

ISTA Ordinary Meeting 2005

GMO Task Force

**INFORMATION EXCHANGE WORKING
GROUP**

ACTIVITY REPORT 2004-2005

MAIN OBJECTIVE:

to provide technical support for laboratories

1. WORKSHOPS

2. ISTA WEBSITE

1. WORKSHOPS

ISTA/FAO Workshops on “Electrophoretic Methods and PCR-Techniques for Variety Verification and GMO Detection”

4th - Ljubliana, Slovenia 10-14 July 2004

Agricultural Institute of Slovenia

5th - Giza, Egypt 18-20 December 2004

Agriculture Genetic Engineering Research Inst. (AGERI)

- **Beijing, China February 27 – March 5 2005**
National Agro-technical Extension and Service Center,
Ministry of Agriculture, P. R. China

WORKSHOPS

Coming soon:

6th - Kingston, Jamaica 9-13 May 2005
University of West Indies (UWI)

- **St Louis, Missouri, US 17-19 November 2004**
Statistical aspects of GMO detection (by STA/GMO TF)
- **Buenos Aires, Argentina October 2005**
Statistical and analytical aspects of GMO detection
- **Still strong demand for workshops**

WORKSHOPS

General program

- 1. What transgenic plants are**
- 2. Objectives of GM detection**
- 3. Methods for GM detection**
- 4. Classification of PCR methods (screening, gene-construct- event-specific)**
- 5. DNA structure and properties**
- 6. Calculations on DNA**
- 7. PCR basics**

Workshops - General program contnd.

- 8. Sample preparation and DNA extraction → practice**
- 9. DNA quantitation and quality control → practice**
- 10. End point and real time PCR → practice**
- 11. Troubleshooting (low sensitivity/specificity, false positive/negative)**
- 12. Quality control in PCR analysys**
- 13. Issues of quantification**
- 14. General information on statistical aspects**
- 15. Illustration of ISTA activity**

2. ISTA WEBSITE - proposals

LINKS TO USEFUL DATABASES

<http://agbios.com>

(event database, regulatory aspects and general description)

http://usbiotechreg.nbii.gov/database_pub.asp

(petitions for authorisation, molecular information)

<http://www.gmo-watch.org/gmo-watch/>

(GM Crops: molecular make-up and regulatory details)

<http://www.uspto.gov>

(US patents database; sequence information)

WEBSITE

LINKS TO METHOD DATABASES

<http://biotech.jrc.it>

(method description and validation data)

<http://gmo-crl.jrc.it/guidancedocs.htm>

(method validation and minimum performance requirements)

To facilitate the exchange of information and as a quick reference

- **list of methods with or without validation records**
- **list of scientific references**

