



**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





# UNODC

United Nations Office on Drugs and Crime



# World Health Organization

## UNODC Expert Consultation on Forensic Toxicology and Drug Control Vienna, 28 to 29 June 2016





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





# UNODC

United Nations Office on Drugs and Crime



# World Health Organization

## UNODC Expert Consultation on Forensic Toxicology and Drug Control Vienna, 28 to 29 June 2016





**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**

**The GC-MS and HPLC-MS/MS  
Determination of New Psychoactive  
Substances in Hair and Nails  
with New Version of MS Library**

**Sergey Savchuk, Dr. of chem., Toxicology Lab  
Research Institute on Addictions  
Moscow, Russia**

**More than 150 forensic and toxicology labs in Russia working in  
narcological clinics and in bureau of forensic expertise**

**Main goal:**

- Development of methods with minimum false positive and negative results
- Harmonization of GC-MS and HPLC-MS/MS methods
- Rapid identification and confirmation of structure NPS and their metabolites
- Generation of MS libraries with permanent updates
- Development methods for determination of NPS in hair and nails
- Proficiency testing of Russian laboratories

**Problem:**

**according to Russia's Law the use of drug QC standards in laboratories is prohibited**

**For proficiency testing of  
laboratories we use three types the  
Control Samples:**

- Real composed urine sample containing common drugs, NPS and their metabolites. Before using samples we analysed by GC-MS, HPLC-MS/MS, HPLC-IT-TOF (confirmation of structures),
- Real hair samples from NPS consumers.
- Ethanol spiked OC samples.





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**



*UNODC Expert Consultation, Vienna, June 2016*

**Rational approach to toxicology-  
related data collection**

**Franco Tagliaro**

Full professor of Forensic Medicine and Toxicology  
University of Verona  
Verona, Italy

*UNODC Expert Consultation, Vienna, June 2016*

**New methods from pharmacological research**

***Zebrafish* approach to rapid  
pharmacological screening**

M Tayyab Akhtar, S Ali,  
R Verpoorte, MK Richardson  
**Behavioral effects of  
cannabinoids on zebrafish  
larvae.** *Planta Med* 2012; 78 -  
PD123





**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**





**UNODC**  
United Nations Office on Drugs and Crime



**World Health Organization**

**UNODC Expert Consultation  
on Forensic Toxicology and Drug Control  
Vienna, 28 to 29 June 2016**

