A subchronic toxicity study of garden balsam extract in F344 rats
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Takeshi Toyoda a), Shigeaki Takami b), Toshio Imai c), Young-Man Cho a), Mai Hasumura a), Yasuko Mizuta a), Saeko Onami a), Isamu Suzuki a), Masao Hirose a), Akiyoshi Nisikawa a), Kumiko Ogawa a)

a) National Institute of Health Sciences
b) Biosafety Research Center, Foods, Drugs and Pesticides
c) National Cancer Center Research Institute

Abstract
A subchronic toxicity study of garden balsam (Impatiens balsamina L.) extract (GBE) was performed in male and female F344 rats with oral administration in their drinking water at concentrations of 0%, 1.25%, and 5.0% for 13 weeks. No chemical-related clinical signs and changes of body weights, food intake, and water consumption were observed in any groups during the experiment. Regarding serum biochemistry, in males, significant increase of Na was observed in 2.5% and 5.0% group and that of Cl was seen in all treated groups. In females, significant increase of Cl and decrease of inorganic phosphorous (IP) were detected at 2.5% and 5.0%. However, no related histopathological lesions were observed in the kidney, intestine and bone tissue. Therefore, it is considered that the changes in serum electrolyte levels were not associated with any meaningful toxicological effects. There were no significant differences in hematological data, organ weights and histopathological findings among the groups. Based on the results, the no-observed-adverse-effect level (NOAEL) for GBE in male and female F344 rats was estimated to be more than 5.0% (3997 and 4577 mg/kg bw/day, respectively.)