could be directly posted on the ISTA website

METHOD NAME	SPECIES	EVENT	TARGET	QUAL/ QUANT	TYPE OF ASSAY	REFERENCES
Kuribara, H. 02g	maize	wildtype	amido sintasi IIb	QUANT	endogenous gene	Kuribara H. <i>et al</i> (2002)
Ehlers, B. 97c	maize	wildtype	invertasi	QUAL	endogenous gene	Ehlers B. <i>et al</i> (1997)
Brodmann, P. 02d	maize	wildtype	invertasi	QUANT	endogenous gene	Brodmann P. <i>et al</i> (2002)
Meyer, R. 96a	soybean	wildtype	lectina	QUAL	endogenous gene	Meyer R. <i>et al</i> (1996)
Meyer, R. 96a	soybean	wildtype	lectina	QUAL	endogenous gene	Meyer R. <i>et al</i> (1996)
Applera	soybean	wildtype	lectina	QUANT	endogenous gene	-
Applera	maize	wildtype	zeina	QUANT	endogenous gene	-
Matsuoka, T., 02h	maize	BT176+T25	T-35S	QUAL	screening	Matsuoka T. <i>et al</i> (2002)
Matsuoka, T., 02m	maize	MON802	nptII	QUAL	screening	Matsuoka T. <i>et al</i> (2002)
Applera	-	P35S	P-35S	QUANT	screening	-
Pietsch, K. 97a	-	P35S	P-35S	QUAL	screening	Pietsch K. <i>et al</i> (1997)
Matsuoka, T. 00f	maize	P35S(BT11)	P-35S	QUAL	screening	Matsuoka T. <i>et al</i> (2000)
Lipp, M. 01a	maize	P35S(BT176)	P-35S	QUAL	screening	Lipp M. <i>et al</i> (2001)
Lipp, M. 01g	soybean	T-NOS(RR)	T-NOS	QUAL	screening	Lipp M. <i>et al</i> (2001)
Pietsch, K. 97b	soybean	T-NOS(RR)	T-NOS	QUAL	screening	Pietsch K. <i>et al</i> (1997)
Ehlers, B. 97a	maize	BT176	bar	QUAL	gene- specific	Ehlers B. <i>et al</i> (1997)
Ehlers, B. 97b	maize	BT176	cryIAb	QUAL	gene- specific	Ehlers B. <i>et al</i> (1997)
Windels, P. 03a	maize	CBH-351 (StarLink™)	Cry9c	QUAL	gene- specific	Windels P. <i>et al</i> (2003)
Matsuoka, T., 02f	maize	GA21	mepsps	QUAL	gene- specific	Matsuoka T. <i>et al</i> (2002)
Matsuoka, T., 02l	maize	MON802	gox	QUAL	gene- specific	Matsuoka T. <i>et al</i> (2002)
Matsuoka, T., 02k	maize	MON802+RR	CP4 epsps	QUAL	gene- specific	Matsuoka T. <i>et al</i> (2002)
Matsuoka, T. 00a	maize	BT11	IVS6 e cryIAb	QUAL	construct specific	Matsuoka T. <i>et al</i> (2000)
Hupfer, C. 98a	maize	BT176	P-CDPK e cryIAb	QUAL	construct specific	Hupfer C. <i>et al</i> (1998)
Matsuoka, T. 00b	maize	BT176	P-PEPC e cryIAb	QUAL	construct specific	Matsuoka T. <i>et al</i> (2000)
Kuribara, H. 02e	maize	GA21	OTP e mepsps	QUANT	construct specific	Kuribara H. <i>et al</i> (2002)
Matsuoka, T. 00c	maize	MON810	hsp70 e cryIAb	QUAL	construct specific	Matsuoka T. <i>et al</i> (2000)
Koppel, E. 97b	soybean	RR	P-35S e CP4 epsps; CTP e CP4	QUAL	construct specific	Koepfel E. <i>et al.</i> (1997)
Applera	soybean	RR	P-35S e epsps	QUANT	construct specific	-
Koppel, E. 97a	soybean	RR	P-35S promoter e CP4 epsps	QUAL	construct specific	Koepfel E. <i>et al.</i> (1997)
Matsuoka, T. 00d	maize	T25	P-35S e pat	QUAL	construct specific	Matsuoka T. <i>et al</i> (2000)
Brodmann, P. 02d	maize	T25	P-35S e pat	QUANT	construct specific	Brodmann P. <i>et al</i> (2002)
Roening, S.B. 03a	maize	BT11	3' junction between transgenic construct and plant genome	QUANT	event specific	Roening S.B. <i>et al</i> (2003)
Roening, S.B. 03b	maize	BT11	5' junction between P-35S and plant genome	QUANT	event specific	Roening S.B. <i>et al</i> (2003)

WEBSITE

DIDACTIC MATERIALS

- **presentations from previous workshops**

OTHER TECHNICAL INFORMATION

- **equipment & supplies**
- **reference materials**

How to do it

- **Increasing participation in WG, particularly for the setting up of the website (suggestions and information needed)**
- **Continue collaboration with FAO for workshops**
- **Find candidates for helping in workshops to respond to request**
- **Collaborate with STA/GMO for joined workshops**