

# FEDERATION COLOMBOPHILE INTERNATIONALE

Présidence et Secretariat Général:  
Gaasbeeksesteenweg 52/54-B-1500 HALLE  
Tél. 32-2-537 62 11 - fax 32-2-538 57 21  
e-mail : [info@pigeonsfci.com](mailto:info@pigeonsfci.com)



Banque : BIL  
IBAN LU58 0028 1781 2953 0000  
SWIFT BIC BILLULL  
[www.pigeonsfci.com](http://www.pigeonsfci.com)

GP

N° AD à rappeler

Annexe :

## VETERINARY & SCIENTIFIC COMMISSION 5.03.2018

### MINUTES

#### Present :

David BARROS MADEIRA, PhD Dr D. RUBBENSTROTH, Dr. Elisabeth PEUS,  
Pedro BLANCO FERRANDO, Alain KUMM, Leo VAN DER WAART, Henk DE WEERD,  
Prof. Dr. Piotr SZELESZCZUK, Dr. Jean-Pierre NELL, Ulrich FREI-ZULAUF,  
Istvan BARDOS, Stefaan VAN BOCKSTAELE, Richard GROSS, Geert PHILIPS

#### Excused :

Dr. Vet. Piet BLANCKE, Gabor SCHINDLER, Dr. José Luis Duarte CRUZ, Valeriy KARPENKO

#### **1) Approval of the minutes of the meeting of 2.10.2017.**

Minutes are approved.

#### **2) Avian Influenza : current situation and presentation of some slides.**

#### **3) Scientific work on the way.**

Mrs Mieke Steensel, from the Coda Serva, gives a Power Point with the state of research of the Avian Influenza and the influence on racing pigeons.

The meeting agrees that Coda Serva further carries out the tests.

(It still has to be checked whether racing pigeons can transfer the virus to chickens)

#### **4) Crowdfunding research Avian Influenza: conclusions and reflections.**

Mr Madeira clarified that currently about 12000 Euro was collected.  
He thanks the English federation for the deposit of 5000 Euro.

Although this crowdfunding was not a great success, this should also been seen as a PR for the pigeon sport.

#### **5) Other funding initiatives.**

The companies Pipa and Herbots are prepared to organize another internet auction.

#### **6) Information standard profiling or pigeon DNA.**

Veterinarian Pascal Lanneau gives a Power Point presentation regarding DNA research in racing pigeons. (This Power Point is attached to this report).

On the other hand, vet Lanneau clarifies

- wrong pedigrees used to be more common than now.
- in a normal loft (no breeding boxes) between 12 and 15% is foreign fertilization
- depending on the lab, the cost is about 45 Euro
- for one pigeon you need 3 samples (the pigeon, the father and the mother of the pigeon) unless the DNA of one or both parents is already available
- it is very important that the feathers needed for DNA testing are taken as soon as possible after the performance of the pigeon
- it would be interesting if a database of the DNA of the best pigeons was created.

XXXXXXXXXXXXXXXXXXXX

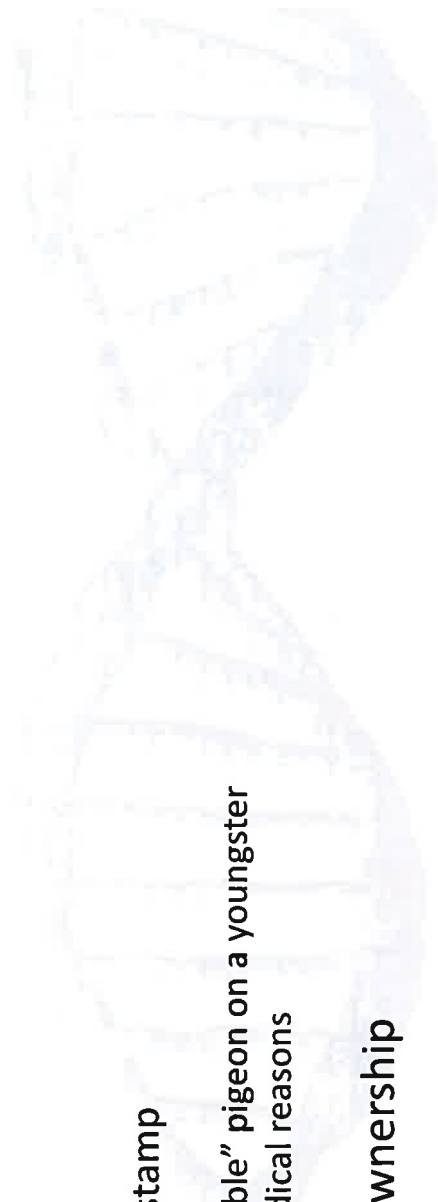
# **DNA profiles for identification and parentage verification in pigeons**

