Genetic testing Cholesterol Deficiency in Holstein

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UNIVERSITÄT BERN

Recently a new recessive genetic defect was discovered in Holstein cattle that causes young calves to die within a period of days to months after birth. The inherited fat metabolism disorder was designated as cholesterol deficiency (CD). Affected animals show unresponsive diarrhea accompanied by hypocholesterolemia. The CD mutation occurs in the international Holstein cattle population and traces to the worldwide used Canadian Holstein sire *Maughlin Storm* born in 1991.

The CD gene test we have developed will accurately provide the genotype and represents an improvement of the indirect haplotype-based marker test (accuracy of 80%). The new CD test allows **a direct detection of the causative mutation** for the following purposes:

(1) An healthy Holstein cattle can be tested if it carries a single copy of the mutation for CD (*heterozygous carrier*: **CDC**) or not (*homozygous clear/free*: **CDF**).

(2) Affected Holstein calves with *Maughlin Storm* in both, maternal and paternal, pedigree lines can be tested if they carry two copies of the mutation for CD (homozygous affected: **CDS**).

The genetic test costs **80 CHF/EUR** for **EDTA-blood** (5-10ml) submissions.
Alternativly, we accept hairroot, semen, or (ear)tissue samples (Please note the extra fee of 40 CHF/EUR).
Blood samples should be sent in a padded envelope without cooling to our laboratory:

Institut für Genetik
CD-Gentest
Bremgartenstrasse 109A
CH-3001 Bern

Please direct any further questions to:
e-mail cord.droegemueller@vetsuisse.unibe.ch
phone +41 (0)31 631 25 29

Animal (Name + breeding ID

DOB ☐ **M** ☐ **F**

Status ☐ **healthy animal** ☐ **affected calf (diarreha)**

Owner /Submitter (Name)

Street

ZIP **City**

E-Mail

Owner's declaration of consent

I agree to genetic testing in the animal indicated above. I also agree that the test result and sample material may be used for further scientific research. **Finally, I agree that the resulting data may be passed to the breeding organization where the herdbook is kept (cross out if not applicable).**

Date **Signature**

Confirmation of correct sampling and animal identity

Date **Veterinarian (stamp/signature)**