



Importance of Forensic Drug Data Analysis

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Secretary
Asian Forensic Sciences Network



Forerunner Meeting, Oct 2008, Singapore

Member: 6 founding institutes from 6 countries

Inaugural Meeting, Nov 2009, Kuala Lumpur, Malaysia

Member: 14 institutes from 10 countries

Attendance: 95 from 23 institutes/organisations from 13 countries

2nd Annual Meeting & Symposium, Jun 2010, Brunei Darussalam

Member: 18 institutes from 11 countries

Attendance: 180 from 55 institutes/organisations from 20 countries

3rd Annual Meeting & Symposium, May 2011, Seoul, Korea

AFSN Forerunner Meeting, Oct 2008, Singapore



AFSN Inaugural Meeting, Nov 2009, Kuala Lumpur, Malaysia



AFSN 2nd Annual Meeting & Symposium, Jun 2010, Brunei Darussalam



AFSN Board

Position Held	Name	Country	Organisation
President	Dr Paul Chui	Singapore	Health Sciences Authority
Vice-President	Mr Primulapathi Jaya	Malaysia	Department of Chemistry
International Liaison Officer	Dr Chung Heesun	Korea	National Institute of Scientific Investigation
Board Member	Ms Cheong Poh-Yee	Brunei Darussalam	Department of Scientific Services
Board Member	Dr Khunying Porntip Rojanasunan	Thailand	Central Institute of Forensic Science

ASIAN FORENSIC SCIENCES NETWORK



ABOUT US

MEMBERSHIP

WORKGROUPS

EVENTS

PUBLICATIONS

LINKS

CONTACT US

AFSN LOGO



The atomic orbit symbolizes the sciences we do.

The scale symbolizes the justice we serve.

The map symbolizes the region we represent.

www.asianforensic.net

Purpose of AFSN

1. Serve as forum for forensic science institutes

Annual Meeting & Symposium

Newsletter

2. Enhance quality of forensic science services

Technical Workgroups / Committee

Workshops / Scientific Sessions

3. Link with other forensic science networks

Member of IFSA

Bilateral Communications

4. Formulate strategies

Raise Standards of Members

Improve Communication

AFSN Interim President's Address



With the advent of the Internet and globalised trade, information, people and goods move across borders quickly. Many issues have taken on an international dimension. Events that occur in one part of the world quickly spread to other areas, such as the H1N1 outbreak, the ongoing financial crisis. Criminal activities that once were more or less geographically limited now infiltrate different societies and far-flung jurisdictions. Examples can be found in illicit drug trafficking, cybercrime, terrorism and paedophile-related crimes. Natural disasters (e.g. Indian Ocean tsunami in 2004) and man-made disasters (e.g. air transportation accidents) frequently involve citizens of many nationalities. Serial killers can and do operate across jurisdictions.

Further, as the world becomes more aware of the role of sciences in solving crime and justice, and regardless as to whether we like the additional exposure of CSI on television or Crime Channel on cable, the perceived reality is that scientists can get to the 'truth' much more quickly and definitively. The expectations of the public, law enforcement and judicial systems on forensic sciences and its practitioners have increased.

These challenges make it imperative for the forensic science community to work more closely together, to collaborate and share experiences, to develop best practices and build stronger and sustainable scientific and organisational systems that provide robustness and integrity for the work that we do.

While there have been several areas of ongoing co-operation between different forensic laboratories, these have been generally limited in scope. DrugNetAsia, a regional publication was conceived and published annually, following a regional meeting of heads of Drug Testing Laboratories in South East Asia in 1999, under the auspices of the UNDCP. Following the 2004 Tsunami, a forensic DNA symposium was held in 2005 in Singapore and subsequently a DNA profiling working group was formed to enable information-sharing amongst practitioners.

Numerous forensic science networks have been established in various parts of the world, such as the American Society of Crime Laboratory Directors (ASCLD), Senior Managers of Australian and New Zealand Forensic Laboratories (SMANZFL), European Network of Forensic Science Institutes (ENFSI) and Academia Iberoamericana De Criminalística y Estudios Forenses (AICEF).