**FCI Veterinary Committee**

**05/03/2018**

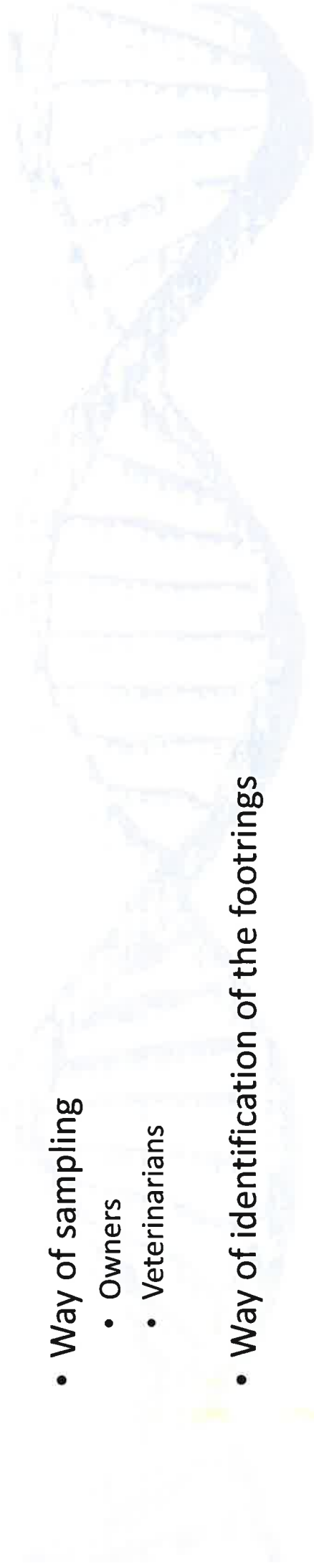
# Use of DNA profiles

- Identification of the pigeon
  - Unique
    - Better than footring, microchip or stamp
      - Fraud proof
        - Using a ring of a “dead valuable” pigeon on a youngster
        - After clipping the footring for medical reasons
  - Linked with the card for proof of ownership
- Parentage verification



## At this moment

- Different sampling protocols
  - Way of sampling
    - Owners
    - Veterinarians
  - Way of identification of the footprints



## At this moment

- Different labs
  - Use of DNA markers
    - Other markers
    - Number of markers
  - --- > different DNA profiles
    - ---→ not comparable
    - --- > Different PE
- Different databases

# ISAG

- Meeting ISAG in China, Summer 2014
- Recommended panel for the identification of pigeons
  - 16 Short Tandem Repeat (STR) loci necessary to determine a DNA profile of pigeons

