



ISAG
CONFERENCE 2014, Xi'an, China

Applied Genetics of Companion Animals

STANDING COMMITTEES / WORKSHOPS Information will be posted online

Organised by a standing committee **Yes**

Date and meeting time: **Thursday, 31 July 2014** **Room 306** **14:00 – 17:00**

Chair, name and contact email: **Co-chair (cat): Leslie A. Lyons** lyonsla@missouri.edu
Co-chair (dog): Susana Dunner dunner@ucm.es

Agenda / programme attached **Yes**

Number of participants at meeting: **~ 50**

Summary of the meeting including votes, decisions taken and plans for future conferences

All laboratories interested in participating in the comparison tests were strongly encouraged to review the guidelines and “terms and conditions”, especially with their university’s authorities.

The ISAG website will be providing information, including list of markers, primer sequences and other technical information.

FASS will be providing analysis for the comparison tests to help standardize the analyse and to ensure they are neutral and unbiased. Duty and analysis laboratories will have to work closely with FASS for the next CT.

The committees were asked to review operating procedures. Overall, the cat and dog duty and analyses laboratories form the standing committee and is renewed at each CT workshop. There are no “term limits” as participates are renewed by vote each workshop.

Cat and dog samples for the CT will include 19 samples and 1 reference sample for a total of 20 samples per CT.

Duty laboratory will submit reference sample to 2 laboratories to confirm quality and reference data.

Penalty for receiving samples and not submitting data will be exclusion from participation for the next CT test.

Committee members (the new committee)

Analysis lab (cat):	Leslie Lyons	term of service	2014 – 2019
E mail address:	lyonsla@missouri.edu		
Duty lab (cat):	Marie Longeri	term of service	2014 – 2019
E-mail address:	Marie.longeri@unimi.it		
Duty lab (dog):	Leanne Van de Goor	term of service	2014 – 2019
E mail address:	lgo@vhladmin.nl		
Analysis lab (dog)	Peter Dovc	term of service	2014 – 2019
E-mail address:	Peter.dovc@bf.uni-lj.si		
Other member:	Sofia Mikko	term of service	2014 – 2019
E-mail address:	sofia.mikko@slu.se		

CAT COMPARISON TEST (2013-2014) yes

If yes: Number of enquiries – requests for consignment forms - 23
 Number of participants receiving samples - 22
 Number of samples: 20, including one reference
 Number of participants reporting results – 16 (1 laboratory providing SNP data)

Duty laboratory name and email address

Becky Evans – Veterinary Genetics Laboratory - rlewaltevens@ucdavis.edu

Comments (issues rising)

Difficulties remain with laboratories submitting correct courier account numbers and the required paperwork. Changes in personnel cause a loss in communication and transfer of information from the person requesting the participation with those in the laboratory performing the CT and then reporting.

Computing Laboratory name and email address

Leslie Lyons – University of Missouri – lyonsla@missouri.edu

Comments:

Attempt better communications to expand participation and to encourage reporting if received samples. Voted – unanimous Yes, no abstain

Inaccuracies in the reference data caused confusion with reporting.

Ensure animals with diseases are present in dataset if a disease marker is to be tested.

FCA026 may have drop-out alleles. Sequencing is suggested to confirm and to support potential primer redesign. Rainer Schubbert volunteered to provide sequencing.

The cat community would like to provide a website that presents how different laboratories present their disease reporting.

Explore SNP panels and a brief comparison between the VGL, Lyons laboratory and GeneSeek was presented.

Voted to perform a CT for 2015 – 2016. - Voted – unanimous Yes, no abstain

Cat and dog tests would be 20 samples, including one reference - Voted – unanimous Yes, no abstain

The Duty and Analysis laboratories must communicate and confirm information prior to any submissions.

List of recommended markers with primer information below

Duty laboratory for the next comparison test with contact details

Duty lab (cat): Marie Longeri term of service 2014 – 2019
Marie.longeri@unimi.it

Computing laboratory for the next comparison test with contact details

Analysis lab (cat): Leslie Lyons term of service 2014 – 2019
E mail address: lyonsla@missouri.edu

Table 1. Genetic markers selected as a “core” panel for ISAG cat parentage and identification testing.