With the encouragement of United Nations Office on Drugs and Crime, in the person of Dr Barbara Remberg, and the guidance of Prof Jose Lorente, International Liaison Officer of AICEF, representatives of six forensic institutes met in October 2008 to deliberate on the formation of a regional forensic science network. The meeting gave birth to the ASIAN FORENSIC SCIENCES NETWORK (AFSN), which will henceforth serve as a collective representation for the forensic sciences community in Asia.

The Network purposes itself to provide a forum for forensic science institutes in Asia to discuss issues relating to



The Forensic Group Meeting in October 2008

forensic services, work towards enhancing the quality of forensic services in member countries and establish links with other regional networks in the global forensic community.

This new beginning is but the first step in forging a stronger forensic sciences community in Asia. Already, we have seen encouraging signs of growing membership and interest in the Network. It will take many hands and strong commitment from all its members. Even though the challenges are foreboding, I am confident that with the good start and strong foundations being laid, the Network will grow from strength to strength, as forensic science practitioners are people who bring passion and purpose into their work everyday.

Dr Paul Chui
President, AFSN Interim Board

AFSN Interim Board Members

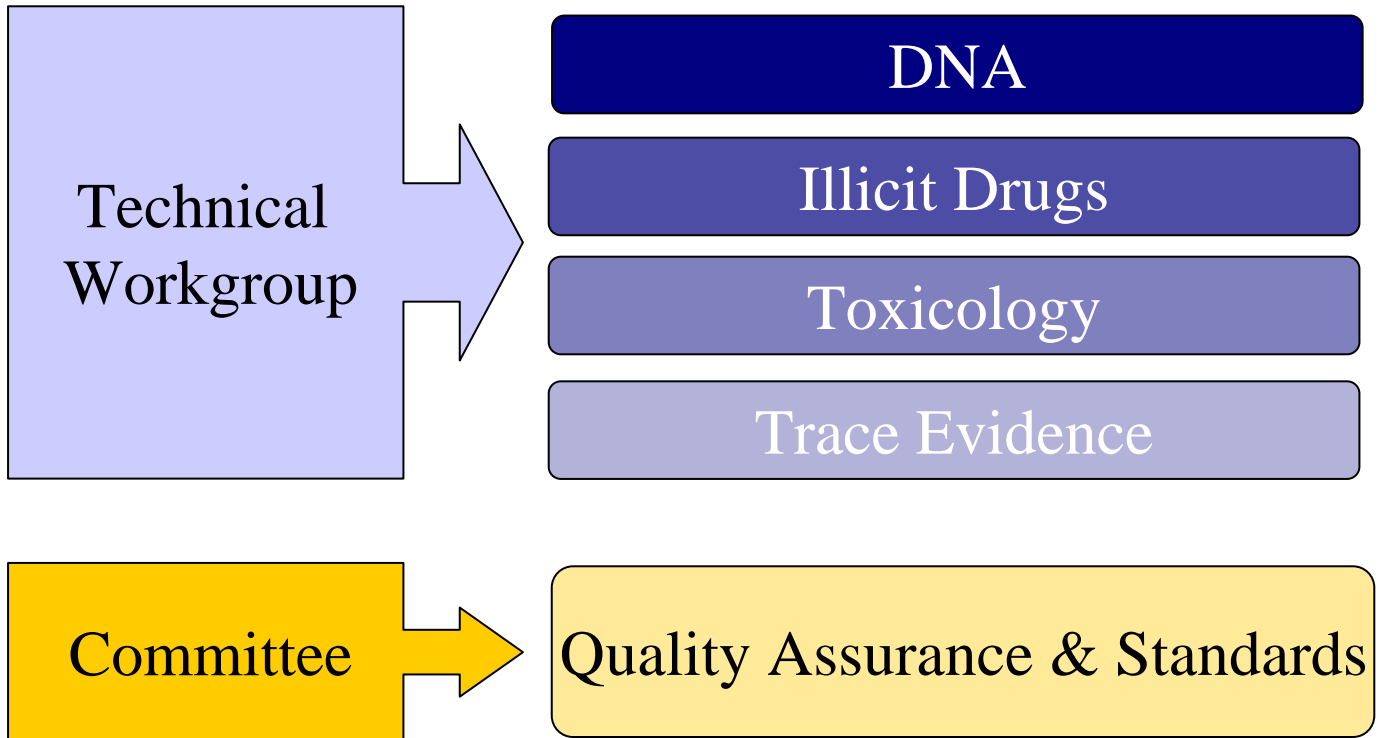
President:
Dr Paul Chui, Health Sciences Authority, Singapore

