

# Internet forums: a source of intelligence to monitor the online diffusion of doping products

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Doping market analysis

# Introduction

Aims: Assessing the doping product market

- Detection of products and suppliers and popularity analysis
- Trends analysis

**To settle monitoring and digital evidence collection strategies**

Selected means: **Community forums analysis**

- Open-source, structured and huge amount of data
- “Safe” space to share information

# Ethical consideration

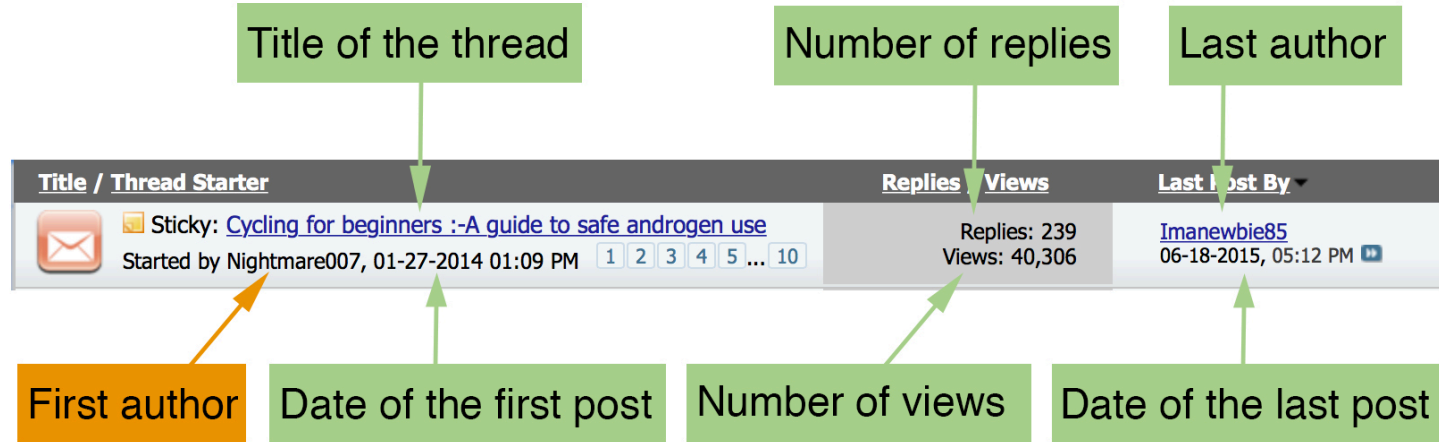
Accordance with the Swiss Federal Act on Data Protection (FADP)

Data sources are publicly accessible online (without any step of registration or any kind of protection)

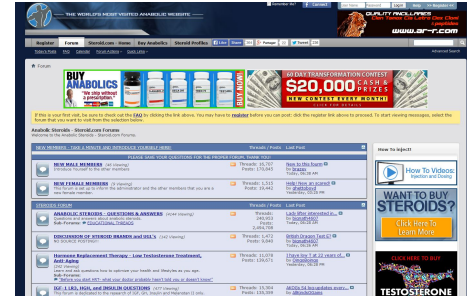
No sensitive personal data

# Methodology (OSINT)

## 1. Source Code extraction of Forums



Popularity indicator: number of authors posting a subject





# Methodology

## 2. Words extraction from topic subjects

[Prop, tren, masteron, eq cycle. Eq question!!](#)  
Started by Acemace, 04-20-2015 08:01 AM



Replies: 10  
Views: 245

[Teutonic](#)  
Today, 06:59 AM 

Example:

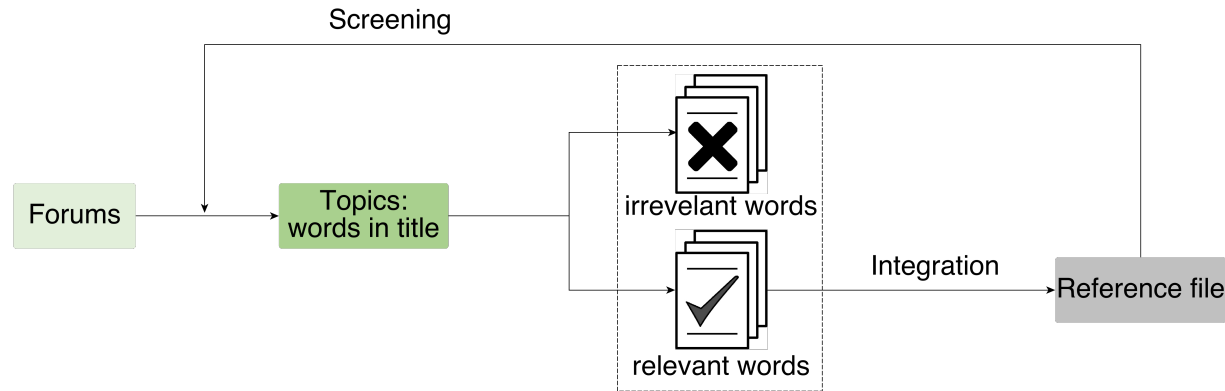
{prop; tren; masteron; eq; cycle; eq; question}