# ISAG recommended panel for identification of pigeons

Marker	Primer	Sequence	Size (bp)	Dye
ClijμD11	F	CCAATCCAAAGAGGATTAT	77 - 99	6-FAM
	R	ACTGTCTATGECTGAAGTG		
PIGN15	F	TTTCCTTCATTGGCTGG	126 - 150	6-FAM
	R	AACCAAGCATTGGAGTCTTT		
ClijμT43	F1	GGGAAAGGAAATTTGACACTG	191 - 223	6-FAM
	R	ACTGTGATGCCATTAAAGAC		
PIGN10	F1	TTCCACTGAATGGTCTCAG	271 - 325	6-FAM
	R1	CTGCCAGAAGGTAAATGACAC		
ClijμD01	F	GATTTCTAAGCTGTAGGACT	75 - 113	VIC
	R	GTTTGATTTGGTTGGCCATC		
PIGN57	F	CTCTTGATGTCCATCTGAAC	155 - 187	VIC
	R	ACCATTTACCACCTCTCTAA		
ClijμT13	F1	CTGTGAGCAGTAACAGTCC	198 - 230	VIC
	R	GTTTGAAGCCCTGGTTATCTCA		
PIGN26	F1	TCACTGTATTCACCAAAGTCTG	358 - 469	VIC
	R1	CAATGTGGGGGGTCTATG		
ClijμD16	F	GCAGTGATAAAGTTCTGGAACA	76 - 172	NED
	R	GTTTGCCTCACCGTGACATCA		
ClijμD19	F1	CTGCCGTTTCTTCTAATGCAC	193 - 199	NED
	R	GTTTGGATTTCTGGAGTGTATG		
PIGN12	F1	CAGATCCAGACTCTTGAAG	232 - 348	NED
	R1	CCCATCTAATGGATAAATCC		
ClijμT02	F	AGTTTAAATGAAGGCACCTCT	92 - 104	PET
	R	TGTAGCATGTCAGAAATTGG		
ClijμD17	F	TCTTACACTCTCGACAAG	116 - 130	PET
	R	GTTTCCACCCAAATGAGCAAG		
ClijμD35	F	GGGAGCTTAAGGGATTATTG	173 - 187	PET
	R	ATTCCTGCATGCCCTACTTA		
ClijμT17	F	ATGGGTTTGGAGATGTTTTG	209 - 249	PET
	R	GTTTGATGGAGTTGCTATTTTGTCT		
PIGN04	F	GGTTTTCTGTTTCTCACC	273 - 327	PET
	R	GGGATCTGGGATTAATTTTTTC		



# ISAG

- Comparable
- Certainty
- PE (combined non-exclusions probalibility):
  - 1 parent: 99,86 %
  - 2 parents: 99,99 %

(An evaluation of the ISAG recommended parentage and identification panel for the domestic pigeon, M. De Groot, 2017)

## Value of a DNA certificate

- Standard strict protocol for sampling the pigeons
- Labs following the ISAG standard

# Very strict sampling procedure

- Veterinarian
  - Independent
    - If it are pigeons from a vet, taken by a colleague veterinarian
  - Responsible for
    - Taking the samples
    - Notation and verification of the bandnumbers
    - Necessary documents
    - Sending the samples

## Very strict sampling procedure

- Taking 2 samples (back up for the lab and to verify later)
  - Feathers
    - Minimum 5 per sample
      - Where
        - on the upper limb
        - On the chest

# Very strict sampling procedure

- Notation on the samples
- Using the international standard, FCI norm
  - BE17- 1256879
  - NL16-5489367
  - DV08-63214-125
  - GB16-X23548
  - PL18-125478
  - FR16-125789
  - Etc....

## Very strict sampling procedure

- Document with requests and declaration of sampling / ownership
  - Signed by vet
    - Declaration of responsibility of sampling and correctness of the ringnumbers
  - Signed by owner
    - Declaration of ownership of the pigeons
  - Joining the samples

# Very strict sampling procedure

- Sending
- Samples
- Documents
  - Requests
  - signatures

## Labs

- Member of the ISAG
  - DNA profiling by following the ISAG recommended parentage and identification panel for the pigeons
- Verifying for the protocol of the strict sampling procedure
  - Documents have to be with the samples
    - Signed by owner
    - Signed by vet who took the samples
  - Verification of the ringnumbers



# Future

- Value of a DNA certificate or DNA certified pedigree
  - Very strict sampling procedure
  - Lab ISAG
  - Fraud proof
    - Online system
- All pigeon DNA databases comparable (possible centralisation DNA profiles)

**Thank you**