Vice-President:
Mr Primitipatni Jaya, KIMIA MALAYSIA, Malaysia

International Liaison Officer:
Ms Cheong Poh-Yee, Department of Scientific Services, Brunel Darussalam

Board Members:
Dr Romel Papa, National Bureau of Investigation, Philippines
Dr Kraisorn Ammawat, The Central Institute of Forensic Science, Thailand
Dr Nguyen Van Ha, Vietnam Forensic Science Institute, Vietnam

AFSN Workgroups/Committee



International Forensic Strategic Alliance (IFSA)



VISION



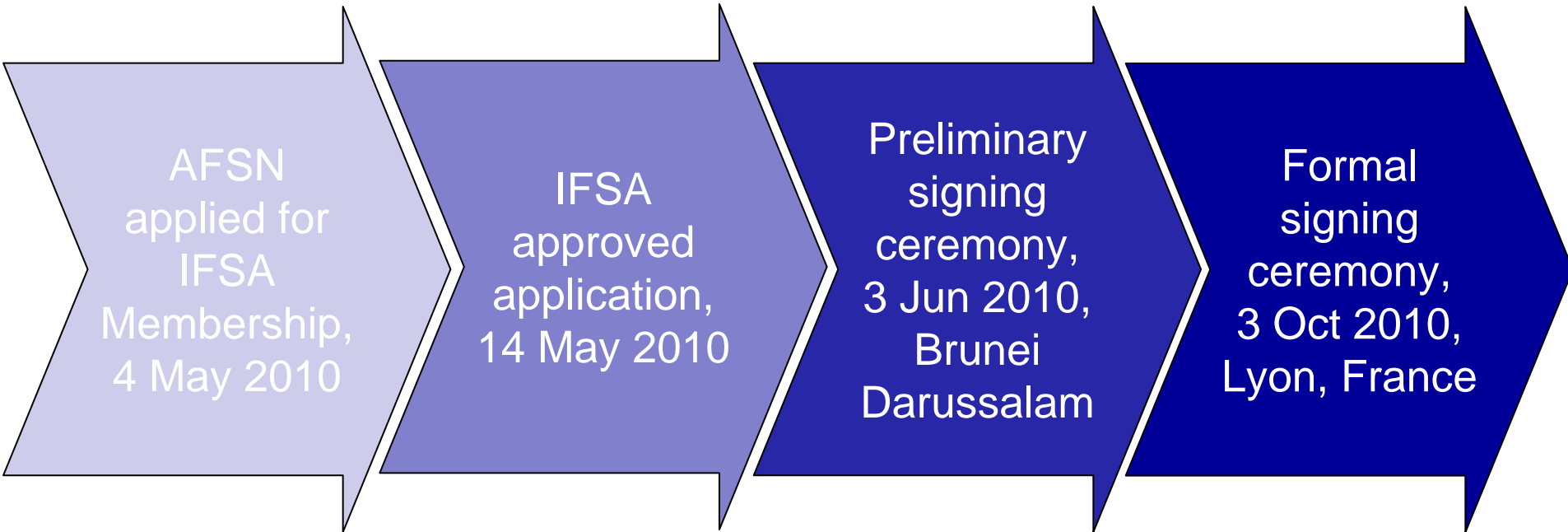
To create opportunities for strategic collaboration across the global forensic science community.

