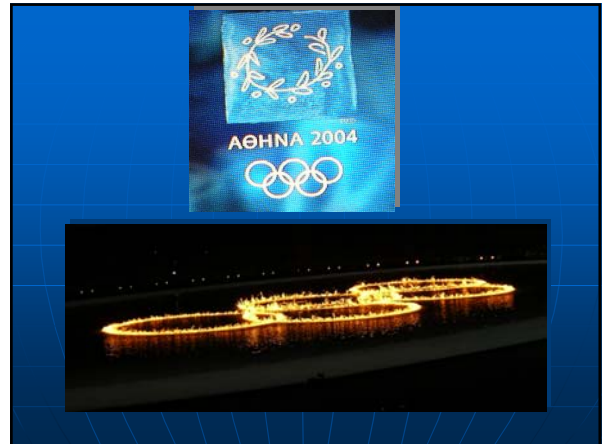


**European FIMS  
Ambassador Tour 2004**

**ERGOGENIC AIDS AND ANTIDOPING  
POLICY: CURRENT ISSUES**

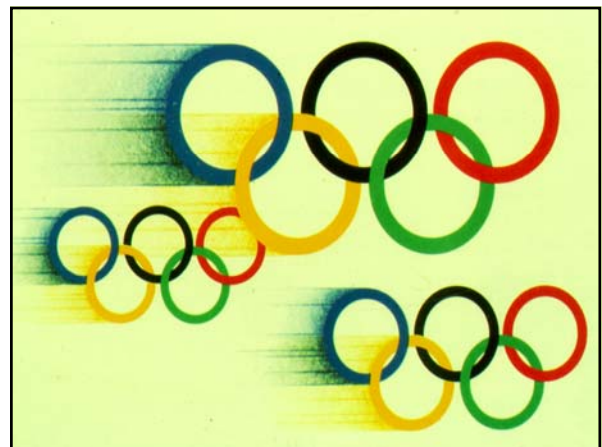
Fabio Pigazzi  
University Institute of Movement Sciences (IUSM), Rome - Italy  
IOC Medical Commission

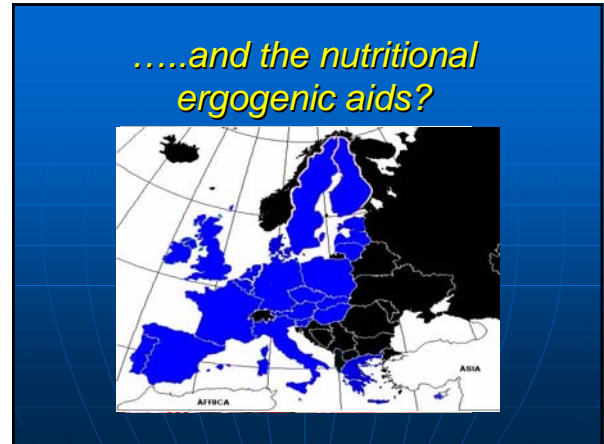
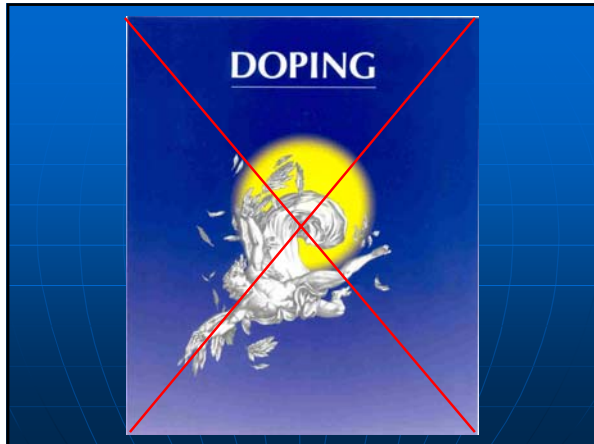


