heterodimeric amino acid transporter. *The Biochemical journal* **417**, 441-448
 12. Morimoto, E., Kanai, Y., Kim do, K., Chairoungdua, A., Choi, H. W., Wempe, M. F., Anzai, N., and Endou, H. (2008) Establishment and characterization of mammalian cell lines stably expressing human L-type amino acid transporters. *Journal of pharmacological sciences* **108**, 505-516
 13. Fukuhara, D., Kanai, Y., Chairoungdua, A., Babu, E., Bessho, F., Kawano, T., Akimoto, Y., Endou, H., and Yan, K. (2007) Protein characterization of NA⁺-independent system L amino acid transporter 3 in mice: a potential role in supply of branched-chain amino acids under nutrient starvation. *The American journal of pathology* **170**, 888-898
 14. Baniasadi, S., Chairoungdua, A., Iribe, Y., Kanai, Y., Endou, H., Aisaki, K., Igarashi, K., and Kanno, J. (2007) Gene expression profiles in T24 human bladder carcinoma cells by inhibiting an L-type amino acid transporter, LAT1. *Archives of pharmacal research* **30**, 444-452
 15. Asano, S., Kameyama, M., Oura, A., Morisato, A., Sakai, H., Tabuchi, Y., Chairoungdua, A., Endou, H., and Kanai, Y. (2007) L-type amino acid transporter-1 expressed in human astrocytomas, U343MGa. *Biological & pharmaceutical bulletin* **30**, 415-422
 16. Shigeta, Y., Kanai, Y., Chairoungdua, A., Ahmed, N., Sakamoto, S., Matsuo, H., Kim, D. K., Fujimura, M., Anzai, N., Mizoguchi, K., Ueda, T., Akakura, K., Ichikawa, T., Ito, H., and Endou, H. (2006) A novel missense mutation of SLC7A9 frequent in Japanese cystinuria cases affecting the C-terminus of the transporter. *Kidney international* **69**, 1198-1206
 17. Park, S. Y., Kim, J. K., Kim, I. J., Choi, B. K., Jung, K. Y., Lee, S., Park, K. J., Chairoungdua, A., Kanai, Y., Endou, H., and Kim, D. K. (2005) Reabsorption of neutral amino acids mediated by amino acid transporter LAT2 and TAT1 in the basolateral membrane of proximal tubule. *Archives of pharmacal research* **28**, 421-432
 18. Takabe, W., Kanai, Y., Chairoungdua, A., Shibata, N., Toi, S., Kobayashi, M., Kodama, T., and Noguchi, N. (2004) Lysophosphatidylcholine enhances cytokine production of endothelial cells via induction of L-type amino acid transporter 1 and cell surface antigen 4F2. *Arteriosclerosis, thrombosis, and vascular biology* **24**, 1640-1645
 19. Matsuo, H., Kanai, Y., Tokunaga, M., Nakata, T., Chairoungdua, A., Ishimine, H., Tsukada, S., Ooigawa, H., Nawashiro, H., Kobayashi, Y., Fukuda, J., and Endou, H. (2004) High affinity D- and L-serine transporter Asc-1: cloning and dendritic localization in the rat cerebral and cerebellar cortices. *Neuroscience letters* **358**, 123-126
 20. Kleta, R., Romeo, E., Ristic, Z., Ohura, T., Stuart, C., Arcos-Burgos, M., Dave, M. H., Wagner, C. A., Camargo, S. R., Inoue, S., Matsuura, N., Helip-Wooley,