GOALS AND OBJECTIVES

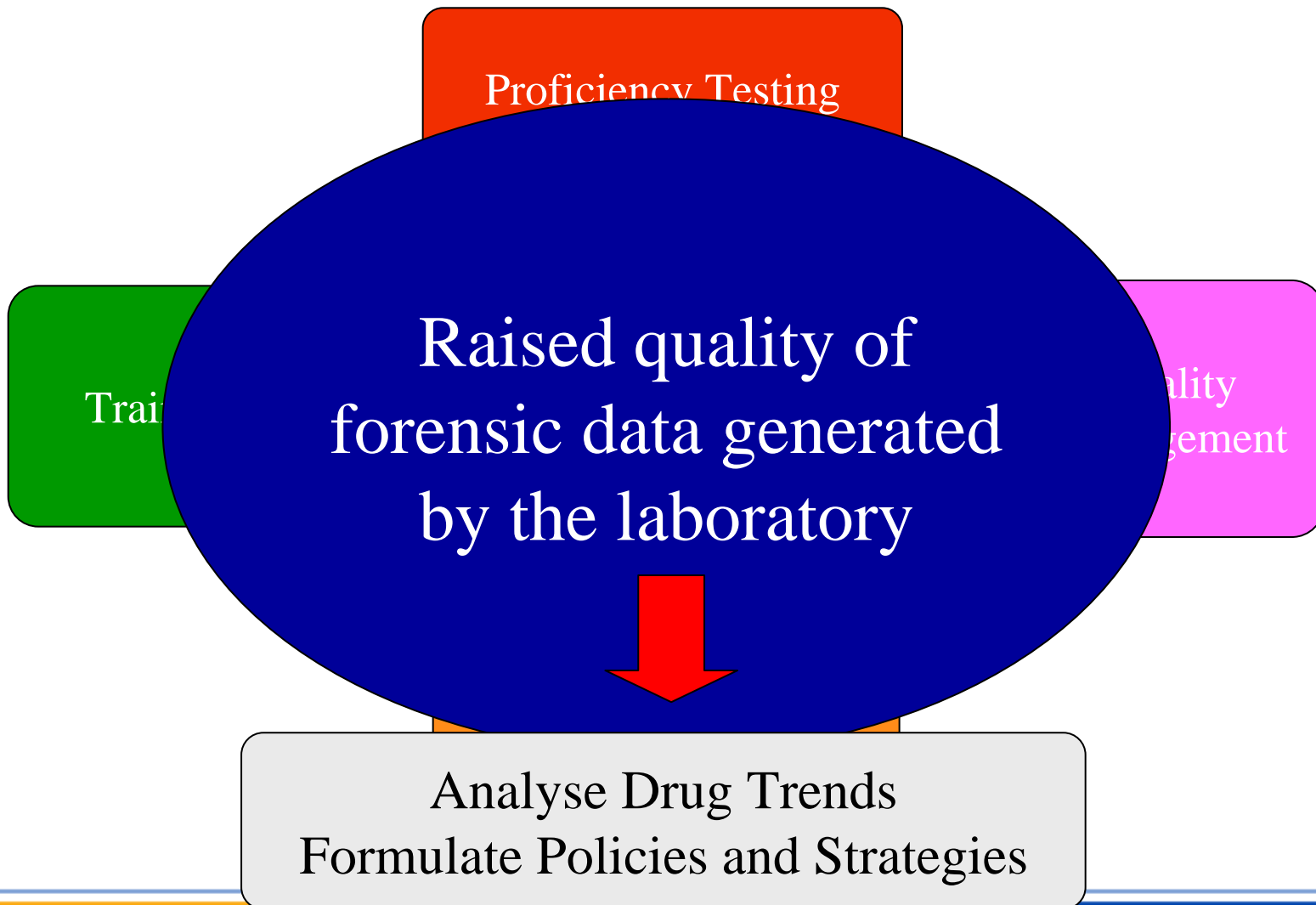
- Represent the operational forensic science community.
- Develop and execute a rolling agenda for strategic issues related to forensic science. (Issues to be agreed and minuted).
- Be a strategic partner to other relevant international organisations and partnerships.
- Encourage the exchange of information related to experience, knowledge and skills between the member networks and other operational forensic experts as appropriate.