Marker	Chr.	Repeat	Forward Primer 5' – 3' Reverse Primer 5' - 3'	Label	uM
FCA026	D3		GGAGCCCTTAGAGTCATGCA TGTACACGCACCAAAAACAA		
FCA069	B4	AC	AATCACTCATGCACGAATGC AATTTAACGTTAGGCTTTTTGCC	VIC	0.20
FCA075	E2	TG	ATGCTAATCAGTGGCATTG GAACAAAATTCCAGACGTGC	NED	0.10
FCA105	A2	TG	TTGACCCTCATACTTCTTTGG TGGGAGAATAAATTTGCAAAGC	PET	0.20
FCA149	B1	TG	CCTATCAAAGTTCTCACCAAATCA GTCTCACCATGTGTGGGATG	PET	0.18
FCA201	B3		TCTGCAGGACCAGTCAGATG AGCATAACAAATTGATGCTGG		
FCA220	F2	CA	CGATGGAAATTGTATCCATGG GAATGAAGGCAGTCACAAACTG	FAM	0.30
FCA229	A1	GT	CAAAGTCAAGCTTAGAGGGC GCAGAAGTCCAATCTCAAAGTC	NED	0.25
FCA293	C1		GATGGCCCAAAGCACAC CCCACATCTTGTCAACAACG		
FCA310	C2	(CA) ₅ TA(CA) ₇ TA(CA) ₈	TTAATTGTATCCCAAGTGGTCA TAATGCTGCAATGTAGGGCA	FAM	0.30
FCA441	D3	TAGA	ATCGGTAGGTAGGTAGATATAG GCTTGCTTCAAATTTTCAC	VIC	0.15
FCA453	A1		AATTCTGAGAACAAGCTGAGGG ATCCTCTATGGCAGGACTTTG		
FCA649	C1		ACTGCCTGCACACTGACTTG TTAGTCCTGGTGAGACTTTGTG		
FCA678*	A1	AC	TCCCTCAGCAATCTCCAGAA GAGGGAGCTAGCTGAAATTGTT	NED	0.25
AMEL	XY	X-214; Y-193	CGAGGTAATTTTTCTGTTTACT GAAACTGAGTCAGAGAGGC		
ZFXY	XY	X-169; Y-166	AAGTTTACACAACCACCTGG CACAGAATTTACACTTGTGCA	PET	0.20

***Primers revised from original publication to prevent null alleles. Markers without repeat type listed were added in 2012 and need to be sequenced to verify the repeat type and length to standardize alleles.**

DOG COMPARISON TEST (2013-2014) **yes**

If yes: Number of enquiries – requests for consignment forms: 59, 3 requested late
 Number of participants receiving samples: 61
 Number of samples: 21 including 1 reference sample
 Number of participants reporting results: 53

Duty laboratory name and email address

Susana Dunner – Velogen - dunner@ucm.es

Comments (issues rising)

Samples distributed 27 November 2013

Although instructions are provided, many do not follow the instructions. Most do not ask questions – such as – should they report REN64 when it was left off the report template accidentally.

Need to make sure e-mails are correct and instructions are not in the “SPAM” folder.

Need accurate account numbers for couriers and accurate addresses.

The Duty and Analysis laboratories must communicate and confirm information prior to any submissions.

The dog

Computing Laboratory name and email address

Leanne Van de Goor VanHaeringen Laboratory lgo@vhladmin.nl

There were no notable marker issues across the 53 labs. Other genotyped markers were not judged by the computer lab, but are present in the final report.

In the initial results report REN64E19 was unintentionally left out of the Excel spreadsheet which could be used to submit the results with. Most participating labs listed the results for REN64E19 in the ‘Other genotyping’ section, those who didn’t were given a chance to report the data if they had any. Non on the labs who were given this opportunity responded to this.

Six labs did not complete REN105L03, REN64E19 and AHTh130. It was decided during the workshop that 22 markers are the ISAG recommended panel that is presented below.

One lab submitted only 4 markers and one laboratory only 10 markers.

Need to ask laboratories to expand on the answer to the parentage question.

STR Loci for Parentage Testing in domestic dogs.