# Methodology

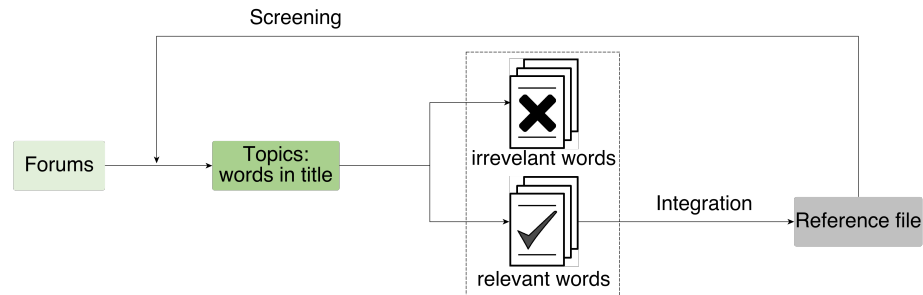
3. Filtering relevant words

4. Words description

- Establishment of a reference file



# Methodology



Reference file, example:

Words	Class	Category	Name	Active substance
sus250	product	steroid	sustanon	testosterone
sustanon	product	steroid	sustanon	testosterone
sus	product	steroid	sustanon	testosterone
cyctahoh	product	steroid	sustanon	testosterone

# Collected data

13 forums

**~1'000'000 topics analysed since 2001**

**1757** relevant words identified as:

**158** active substances

**320** doping products

**327** suppliers



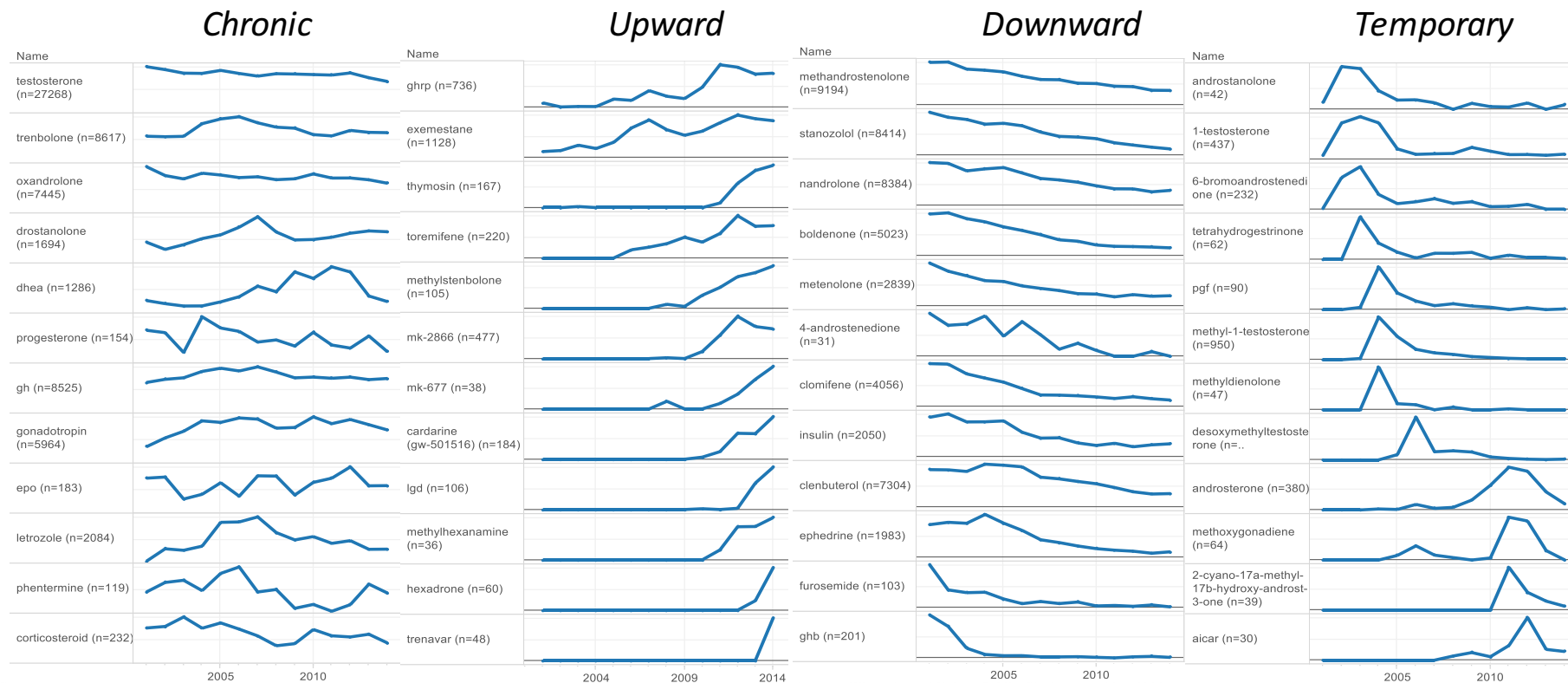
# Products popularity

- Steroid (32%)
- Peptide, GF & EPO (9%)
- Hormone & metabolic modulator (8%)
- Other anabolic agents (5%)
- Stimulant (<1%)
- Beta-2-agonist (<1%)
- Diuretic & masking agent (<1%)
- Narcotic (<1%)