Significant Development

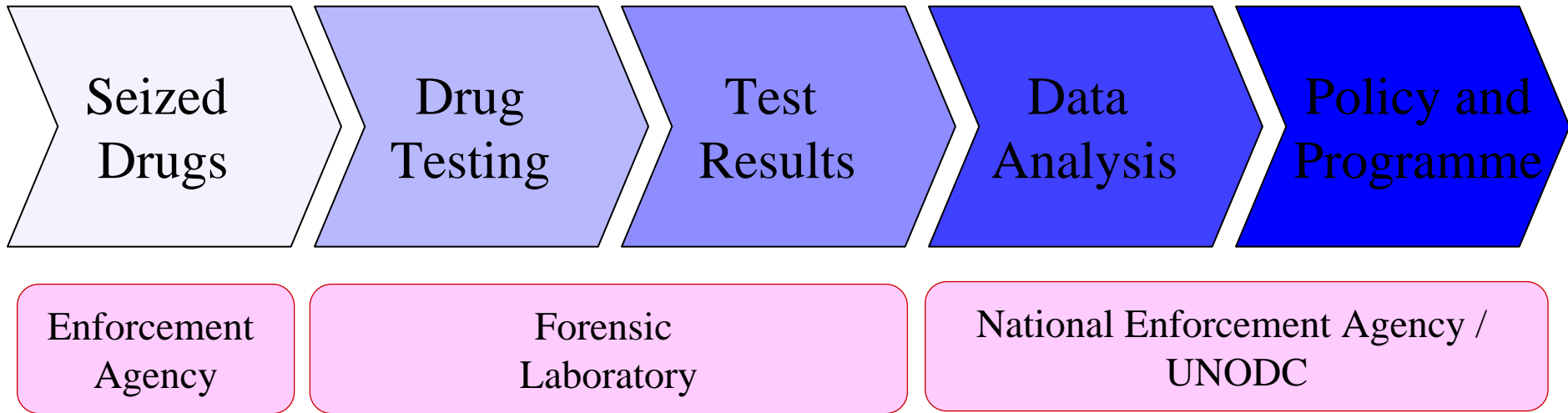


Illicit Drugs Workgroup (IDWG)



Global SMART Programme

The **Global Synthetics Monitoring: Analyses, Reporting and Trends (SMART)** Programme aims to enhance the capacity of Member States and authorities in priority regions to generate, manage, analyse and report **synthetic drug information** and apply the knowledge to the **design of policy and programme interventions**.



Amphetamine-Type Stimulants

A group of **synthetic substances** comprised of amphetamine-group (primarily amphetamine, methamphetamine and methcathinone) and ecstasy-group substances (MDMA and its analogues).

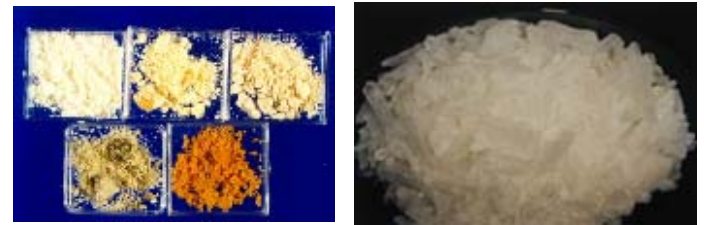
Collection of Data

Complications due to diverse nature of drugs

Different forms (powder, crystals, tablets)

– Methamphetamine

- Powder
- ICE (crystalline)
- Yaba tablets
- Methamphetamine tablets
- Liquid methamphetamine



Collection of Data

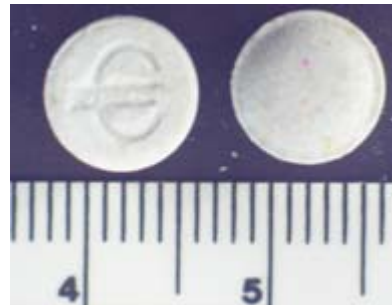
Complications due to diverse nature of drugs

“Ecstasy” Tablets:

- Different composition
 - Single drug
 - Multiple drugs
 - Controlled drugs (Identified? Quantified?)
 - Non-controlled drugs (BZP, TFMPP)
 - New synthetic drugs
- Different purity
 - How are purity results reported? (% base or % salt?)
- Weight reported
 - Gross weight seized or net weight of drug ?



