

## Pharmaceutical Sciences

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### Other Faculty Members

Assistant Professor Kosuke Doki: [k-doki@md.tsukuba.ac.jp](mailto:k-doki@md.tsukuba.ac.jp)

### Major Scientific Interests of the Group

Pharmacokinetic and pharmacogenetic analyses for evaluating drug disposition, drug-drug interactions, drug efficacy, and drug toxicity in relation to drug metabolizing enzymes and drug transporters. Pharmacokinetic evaluation of Kampo-medicine (herbal remedy).

### Projects for Regular Students in Doctoral or Master's Programs

- 1) Pharmacokinetic analysis and therapeutic drug monitoring of anti-neoplastic agents, anti-arrhythmic agents, thrombopoietin receptor agonist and immunosuppressive agents
- 2) Pharmacogenetic analysis of anti-arrhythmic agents and immunosuppressive agents
- 3) Evaluation of adverse effect caused by Kampo-medicines containing licorice

### Study Programs for Short Stay Students (one week – one trimester)

- 1) Development of assay methods for monitoring blood drug concentration
- 2) Evaluation of genetic polymorphisms associated with drug metabolism and transport

### Selected Publications

- 1) Doki K, Shirayama Y, Sekiguchi Y, Aonuma K, Kohda Y, **Homma M**. Optimal sampling time and clinical implication of the SCN5A promoter haplotype in propafenone therapeutic drug monitoring. **Eur J Clin Pharmacol**. 74: 1273-1279, 2018.
- 2) Ohgami M, Kaburagi T, Kurosawa A, Doki K, Shiozawa T, Hizawa N, **Homma M**. Effects of Proton Pump Inhibitor Coadministration on the Plasma Concentration of Erlotinib in Patients With Non-Small Cell Lung Cancer. **Ther Drug Monit**. 40: 699-704, 2018.
- 3) Ohgami M, Bando H, Ishiguro H, Tsuda M, Toriguchi N, Aogi K, Toi M, Masuda N, Mitsuhashi S, Kurosawa A, **Homma M**. Effect of dose timing on the blood concentration of lapatinib in patients with breast cancer. **Ann Oncol**. 28: 2888-2889, 2017.
- 4) Shimada S, Arai T, Tamaoka A, **Homma M**. Licorice-induced hypokalaemia in patients treated with Yokukansan preparations: identification of the risk factors in a retrospective cohort study. **BMJ Open**. 7: e014218, 2017.
- 5) Doki K, Sekiguchi Y, Kuga K, Aonuma K, **Homma M**.  $\beta$ 1-Adrenergic receptor Arg389Gly polymorphism affects the antiarrhythmic efficacy of flecainide in patients with coadministration of  $\beta$ -blockers. **Pharmacogenet Genomics**. 26: 481-485, 2016.
- 6) Doki K, Sekiguchi Y, Kuga K, Aonuma K, **Homma M**. Serum flecainide S/R ratio reflects the CYP2D6 genotype and changes in CYP2D6 activity. **Drug Metab Pharmacokinet**. 30: 257-62, 2015.
- 7) Suzuki Y, **Homma M**, Abei M, Hyodo I, Kohda Y. Effects of dipyridamole coadministration on the pharmacokinetics of ribavirin in healthy volunteers. **Drug Metab Pharmacokinet**. 28: 406-410, 2013.