- A., Bockenbauer, D., Warth, R., Bernardini, I., Visser, G., Eggermann, T., Lee, P., Chairoungdua, A., Jutabha, P., Babu, E., Nilwarangkoon, S., Anzai, N., Kanai, Y., Verrey, F., Gahl, W. A., and Koizumi, A. (2004) Mutations in SLC6A19, encoding B0AT1, cause Hartnup disorder. *Nature genetics* **36**, 999-1002
21. Anzai, N., Miyazaki, H., Noshiro, R., Khamdang, S., Chairoungdua, A., Shin, H. J., Enomoto, A., Sakamoto, S., Hirata, T., Tomita, K., Kanai, Y., and Endou, H. (2004) The multivalent PDZ domain-containing protein PDZK1 regulates transport activity of renal urate-anion exchanger URAT1 via its C terminus. *The Journal of biological chemistry* **279**, 45942-45950
 22. Jutabha, P., Kanai, Y., Hosoyamada, M., Chairoungdua, A., Kim, D. K., Iribe, Y., Babu, E., Kim, J. Y., Anzai, N., Chatsudhipong, V., and Endou, H. (2003) Identification of a novel voltage-driven organic anion transporter present at apical membrane of renal proximal tubule. *The Journal of biological chemistry* **278**, 27930-27938
 23. Babu, E., Kanai, Y., Chairoungdua, A., Kim, D. K., Iribe, Y., Tangtrongsup, S., Jutabha, P., Li, Y., Ahmed, N., Sakamoto, S., Anzai, N., Nagamori, S., and Endou, H. (2003) Identification of a novel system L amino acid transporter structurally distinct from heterodimeric amino acid transporters. *The Journal of biological chemistry* **278**, 43838-43845
 24. Uchino, H., Kanai, Y., Kim, D. K., Wempe, M. F., Chairoungdua, A., Morimoto, E., Anders, M. W., and Endou, H. (2002) Transport of amino acid-related compounds mediated by L-type amino acid transporter 1 (LAT1): insights into the mechanisms of substrate recognition. *Molecular pharmacology* **61**, 729-737
 25. Matsuo, H., Kanai, Y., Kim, J. Y., Chairoungdua, A., Kim, D. K., Inatomi, J., Shigeta, Y., Ishimine, H., Chaekuntode, S., Tachampa, K., Choi, H. W., Babu, E., Fukuda, J., and Endou, H. (2002) Identification of a novel Na⁺-independent acidic amino acid transporter with structural similarity to the member of a heterodimeric amino acid transporter family associated with unknown heavy chains. *The Journal of biological chemistry* **277**, 21017-21026
 26. Kim, D. K., Kanai, Y., Matsuo, H., Kim, J. Y., Chairoungdua, A., Kobayashi, Y., Enomoto, A., Cha, S. H., Goya, T., and Endou, H. (2002) The human T-type amino acid transporter-1: characterization, gene organization, and chromosomal location. *Genomics* **79**, 95-103
 27. Kim, D. K., Kanai, Y., Choi, H. W., Tangtrongsup, S., Chairoungdua, A., Babu, E., Tachampa, K., Anzai, N., Iribe, Y., and Endou, H. (2002) Characterization of the system L amino acid transporter in T24 human bladder carcinoma cells. *Biochimica et biophysica acta* **1565**, 112-121
 28. Jung, K. Y., Takeda, M., Shimoda, M., Narikawa, S., Tojo, A., Kim, D. K., Chairoungdua, A., Choi, B. K., Kusuhara, H., Sugiyama, Y., Sekine, T., and Endou, H. (2002) Involvement of rat organic anion transporter 3 (rOAT3) in cephaloridine-induced nephrotoxicity: in comparison with rOAT1. *Life sciences* **70**, 1861-1874
 29. Enomoto, A., Kimura, H., Chairoungdua, A., Shigeta, Y., Jutabha, P., Cha, S. H., Hosoyamada, M., Takeda, M., Sekine, T., Igarashi, T., Matsuo, H., Kikuchi, Y., Oda, T., Ichida, K., Hosoya, T., Shimokata, K., Niwa, T., Kanai, Y., and Endou, H. (2002) Molecular identification of a renal urate anion exchanger that regulates blood urate levels. *Nature* **417**, 447-452