**Doping Control  
Station**  
Στάθμος Έλέγχου Ντόπινγκ  
Station de Contrôle du Dopage

**Positive doping cases in Athens**

Rank	Name	Country	Substance	Sport	Event	Gender
1	David Mutuziasa	Kenya	Cathine	Boxing		Male
2	Kostas Klerous	Greece	No show	Track and Field	200m	Male
3	Katerina Thanou	Greece	No show	Track and Field	100m	Female
4	Schukha Opa	Uzbekistan	Clombuterol	Track and Field	Shot put	Female
5	Mural Sharipov	Kazakhstan	Stanozolol	Weightlifting		Male
6	Albina Chornitsch	Russia	Methandienone	Weightlifting		Female
7	Wafiq Amrouni	Morocco	Nandrolone	Weightlifting		Female
8	Victor Chislean	Moldova	Stanozolol	Weightlifting		Male
9	Zoltan Kecskes	Hungary	Oxandrolone	Weightlifting		Male
10	Trilina Kumari	India	Testosterone	Weightlifting		Female
11	Shabaz Sule	Turkey	Stanozolol	Weightlifting		Female
12	Nan Aye Khine	Myanmar	Anabolic	Weightlifting		4th place
13	Saranachia Chanu	India	Furosemide	Weightlifting		4th place
14	Leonidas Sampanis	Greece	Testosterone	Weightlifting	62 kg	Bronze
15	Irina Koshchenko	Russia	Stanozolol	Track and Field	Shot put	Gold
16	Robert Fazekas	Hungary	Rekusal	Track and Field	Discus	Gold
17	Alaksay Lisnitschiy	Belarus	Clombuterol	Track and Field	High Jump	Gold
18	Olena Odintsova	Ukraine	Rekusal	Rowing	4 staff	Bronze
19	Zoltan Kovacs	Hungary	Rekusal	Weightlifting		Random
20	Anton Galim	Russia	Stanozolol	Track and Field	400 m	Random
21	Ferenc Gyurkovics	Hungary	Oxandrolone	Weightlifting	105 kg	Silver
22	Mabel Fonseca	Puerto Rico	Stanozolol	Wrestling	55 kg	Random
23	José Ismael Roba	Venezuela	Testosterone	Weightlifting		Bronze
24	Arnus Adrian	Hungary	Rekusal	Track and Field		Gold
25	Mania Luisa Calle	Colombia	Heptaminol	Cycling	Points race	Bronze






### NUTRITIONAL ERGOGENIC AIDS

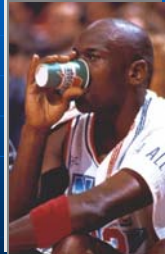
Burke & Read, Sports Med, 1993

- ➔ contain nutrients or other food components in amounts greater than nutrient RDI levels, or the amounts typically provided by food
- ➔ propose a direct ergogenic (work-enhancing) effect on sports performance, often through a pharmacological rather than a physiological effect
- ➔ often rely on theoretical or anecdotal support rather than on documented support from scientific trials
- ➔ are generally not supported by sports nutrition experts, except where scientific trials have documented a significant ergogenic effect



### WHAT DOES REALLY WORK?


<b>YES</b>	<b>NO</b>
creatine	carnitine
caffeine	glutamine
bicarbonate	Cr
	"the rest"
glycerol	
B-Hydroxy B-Methyl Butyrate	



### HERBALS

- ginseng (chinese, korean, American, Siberian)
- mahuang or ephedra
- ashwagandha
- rhodiola
- yohimbe
- cordyceps fungus
- shilajit or mummio


- smilax
- wild oats
- ... (sterone)
- ... (restris)
- ... (tto berries)
- B- sitosterol/related sterols
- wild yams (diosgenin)



### NUTRITIONAL SUPPLEMENTS CONTAMINATED WITH STEROIDS

- creatine
- carnitine
- vitamines
- minerals
- tribulus terrestris
- ribose
- BCAA and ...

- zinc
- ...
- ...
- ...
- ...
- ...
- ...



634 SUPPLEMENTS ANALYZED ➔ 14,8% Positives

IOC Cologne 2001

**Institut für Biochemie  
German Sport University Cologne  
Prof. Dr. Wilfried Schaller**

**Analysis of Non-Biochemical Nutritional Supplements for  
Anabolic-Androgenic Steroids  
- An International Study -**

An investigation of the IOC accredited doping laboratory Cologne, Germany.  
The investigation was funded by the IOC.

From October 2001 until November 2002 434 non-biochemical nutritional supplements were analysed in 11 countries from 213 different suppliers. The supplements were bought in shops in the respective countries (74 samples + 31.2%), on the internet (22 samples + 5.1%) and by telephone order (2 samples + 0.5%). Two samples (0.5%) were sent by the IOC. 2001 supplements were from performance-selling companies and 197 supplements came from companies which do not sell performance. Also samples from the supplement stores in 11 different countries (anabolic steroids, mainly performance of testosterone and testosterone analogues) and gas chromatography - mass spectrometry.

Out of the 434 samples analysed 49 (11.3%) contained performance not declared on the label ("positive supplements"). We could not assess reliable data for 46 samples (10.6%) because of matrix effects. Out of all positive supplements 23 samples (4.6%) contained performance of testosterone and testosterone, 84 samples (19.1%) only contained performance of testosterone, 7 samples (1.4%) only contained performance of androstano. None of the samples contained the performance of testosterone.

In relation to the total number of samples purchased per country most of the positive supplements were bought in the Netherlands (28.9%), in Austria (22.7%) in the UK (18.8%) and the USA (18.8%).