Colour	No. of tablets	Weight per tablet (g)	MDA (%)	MDMA (%)	K (%)	Other Drugs
Beige	1	0.207	45.7	0.3	1.7	
	5	0.192	44.3	0.2	1.6	
	5	0.189	46.3	0.2	1.4	
	6	0.190	46.4	0.2	1.6	
Yellow	50	0.293	-	16.2	14.0	Caffeine



Colour	No. of tablets	Weight per tablet (g)	MDMA (%)	K (%)	Other Drugs
Pink	6	0.279	45.8		
	10	0.277	46.5		
	1	0.282	45.7		
	1	0.275	47.5		
	10	0.278	46.0		
	27	0.278	46.9		
	5	0.279	44.5		
	10	0.278	46.6		
Blue	5	0.315	21.4	13.4	N,N-Dimethylamphetamine, Caffeine, Chloroquine
	10	0.311	23.2	15.1	
	11	0.310	22.6	15.2	
	4	0.313	22.2	14.3	



Colour	No. of tablets	Weight per tablet (g)	MDMA(%)	Meth(%)	K(%)	Other Drugs
Blue	10	0.278	47.2			
Blue	6	0.276	47.2			
Blue	3	0.278	46.3			
Blue	4	0.282	47.6			
Blue	31	0.279	48.1			
Blue	2	0.288	39.2			
Blue	2	0.282	41.4			
Blue	1	0.267	41.2			
Blue	19	0.277	44.2			
Blue	5	0.278	44.4			
Blue	3	0.280	44.5			
Beige	2	0.303	12.2	1.9	23.7	
Pink	1	0.316		2.3	34.4	
Pink	1	0.333		2.4	35.3	
Dark Pink	1	0.261			10.7	Caffeine
Green	7	0.258			27.3	Meth, Paracetamol, Caffeine



Colour	No. of tablets	Weight per tablet (g)	Meth (%)	Other Drugs
Red	951	0.091	16.8	Caffeine
Green	7	0.090	16.1	Caffeine
Orangy-Red	159	0.091	17.0	Caffeine
Dark Red	22	0.105	2.9	Caffeine
Red	60	0.098	15.8	Caffeine
Red	7	0.092	15.8	Caffeine

Diamorphine (Heroin No3) Diamorphine (Heroin No4)

>=15 gm <15 gm >=15 gm <15 gm

No. of Cases	5	43	1	0
Net Wt. Recvd	11430.86	863.94	13612.20	
Net Wt. of Drug	271.18	46.83	10912.37	
% of Drug	2.37	5.42	80.16	
% of A-Codeine	1.04	0.89	7.28	
% O6-MAM	4.09	1.50	1.18	

Morphine

>=20 gm <20 gm

Oxycodone

>=120 gm <120 gm

Cannabis

>=500 gm <500 gm

Cannabis Mixture

>=1000 gm <1000 gm

No. of Cases	0	0	0	0	0	1	0	7
Net Wt. Recvd						3.36		182.84
Net Wt. of Drug						0.00		0.00
% of Drug						0.00		0.00

Ketamine (Tablet)

>=113 gm <113 gm

Ketamine (K)

>=113 gm <113 gm

Methamphetamine (Tablet)

>=250 gm <250 gm

Methamphetamine (Ice)

>=250 gm <250 gm

MDMA/MDEA/MDA

>=10 gm <10 gm

No. of Cases	0	6	6	8	0	5	0	22	4	11
Net Wt. Recvd		204.87	5574.09	105.77		205.10		701.96	889.70	86.52
Net Wt. of Drug		58.12	4668.48	85.89		4.34		549.36	152.74	14.28
% of Drug		28.67	83.93	83.13		2.14		78.26	17.22	16.74