30. Yanagida, O., Kanai, Y., Chairoungdua, A., Kim, D. K., Segawa, H., Nii, T., Cha, S. H., Matsuo, H., Fukushima, J., Fukasawa, Y., Tani, Y., Taketani, Y., Uchino, H., Kim, J. Y., Inatomi, J., Okayasu, I., Miyamoto, K., Takeda, E., Goya, T., and Endou, H. (2001) Human L-type amino acid transporter 1 (LAT1): characterization of function and expression in tumor cell lines. *Biochimica et biophysica acta* **1514**, 291-302
31. Mizoguchi, K., Cha, S. H., Chairoungdua, A., Kim, D. K., Shigeta, Y., Matsuo, H., Fukushima, J., Awa, Y., Akakura, K., Goya, T., Ito, H., Endou, H., and Kanai, Y. (2001) Human cystinuria-related transporter: localization and functional characterization. *Kidney international* **59**, 1821-1833
32. Kim, J. Y., Kanai, Y., Chairoungdua, A., Cha, S. H., Matsuo, H., Kim, D. K., Inatomi, J., Sawa, H., Ida, Y., and Endou, H. (2001) Human cystine/glutamate transporter: cDNA cloning and upregulation by oxidative stress in glioma cells. *Biochimica et biophysica acta* **1512**, 335-344
33. Kim, D. K., Kanai, Y., Chairoungdua, A., Matsuo, H., Cha, S. H., and Endou, H. (2001) Expression cloning of a Na⁺-independent aromatic amino acid transporter with structural similarity to H⁺/monocarboxylate transporters. *The Journal of biological chemistry* **276**, 17221-17228
34. Chairoungdua, A., Kanai, Y., Matsuo, H., Inatomi, J., Kim, D. K., and Endou, H. (2001) Identification and characterization of a novel member of the heterodimeric amino acid transporter family presumed to be associated with an unknown heavy chain. *The Journal of biological chemistry* **276**, 49390-49399
35. Nakauchi, J., Matsuo, H., Kim, D. K., Goto, A., Chairoungdua, A., Cha, S. H., Inatomi, J., Shiokawa, Y., Yamaguchi, K., Saito, I., Endou, H., and Kanai, Y. (2000) Cloning and characterization of a human brain Na⁽⁺⁾-independent transporter for small neutral amino acids that transports D-serine with high affinity. *Neuroscience letters* **287**, 231-235
36. Matsuo, H., Tsukada, S., Nakata, T., Chairoungdua, A., Kim, D. K., Cha, S. H., Inatomi, J., Yorifuji, H., Fukuda, J., Endou, H., and Kanai, Y. (2000) Expression of a system L neutral amino acid transporter at the blood-brain barrier. *Neuroreport* **11**, 3507-3511
37. Matsuo, H., Chairoungdua, A., Kim, D. K., Cha, S. H., Fukuda, J., Endou, H., and Kanai, Y. (2000) Mouse Asc-1 (asc-type amino acid transporter 1) maps to chromosome 7, region B1-B5. *Chromosome research : an international journal on the molecular, supramolecular and evolutionary aspects of chromosome biology* **8**, 456
38. Kanai, Y., Segawa, H., Chairoungdua, A., Kim, J. Y., Kim, D. K., Matsuo, H., Cha, S. H., and Endou, H. (2000) Amino acid transporters: molecular structure and physiological roles. *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association* **15 Suppl 6**, 9-10
39. Kanai, Y., Fukasawa, Y., Cha, S. H., Segawa, H., Chairoungdua, A., Kim, D. K., Matsuo, H., Kim, J. Y., Miyamoto, K., Takeda, E., and Endou, H. (2000) Transport properties of a system y⁺L neutral and basic amino acid transporter. Insights into the mechanisms of substrate recognition. *The Journal of biological chemistry* **275**, 20787-20793
40. Fukasawa, Y., Segawa, H., Kim, J. Y., Chairoungdua, A., Kim, D. K., Matsuo, H., Cha, S. H., Endou, H., and Kanai, Y. (2000) Identification and characterization of a Na⁽⁺⁾-independent neutral amino acid transporter that associates with the 4F2 heavy chain and exhibits substrate selectivity for small

- neutral D- and L-amino acids. *The Journal of biological chemistry* **275**, 9690-9698
41. Chairoungdua, A., Segawa, H., Kim, J. Y., Miyamoto, K., Haga, H., Fukui, Y., Mizoguchi, K., Ito, H., Takeda, E., Endou, H., and Kanai, Y. (1999) Identification of an amino acid transporter associated with the cystinuria-related type II membrane glycoprotein. *The Journal of biological chemistry* **274**, 28845-28848
42. Apiwattanakul, N., Sekine, T., Chairoungdua, A., Kanai, Y., Nakajima, N., Sophasan, S., and Endou, H. (1999) Transport properties of nonsteroidal anti-inflammatory drugs by organic anion transporter 1 expressed in *Xenopus laevis* oocytes. *Molecular pharmacology* **55**, 847-854

MEMBERSHIPS IN PROFESSIONAL SOCIETIES:

- The American Society for Cell Biology (ASCB)
- The American Society For Biochemistry and Molecular Biology (ASBMB)