Country	No. of samples	No. of positive	percentage of positive
Austria	21	4	19.0%
Belgium	1	0	0.0%
Canada	1	0	0.0%
China	1	0	0.0%
France	1	0	0.0%
Germany	10	0	0.0%
Italy	1	0	0.0%
Netherlands	10	8	80.0%
Spain	1	0	0.0%
USA	1	0	0.0%
UK	1	0	0.0%
Other countries	1	0	0.0%
Total	434	49	11.3%

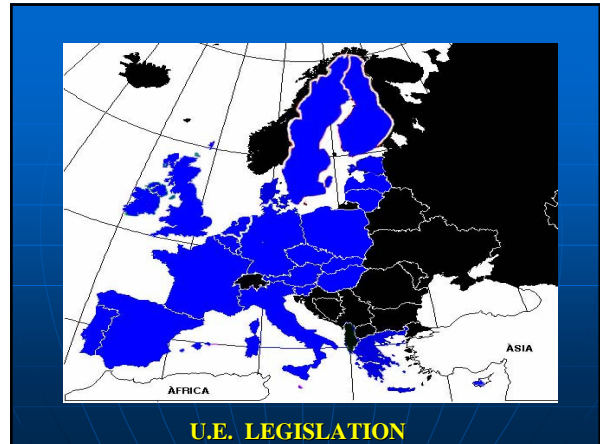
According to the label of positive supplements could be reduced to companies only listed in the countries, the USA, the Netherlands, the UK, Italy and Germany.

**Institut für Biochemie  
German Sport University Cologne  
Prof. Dr. Wilfried Schaller**

21.1 % of the nutritional supplements from performance selling companies contained anabolic-androgenic steroids, whereas 0.6 % of the supplements from companies not selling performance were positive.

The positive supplements showed anabolic-androgenic steroid concentrations of 0.01 µg/g up to 190 µg/g.


Executive analysis with application of supplements containing testosterone performance corresponding to a total number of more than 1 µg resulted in urinary concentrations of the metabolite metabolite in the urine above the cut-off level of the IOC for several hours (positive doping result).



**PURITY**



- PHARMACEUTICAL PRODUCTS
- NUTRITIONAL SUPPLEMENTS

**Directive of the European Parliament EU 46/2002**

DIRECTIVE 2002/46 OF THE EUROPEAN PARLIAMANT AND OF THE COUNCIL - 10 June 2002  
Aimed to the harmonisation of rules the Countries member relative to the nutritional supplement guide

- ➔ Specific rules for vitamins and minerals produced, finalised to supplementation
- ➔ **POSOLGY**
- ➔ Specific requirements for labels of the packages
- ➔ In a second phase specific rules will be defined, relative to nutrients which differ from vitamins or from other minerals and substances having a nutritional or physiological effect, utilised as components for nutritional supplements (e.g. aminoacids, fatty acids, fibers and herbals)
- ➔ The Countries member will have to get conform to this directive by  
31<sup>st</sup> July 2003
- ➔ Products lacking of the requirements listed in the provision, will be withdrawn by  
1<sup>st</sup> August 2003

**PROJECT  
HORMONE-FREE Sports Nutrition**

**Informations to**

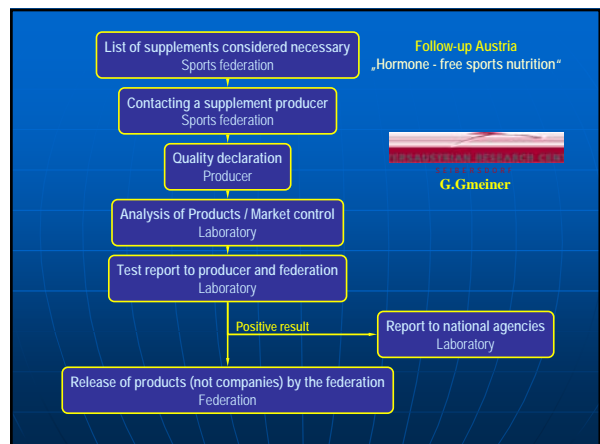
- ➔ National Federal Authorities
- ➔ Austrian Sports Organisation, Sport Federations
- ➔ Athletes

**Model: Hormone-Free Sports Nutrition**

- ➔ Information
- ➔ Avoidance of the "Doping-Trap" Contaminated Supplements



**G. Gmeiner**



### CONSEQUENCES FOR PRODUCERS

- Stable good quality of the products
- No hormones, no pro - hormones are found by the analysis of an accredited laboratory
- Producer covers the costs for the analyses
- Test report goes straight, but confidential to sports federations
- Test report may not be published as itself, but mentioned
- Positive result is reported to the national agencies



### PRODUCT QUALITY CONTROL Pre-requisites



- Products should not contain pro-hormones
- Products should not be manufactured with pure raw materials and should not be contaminated by substances prohibited by International Olympic Committee rules

### PRODUCT QUALITY CONTROL Pre-requisites



- Delivery to the competent authorities of the analysis protocols to check the substances declared in the composition



*In conclusion.....*



Athletes must be aware of the strict liability principle that makes them responsible for everything they eat and drink

Ignorance is not an acceptable excuse for a positive doping result

Check all supplements with a medical officer

**If there is any doubt at all, don't take it!!!!**