Locus	D	5'-3' Sequence	Repeat Length	Notes
AHT121	A	TATTgCgAATgTCACTgCTT	20	
AHT121	B	ATAgATACACTCTCTCTCCg	20	
AHT137	A	TACAgAgCTCTTAACTgggTCC	22	
AHT137	B	CCTTgCAAAGTgTCATTgCT	20	
AHTh130	A	gTTTCTCTCCCTTCgggTTC	20	
AHTh130	B	gACgTgTgTTCACgCCAg	18	
AHTh171	A	AGGTGCAGAGCACTCACTCA	20	
AHTh171	B	GTTTCTT CCCATCCACAGTTCAGCTTT	27	7 base PIG tail
AHTh260	A	CGCTATACCCACACCAgAgC	20	
AHTh260	B	GTTTCTT CCACAgAggAAgggATgC	25	7 base PIG tail
AHTk211	A	TTAgCAgCCgAgAAATACgC	20	
AHTk211	B	ATTCgCCCgACTTTggCA	18	
AHTk253	A	ACATTTgTgggCATTggggCTg	22	
AHTk253	B	GTTTCTT TgCACATggAggACAAgCACgC	29	7 base PIG tail
CXX0279	A	TgCTCAATgAAATAAgCCAgg	21	
CXX0279	B	ggCgACCTTCATTCTCTgAC	20	
FH2054	A	gCCTTATTCATTgCAgTTAggg	22	
FH2054	B	ATgCTgAgTTTTgAACTTTCCC	22	
FH2848	A	CAAAACCAACCCATTCACTC	20	
FH2848	B	gTCACAAggACTTTTCTCCTg	21	
INRA021	A	ATgTAgTTgAgATTTCTCCTACgg	24	
INRA021	B	GTTTCTT TAATggCTgATTTATTTggTgg	29	7 base PIG tail
INU005	A	catgctggtctgtgtaggc	21	
INU005	B	AAATACAATCTTGCGTGTGTGC	22	
INU030	A	GGCTCCATGCTCAAGTCTGT	20	
INU030	B	CATTGAAAGGGAATGCTGGT	20	
INU055	A	CCAGGCGTCCCTATCCATCT	20	
INU055	B	GCACCACTTTGGGCTCCTTC	20	
K9-AME	A	gTgCCAgCTCAgCAgCCCgTggT	23	
K9-AME	B	TCGGAGGCAGAGGTGGCTGTGGC	23	
LEI004	A	CATCATgCATCAAgCAgAgC	20	
LEI004	B	TCATgTAAgCAgAgACTgAC	20	
REN105L03	A	GGAATCAAAAGCTGGCTCTCT	21	
REN105L03	B	GAGATTGCTGCCCTTTTTACC	21	
REN162C04	A	TTCCCTTTgCTTTAgTAggTTTTg	24	
REN162C04	B	TggCTgTATTCTTTggCACA	20	
REN169D01	A	AGTGGGTTTGCAAGTGGAAC	20	
REN169D01	B	AATAGCACATCTTCCCCACG	20	
REN169O18	A	CACCCAACCTgTCTgTTCCT	20	
REN169O18	B	ACTgTgTgAgCCAATCCCTT	20	
REN247M23	A	TGGTAACACCAAGGCTTTCC	20	
REN247M23	B	TGTCTTTTCCATGGTGGTGA	20	
REN54P11	A	GGGGGAATTAACAAAGCCTGAG	22	
REN54P11	B	GTTTCTT TGCAAATTCTGAGCCCCACTG	28	7 base PIG tail

LEI004 is not included in the present ISAG recommended STR marker panel for dogs

REN64E19 A tggagagatgatatccaaaagga
REN64E19 B AGCCACACTGCTTGGTGAG

23
19

List of recommended markers with primer information - above

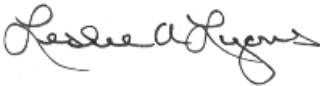
Duty laboratory for the next comparison test with contact details

Duty lab (dog): Leanne Van de Goor term of service 2014 – 2019
E mail address: lgo@vhladmin.nl

Computing laboratory for the next comparison test with contact details

Analysis lab (dog) Peter Dovc term of service 2014 – 2019
Peter.dovc@bf.uni-lj.si

SIGNATURES


Chair

Cat Duty laboratory

Cat Computing laboratory:

Dog Duty laboratory: Susana Dunner

Dog Computing laboratory:

