

## Pharmacokinetic training of aspirin for medical undergraduate students to understand the concept of ion trap

Takeya Sato<sup>1</sup>, Masaki Saito<sup>1</sup>, Takeo Yoshikawa<sup>2</sup>, Fumito Naganuma<sup>3</sup>, Tadaho Nakamura<sup>3</sup>, Nobuyuki Okamura<sup>3</sup>, Teruyuki Yanagisawa<sup>1,4</sup>, Kazuhiko Yanai<sup>1,2</sup>

<sup>1</sup>Dept. Mol. Pharmacol., Tohoku Univ. Grad. Sch. Med., <sup>2</sup>Dept. Pharmacol., Tohoku Univ. Grad. Sch. Med., <sup>3</sup>Div. Pharmacol., Sch. Med. Tohoku Med. Pharmaceut. Univ., <sup>4</sup>Fac. Health Sci., Tohoku Fukushi Univ.

Medical undergraduate students who will become medical doctors should have enough knowledge and understandings of medication since they will administer medical drugs to cure or examine the patients in hospital. Our current pharmacological practice is intended for the students to learn pharmacokinetics of drugs by focusing on administration, metabolism and excretion of aspirin. In this practice, the volunteers are recruited from students who take aspirin with or without another agent that changes the urine to acidic or basic pH. They collect the urine during 3.5 hours after taking aspirin and analyze the metabolites of aspirin in the urine. Through this practice, the students understand how aspirin is metabolized and excreted to urine and also how the urine pH affects the excretion of the metabolites in urine. The students, who will need to administer medicine to patients as physicians, are expected to acquire basic aspects of pharmacokinetics and clinical trials through this practice.