# Main types of temporal trends

Sample of the 158 actives substances



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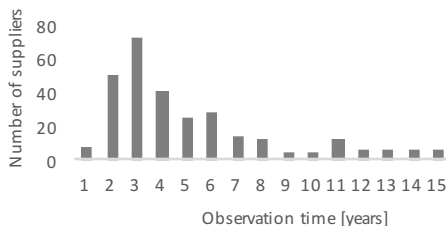
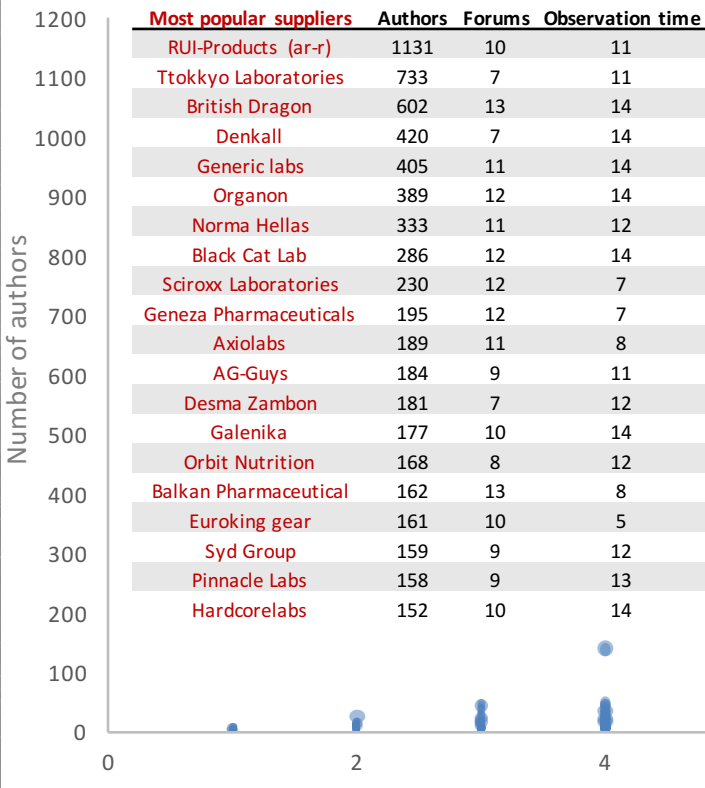
Doping market analysis

30 March 2016

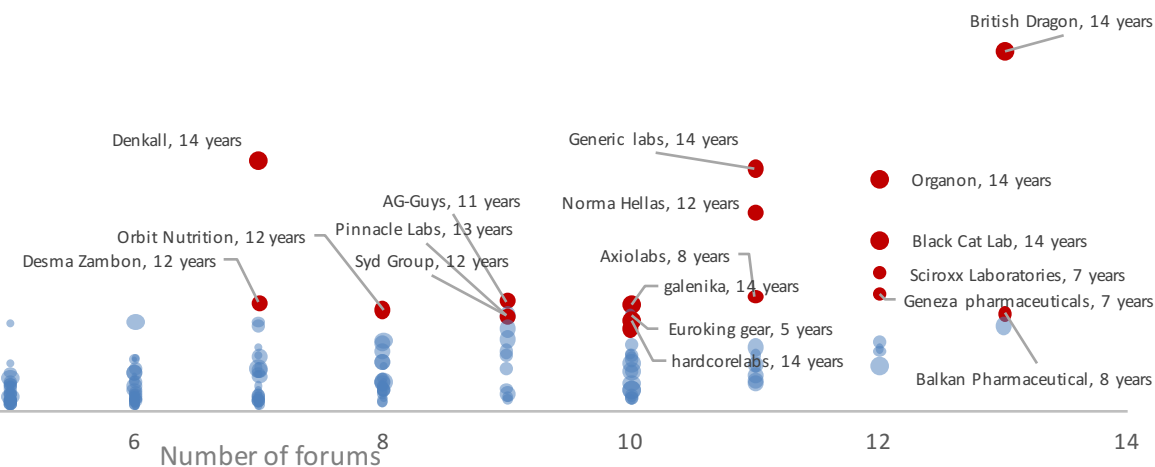
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# Supplier detection and popularity

N = 327 suppliers



● Ttokkyo laboratories, 11 years



# Conclusion

## Dynamic adaptation of the collection plan based on discussions of users/suppliers

- ✓ Structured approach to identify relevant keywords
  - ✓ Trends analysis: popularity
  - ✓ Emerging products detection
- ✓ Suppliers detection
  - ✓ Promotional strategies
  - ✓ Popularity
  - ✓ Seller's websites detection

The methodology can be widely applied to other types of crime problems