Collection of Data

Complications due to diverse nature of drugs

“Ecstasy” Tablets:

- Changing drug composition
 - New emerging novel drugs
 - Usually non-controlled
 - May not be reported
 - Example: BZP, TFMPP, methcathinones

“Ecstasy” Tablets

Ketamine & methamphetamine



MDMA,
Methamphetamine
& Ketamine



Ketamine & MDMA



MDA



Ketamine



MDMA



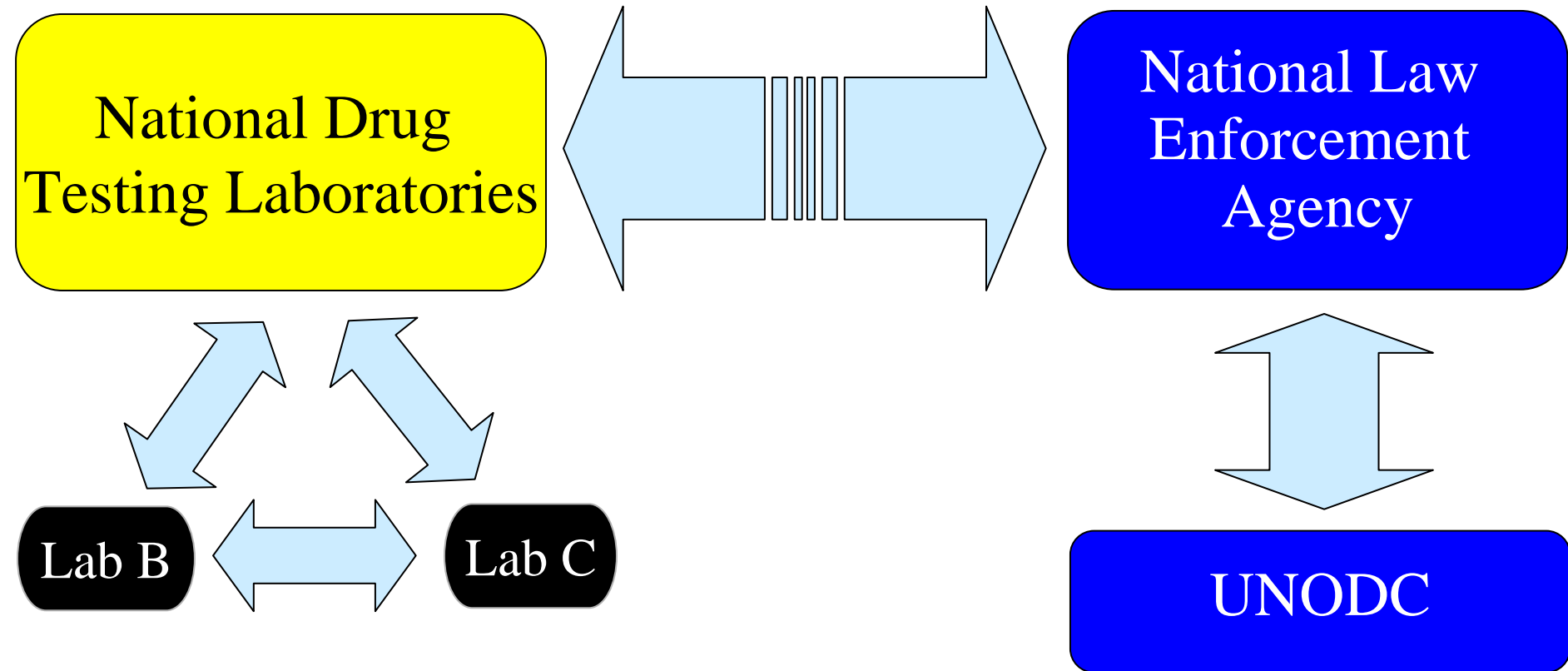
2CB



BZP & TFMPP



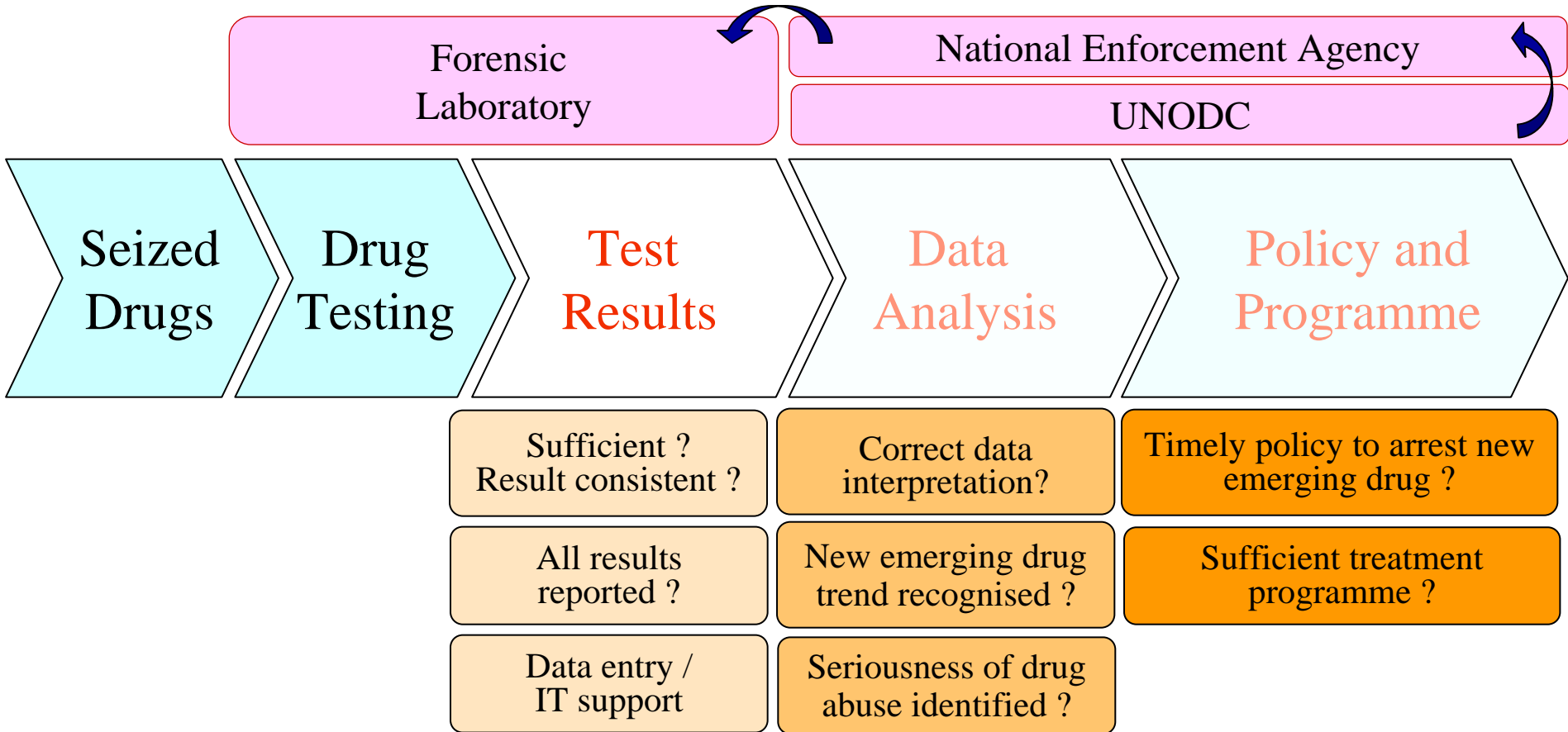
Communication



Collection of Data

Complications due to diverse nature of drugs

- Manufacture not confined
 - Shifting locations
- Changing Precursors



Conclusion

Importance of good forensic data generated from forensic laboratories

Data needs to be treated correctly to reflect the true situation

Improvement of communication

Building of capacity of forensic laboratories

Thank You!

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