## Iranian Journal of Toxicology

Scientific Quarterly Journal VOLUME 7 NUMBER 21 SUMMER 2013

Chairman: Mohammad Jamalian Editor-in-chief: Hassan Solhi

Editor of the section of Analytic Toxicology: Kambiz Soltannejad

Editor of the section of Biochemical Toxicology: Mohammad Abdollahi

Editor of the section of Cellular Toxicology: Seyed Nasser Ostad Editor of the section of Clinical Toxicology: Shahin Shadnia

Editor of the section of Molecular Toxicology: Jalal Pourahmad, Omid Sabzevari

Associated Editors: Ali Cyrus :MD, Department of Urology, Arak University of Medical Sciences, Arak, Iran, Amir Mohammad Kazemifar: MD, Department of Forensic Medicine, Ghazvin University of Medical Sciences, Ghazvin, Iran, Vahid Jalilian: MA in Language Teaching, Mina Mozaffari: MSc in Health Information Management.

## Editorial Board:

Mohammad Abdollahi (Pharm.D, Department of toxicology & pharmacology, Tehran University of Medical Sciences, Tehran, Iran.)Mahdi Balali-Mood (PhD, Department of toxicology, Mashad University of Medical Sciences, Mashad, Iran). Talat Ghane (PharmD, Department of toxicology, Tehran University of Medical Sciences, Tehran, Iran). Mahmoud Ghazi-Khansari (Pharm.D, Department of toxicology & pharmacology, Tehran University of Medical Sciences, Tehran, Iran) Farzad Gheshlaghi (MD, Department of poisoning emergency, Isfahan University of Medical Sciences, Isfahan. Iran). Hossein Hassanian-Moghadam (MD, Department of clinical toxicology, Shahid Beheshti University of Medical Sciences, Tehran, Iran) Mohammad Reza Heydari (Pharm.D, Department of toxicology & pharmacology, Kerman University of Medical Sciences, Kerman, Iran). Farshad Hosseini-Shirazi (Pharm.D, Department of toxicology & pharmacology, Shahid Beheshti University of Medical Sciences, Tehran, Iran.)Nasser Jalali (MD, Department of toxicology, Shahid Beheshti University of Medical Sciences, Tehran, Iran). Akbar Kooshanfar (MD, Department of pediatrics, Shahid Beheshti University OF Medical Sciences, Tehran, Iran) Omid Mehrpour (MD, Department of Forensic Medicine, Birjand University of Medical Sciences, Birjand, Iran.) Ali Akbar Moghadamnia (Pharm.D., Department of pharmacology, Babol University of Medical Sciences, Babol, Iran.) Hossein Niknahad (Pharm.D, Department of pharmacology, Babol University of Medical Sciences, Babol, Iran). Lucky Lebgbosi Nwidu, (Ph.D in Pharmacology, Department of Pharmacology & Toxicology, Bayelsa, Nigeria). Seved Nasser Ostad (Pharm.D, Department of toxicology, Tehran University of Medical Sciences, Tehran, Iran). Abdolkarim Pajoumand (MD, Department of toxicology, Shahid Beheshti University of Medical Sciences, Tehran, Iran). Shirin Pazuki (MD, Department of anesthesiology, Arak University of Medical Sciences, Arak, Iran). Jalal Pourahmad (Pharm.D, Department of toxicology & pharmacology, Shahid Beheshti University of Medical Sciences, Tehran, Iran). Mahmoud Rahimi (MD, Department of anesthesiology, Isfahan University of Medical Sciences, Isfahan, Iran.) Mohammad Reza Rasekh (Pharm.D, Department of Toxicology & pharmacology, Shahid Beheshti University of Medical Sciences, Tehran, Iran). Omid Sabzevari (Pharm.D., Department of toxicology, Tehran University of Medical Sciences, Tehran, Iran)Shahin Shadnia (MD, Department of internal medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.) Hassan Solhi (MD, Department of Forensic Medicine, Arak University of Medical Sciences, Arak, Iran). Kambiz Soltaninejad (Pharm.D, Department of toxicology & pharmacology, Legal Medicine Organization, Tehran, Iran). Fakhreddin Taghadosinejad (MD, Department of forensic medicine, Tehran University of Medical Sciences, Tehran, Iran). Haleh Talaie (MD, Department of Toxicology, Shahid Beheshti University of Medical Sciences, Tehran, Iran). Hassan Towfighi (MD, Department of forensic medicine, Tehran University of Medical Sciences, Tehran, Iran). Musa Toyin Yakubu. (Ph. D. Biochemistry, Department of Biochemistry, University of Ilorin, Ilorin, Nigeria).

Executive Manager: Fatemeh Marjan Mousavi

Expert, Layout: Sima Hamidi

Executive Expert: Maryam Aeinmehr

**Publisher:** Arak University of Medical Sciences with corporation of Iranian Society of Toxicology Journal Office: Arak University of Medical Sciences, Basij Sq., Arak, Iran. Telefax: +98 861 4173509

E-mail: "ijt@arakmu.ac.ir", "tox.journal@ymail.com" Homepage: "http://ijt.arakmu.ac.ir", "http://www.ijt.ir"